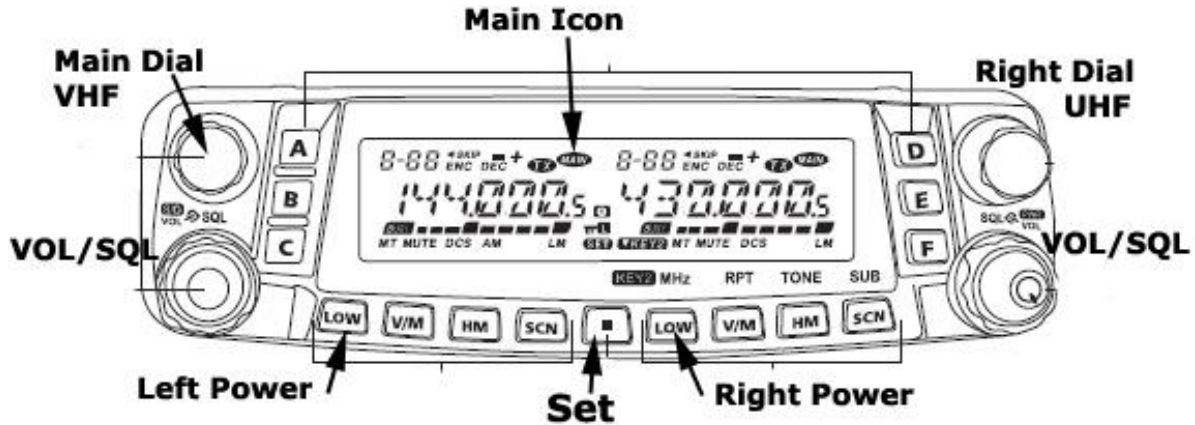


## How to set up cross-band repeater operation for TYT TH-9800



| LOW | MID 2 | MID 1 | HIGH             |
|-----|-------|-------|------------------|
| 5 W | 10 W  | 20 W  | 50 W / UHF: 40 W |

1. Set the VHF and UHF channels to the desired frequency.  
Select VHF (TAC-1 to TAC-10) and UHF (UTAC-1 to UTAC-5)
2. Make sure both VHF and UHF squelch is set to Max (full CW).
3. Adjust the power level for VHF and UHF as desired.
4. Press the [SET] key to enter the Menu mode.
5. Rotate the "Main" band **DIAL** to select Menu # 35 (X-PRT).
6. Press the "Main" band **DIAL** knob once, "XSTART" will appear on the display.
7. Press the "Main" band **DIAL** knob again to activate the cross-band repeater mode.
8. Now the **MAIN** icon will disappear on the display.  
Both the left and right bands can be used for Tx or Rx.
9. Press the [SET] key to exit the cross-band repeater mode.

| NO. | KEY          | FUNCTION   |
|-----|--------------|--|
| 1   | LEFT DIAL    | 1. Tuning dial for the "left" band.  |
|     |              | 2. Short press the knob to set the "left" band as the "Main" band.   |
|     |              | 3. Enable rapid tuning (in 1 MHz steps) when the "left" band is set to be the "Main" band in VFO mode.   |
|     |              | 4. Press and hold in this knob for 1/2 second to toggle the operating band on the left side as follows:<br>144 MHz -> 350 MHz -> 430 MHz -> 850 MHz -> 29 MHz -> 50 MHz...       |
| 2   | LEFT VOL/SQL | 1. The outer VOL (Volume) control adjusts the "left" receiver speaker audio level.   |
|     |              | 2. Short press the knob to switch single receive mode "on" and "off".  |
|     |              | 3. Press and hold this knob for 1/2 second to switch the front panel keys LOCK feature "on" and "off".   |
|     |              | 4. The inner SQL (Squelch) control adjusts the "left" receiver background noise.   |
| 3   | LEFT [LOW]   | 1. Short press the key to switch power output level of the "left" band (LOW-MID2-MID1-HIGH).   |
|     |              | 2. Press and hold in this key for 1/2 second to switch memory display mode between "Frequency" and "Channel Tag" when the "left" band is set to the Memory mode or Home Channel. |

