

TK-5400 Tuning Procedure

22/Oct/2001

- 1.0. PTT + [Side PF2] + Power On → PTT off → [Side PF2] off
- 1.1. **TXF** (TX Frequency Adjustment) @815.50MHz
 Press PTT and adjust TX frequency to 815.50MHz by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B)
 In high accuracy mode by function 7.1+Special
- 1.2. **PWR** (RF Power Hi Adjustment) @815.50MHz
 Press PTT and adjust TX output power to +34.8dBm by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B)
 For getting high measurement response, taking low accuracy by function 7.0+Special
 Adjustment accuracy is about 0.030(W/digit) around 3W.
 - 1.2.1 **PWR_L** (RF Power Hi @L-Edge Adjustment) @806.05MHz
 - 1.2.2 **PWR_C** (RF Power Hi @Center Adjustment) @815.50MHz
 - 1.2.3 **PWE_H** (RF Power Hi @H-Edge Adjustment) @824.90MHz
- 1.3. **tPWR** (RF Power Hi Talk Around Mode Adjustment) @860.50MHz
 Press PTT and adjust TX output power to +34.8dBm by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B)
 - 1.3.1 **PWR_tL** (RF Power Hi TA @L-Edge Adjustment) @851.05MHz
 - 1.3.2 **PWR_tC** (RF Power Hi TA @Center Adjustment) @860.50MHz
 - 1.3.3 **PWR_tH** (RF Power Hi TA @H-Edge Adjustment) @869.90MHz
- 1.4. **PWR_Lo** (RF Power Lo Adjustment) @815.50MHz
 Press PTT and adjust TX output power to +30.0dBm by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B)
 Adjustment accuracy is about 0.025(W/digit) around 1W.
- 1.5. **PWR+tLo** (RF Power Lo Talk Around Mode Adjustment) @860.50MHz
 Press PTT and adjust TX output power to +30.0dBm by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B)
- 1.6. **MIC** (MIC sensitivity adjustment)
 Set at a constant value (129) by Top PF1 Top PF2 keys.
- 1.7. **BAL** (VCO/VCXO Deviation Balance Adjustment) @815.50MHz
 Press PTT and adjust Output waveform(100Hz) to get a square waveform by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B) LPF = 3kHz, HPF = OFF, De-Emphasis = OFF
 Oscilloscope
- 1.8. **BAL_t** (DQT Balance Adjustment for Talk Around Mode) @860.50MHz
 Same as 1.7 BAL
- 1.9. **HDVA** (APCO Deviation Adjustment) @815.50MHz
 Press PTT and adjust FM Deviation to 2.827kHz by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B) LPF = 3kHz, HPF = OFF, De-Emphasis = OFF,
 Detector = Peak (+/-)
 - 1.9.1 **HDVA_L** (APCO Deviation Adjustment @L-Edge) @806.05MHz
 - 1.9.2 **HDVA_H** (APCO Deviation Adjustment @H-Edge) @824.90MHz
- 1.10. **HDVA_t** (APCO Deviation Adjustment for Talk Around Mode) @860.50MHz
 Same as HDVA
 - 1.10.1 **HDVA_t_L** (APCO Deviation Adjustment for Talk Around Mode @L-Edge) @851.05MHz
 - 1.10.2 **HDVA_t_H** (APCO Deviation Adjustment for Talk Around Mode @H-Edge) @869.90MHz
- 1.11. **FMDV** (FM Wide MAX Deviation Adjustment) @815.50MHz
 Press PTT and adjust FM Deviation to 4.00kHz by Top PF1 Top PF2 keys.
 Equipment: Modulation Analyzer (HP8901B) LPF = 15kHz, HPF = OFF, De-Emphasis = OFF,
 Detector = Peak (+/-)

Audio Generator

MIC Input = 150 mV, 1kHz

- 1.12. **FMDV_t** (FM Wide MAX Deviation Adjustment for Talk Around Mode) @860.50MHz

Same as 1.11 FMDV

- 1.13. **NMDV** (FM NPSPAC MAX Deviation Adjustment) @815.50MHz

Press PTT and adjust FM Deviation to 3.20kHz by Top PF1 Top PF2 keys.

Equipment: Modulation Analyzer (HP8901B) LPF = 15kHz, HPF = OFF, De-Emphasis = OFF,
Detector = Peak (+/-)

Audio Generator

MIC Input = 150 mV, 1kHz

- 1.14. **NMDV_t** (FM NPSPAC MAX Deviation Adjustment for Talk Around Mode) @860.50MHz

Same as 1.13 NMDV

- 1.15. **QTDV** (QT Deviation Adjustment) @815.50MHz

Press PTT and adjust FM Deviation to 0.75kHz by Top PF1 Top PF2 keys.

Equipment: Modulation Analyzer (HP8901B) LPF = 3kHz, HPF = OFF, De-Emphasis = OFF,
Detector = Peak $\pm$ /2

- 1.16. **QTDV_t** (QT Deviation Adjustment for Talk Around Mode) @860.50MHz

Same as 1.15 QTDV

- 1.17. **DQDV** (DQT Deviation Adjustment) @815.50MHz

Press PTT and adjust FM Deviation to 0.75kHz by Top PF1 Top PF2 keys.

Equipment: Modulation Analyzer (HP8901B) LPF = 3kHz, HPF = OFF, De-Emphasis = OFF,
Detector = Peak+, Peak Hold

- 1.18. **DQDV_t** (DQT Deviation Adjustment for Talk Around Mode) @860.50MHz

Same as 1.17 DQDV

- 1.19. **DTDV** (DTMF Deviation Adjustment) @815.50MHz

Press PTT and adjust FM Deviation to 3.00kHz by Top PF1 Top PF2 keys.

Equipment: Modulation Analyzer (HP8901B) LPF = 15kHz, HPF = OFF, De-Emphasis = OFF,
Detector = Peak (+/-)

- 1.20. **DTDV_t** (DTMF Deviation Adjustment for Talk Around Mode) @860.50MHz

Same as 1.19 DTDV

- 1.21 **SQ_O** (Squelch Threshold Level Adjustment and RSSI Reference Level Writing)

Input RF signal corresponding to 12dBSINAD-3dB from SSG, and adjust the digit number so that Squelch could be opened by Top PF1 Top PF2 keys.

Equipment: SSG(860.5MHz)

- 1.22 **LRSI** (RSSI Lo Level Writing)

Input RF signal corresponding to 12dBSINAD from SSG, and press orange key to memorize the digit number.

Equipment: SSG(860.5MHz)

- 1.23 **SQ_T** (Squelch Tight Level Adjustment)

Input RF signal corresponding to 12dBSINAD+5dB from SSG, and adjust the digit number so that Squelch could be opened by Top PF1 Top PF2 keys.

Equipment: SSG(860.5MHz)

- 1.24 **HRSI** (RSSI Hi Level Writing)

Input RF signal -70dBm from SSG, and press orange key to memorize the digit number.

Equipment: SSG(860.5MHz)

- 1.25 **BATT** (Battery Warning Level Writing)

Set DC Power Supply at 6.2V and press orange key to memorize the digit number.