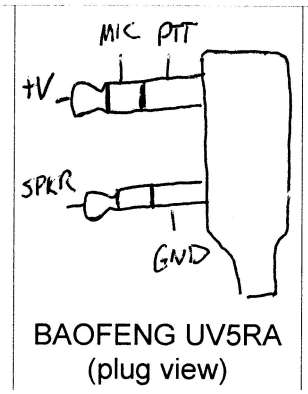
MAKING BAOFENG UV-5R DATA CABLES

by Gordon Gibby KX4Z
August 13, 2019

This is a very simple project and you can make a $20 cable very inexpensively. Start with an inexpensive baofeng external microphone.[1] $6: https://www.amazon.com/BAOFENG-Speaker-MIC-UV-5R-5REPLUS/dp/B00BYMKKT4



We want this primarily to get the PLUG and cable, because those are tedious to home construct. These are made by many different manufacturers, so the only way to know the correct color for the various signals carried in the cable is to take out the 3 screws (small, phillips screwdriver) and look at the circuit board.

Signals carried:
GROUND
SPEAKER
MIC
PTT
+V (a positive voltage to run the electret – we don't use this at all in this project)

1We are just going to use the cable and plug end, so you can keep the electret microphone element and LED for other projects. You can even wire up the mic later on to work with our Alachua County data RJ-45 jack – but that is a story for another day.

Not too difficult to figure out the wiring now! The colors in your mic may be different, but from the photo above,

Baofeng mic PCB marking	**Packet Signal**	**Wire Color**
SP+	Receiver audio out	Black
PTT	Push to talk	White
M -	Ground	Green
M +	Mic	Red

Now take an RJ-45 plug that has been wired with the common ethernet wiring, where orange-white is pin #1 – the signals on the Alachua County standard wiring are:

Pin	**Color**	**Signal**
1	Orange-white	Microphone input
2	Orange	Ground
3	Green-White	PTT (connect to ground to initiate transmission)
4	(unused)	
5	Blue-White	Receiver audio out

Remove the cable from the Baofeng external mic (you can just cut it) , and then remove 1.5 inches of insulation carefully, and strip off 3/8” of insulation from the wires you need. Remove 3/8” of insulation from the appropriate wires from your wired RJ-45 plug, and connect together suitably, and you have a new baofeng data cable.

Baofeng signal	**Color in the photo above (may be different in your microphone)**	**Ethernet wire color**	**Packet Signal**	**RJ-45 pin**
M+	Red	Orange white	Microphone in	1
M-	Green	Orange	Ground	2
PTT	White	Green-White	Push to Talk	3
SP+	Black	Blue-White	Receiver audio output	5