

# PROJECT: CROSS BAND REPEATER WITH 2 BTECH MOBILES

## WHAT'S NEEDED:

RJ-45 CABLE (Diagram on Page 4)

2 BTECH MOBILES

*The frequencies used in this guide are for illustrative purposes only. It is the responsibility of the user to program frequencies that he/she has been granted the authority to use.*

### This Illustration Example Uses:

136.025MHz to 465.025MHz – PL (CTCSS) 74.4Hz

SET TDR (Dual Watch) 'OFF' ON BOTH RADIOS

1: First set the parameters on the two mobiles. On the first mobile select the lower display (with the A/B Button). Set the frequency to 465.025MHz (or your own UHF frequency)



On the other radio select the upper display (with the A/B Button). Set the frequency to 136.025MHz (or your own VHF frequency)



2: On **both** BTECH mobile radios set the PL Tones with MENUS 11 and 13. In this example set R-CTCS (Menu 11) to 74.4Hz and T-CTCS (Menu 13) to 74.4Hz

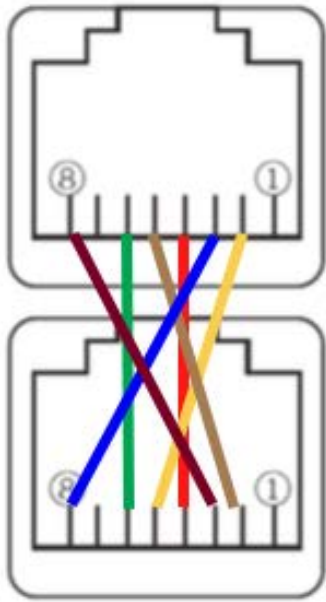


3: Enter MENU 43 REP-M and select CTDCS for two mobiles – this will require the repeater forwarding (X-Band Repeat) to activate once the confirmed PL signal (CTCSS or DCS) is received will transmit it on.



4: Exit the Menus and connect the radios with a RJ-45 cable (diagram on page 4). Insure your external antennas are not in close proximity to avoid interference.





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|--------------|--------------|
| ① Data Input | ⑤ PTT.       |
| ② RPT CTRL   | ⑥ GND        |
| ③ MIC        | ⑦ +8V DC Out |
| ④ MIC Ground | ⑧ AF OUT     |
| ① Data Input | ⑤ PTT.       |
| ② RPT CTRL   | ⑥ GND        |
| ③ MIC        | ⑦ +8V DC Out |
| ④ MIC Ground | ⑧ AF OUT     |

WIRE PINS: 2 TO 5, 3 TO 8, 4 TO 4, 5 TO 2, 6 TO 6, 8 TO 3

5: If the radio receives the carrier frequency with the required CTCSS or DCS tone (depending on your configuration) the radios will now pass along and transmit the signal from VHF-UHF or vice versa as a cross-band repeater

NOTES:

**THIS IS ONLY RECOMMENDED TO SUPPORT CROSS-BAND REPEATING – DO NOT USE 2 VHF OR 2 UHF FREQUENCIES**

**MAKE SURE THE TWO ANTENNAS ARE FAR AWAY IN ORDER TO PREVENT THE INTERFERENCE BETWEEN THE TWO BTECH MOBILES**