|   |                             |   |
|---|-----------------------------|---|
| 3 | LEFT [V/M]                  | 1. Short press the key to switch frequency control for the "left" band between the VFO and Memory mode.   |
|   | LEFT [HM]                   | 1. Short press the key to recall a favorite "HOME" frequency memory.  |
|   | LEFT [SCN]                  | 1. Short press the key to activate the Scanner on the "left" band.  |
| 4 | [SET]                       | 2. Press and hold in this key for 1/2 second to set up the Scan Skip List or Preferential Scan List under MR mode.  |
|   |                             | 1. Short press the key to enter the Menu mode.  |
| 5 | RIGHT [LOW]<br>(Default)    | 2. Press and hold in this key for 1/2 second to transfer the contents of the Main band VFO into a Memory system.  |
|   | RIGHT [MHz]<br>(Key Mode 2) | 1. Short press the key to switch power output level of the "right" band (LOW-MID2-MID1-HIGH).   |
|   | RIGHT [V/M]<br>(Default)    | 2. Press and hold in this key for 1/2 second to switch memory display mode between "Frequency" and "Channel Tag" when the "right" band is set to the Memory mode or Home Channel. |
|   | RIGHT [RPT]<br>(Key Mode 2) | 1. Short press the key to allow tuning in 1 MHz steps on the "Main" band VFO.   |
|   |                             | 2. Press and hold in this key for 1/2 second to allow tuning in 10 MHz steps on the "Main" band VFO.  |
|   |                             | 1. Short press the key to switch frequency control for the "right" band between the VFO and Memory mode.  |
|   |                             | 2. Press and hold in this key for 1/2 second to shift to the "Memory Tuning" feature when the "right" band is set to the Memory mode.   |
|   |                             | 1. Short press the key to change the frequency shift direction: RPT - (minus shift), RPT + (plus shift), or RPT OFF (simplex).  |
|   |                             | 2. Press and hold in this key for 1/2 second to reverse TX and RX frequencies on the "Main" band during split-frequency operation.  |

|   |                                     |   |
|---|-------------------------------------|---|
| 5 | <b>RIGHT [HM]</b><br>(Default)      | 1. Short press the key to recall a favorite "HOME" frequency memory.<br>2. Press and hold in this key for 1/2 second to activate Priority Channel Scanning under VFO or MR mode.          |
|   | <b>RIGHT [TONE]</b><br>(Key Mode 2) | Short press the key to change the Tone Squelch mode: ENC (CTCSS Encoder), ENC DEC (CTCSS Encoder & Decoder) or DCS operation.   |
|   | <b>RIGHT [SCN]</b><br>(Default)     | 1. Short press the key to activate the Scanner on the "right" band.<br>2. Press and hold in this key for 1/2 second to set up the Scan Skip List or Preferential Scan List under MR mode. |
|   | <b>RIGHT [SUB]</b><br>(Key Mode 2)  | Short press the key to make the next key you press act on the "Sub band". (The "MAIN" icon will blink on the "Sub band")  |
| 6 | <b>RIGHT VOL/SQL</b>                | 1. The outer <b>VOL</b> (Volume) control adjusts the "right" receiver speaker audio level.  |
|   |                                     | 2. Press and hold this knob for 1/2 second to turn the radio "on" and "off".  |
|   |                                     | 3. The inner <b>SQL</b> (Squelch) control adjusts the "right" receiver background noise.  |
| 7 | <b>RIGHT DIAL</b>                   | 1. Tuning dial for the "right" band.  |
|   |                                     | 2. Short press the knob to set the right band as the "Main" band.   |
|   |                                     | 3. Enable rapid tuning (in 1 MHz steps) when the "right" band is set to be the Main band in VFO mode.   |
|   |                                     | 4. Press and hold in this knob for 1/2 second to toggle the operating band between 144 MHz and 430 MHz on the right side.   |
| 8 | Hyper Memory Keys<br>([A] - [F])    | 1. Press and hold in one of these buttons for 2 seconds to store the current configuration of the radio into a special "Hyper" memory bank.   |
|   |                                     | 2. Short press the appropriate button to recall the desired "Hyper" memory.   |

## Selecting the frequency band

Press and hold in **LEFT DIAL** knob for 1/2 second to toggle the operating band on the "left" band.

144 MHz -> 350 MHz -> 430 MHz -> 850 MHz -> 29 MHz -> 50 MHz..

Press and hold in **RIGHT DIAL** knob for 1/2 second to toggle the operating band between 144 MHz and 430 MHz on the right side.

### Note:

TH-9800 can operate either in a V+V or U+V working mode, if needed.



VHF-VHF (V-V) Operation



UHF-UHF (U-U) Operation

## Selecting desired frequency

### 1. Turning Dial

Under VFO mode, rotating the **DIAL** knob allows tuning in the pre-programmed steps established for the current operating band. Clockwise rotation will increase the operating frequency while counter-clockwise rotation will lower it.

On the Main band frequency, short press the **DIAL** knob then rotate it, to change the Main band frequency steps to 1 MHz step. This feature is useful for making rapid frequency excursions over the wide tuning range of the TH-9800.