

*H. Vance*  
72-44

AN/WEST-LA TUNING INSTRUCTIONS

A. PRELIMINARY STEPS:

	<u>CONTROL</u>	<u>POSITION</u>
MUST BE IN THIS ORDER	1. EMERGENCY STOP	ON
	2. FILAMENT POWER	ON
	3. POWER SELECTOR	ADJ
NO PARTICULAR ORDER	4. EMISSION SELECTOR	CW
	5. FLAME POWER	ON
	6. LOCAL/REMOTE	LOCAL
	7. FSK TEST	LINE
	8. DRIVE ADJUST	BETWEEN 5 AND 6
	9. LOW POWER ADJUST	7
	10. CARRIER TEST KEY	OFF
	11. TUNER CONTROL	TUNER IN
	12. COUPLER ANTENNA	300 to 450 KHZ-1.1/451 to 1500 KHZ-DIRECT
	13. SWR CALIBRATE	4:1 RATIO
	14. TRANSFORMER	300 to 600 KHZ-IN/601 to 1500 KHZ-OUT
	15. OUTPUT METER	RF OUTPUT

300-1500 KHZ - MIDDLE OF COMMERCIAL BROADCAST BAND

CAPABLE OF CW, MACHINE CW, MODULATED CW, AM, & FSK (TTY)

MAX. POWER OUTPUT - 500 WATTS      125 WATTS      500 WATTS

- 1) FILTER & BLOWER - COOL AIR, CLEAN FILTER WEEKLY w/ DETERGENT & WARM WATER.
- 2) POWER PACK - 800 OR 125V. EMERGENCY STOP SWITCH (ALWAYS "ON") (TAKES 6 HRS. TO STABILIZE EQUIP.)  
(PROVIDES VOLTAGE TO HEATERS [OVEN])
- 3) OVEN - MAINTAINS STABILITY OF UNIT. 77 TO 95° F. IN ELECTRICAL FREQ CONTROL (EFC).
- 4) POWER SUPPLY AMP - PROVIDES LOW VOLTAGE. SPEECH AMP. (TUNE = 800V, 100WATT; 500WATT = 125V.)
- 5) RFO - GENERATES CARRIER FREQ. TEMP. CONTROLLED. CARRIER ROTATED BETWEEN RFO & EFC.
- 6) AMP - HIGH POWER AMPLIFICATION OF RF CARRIER. (3 UNITS - DRIVER (1 TUBE), 1PA (2 TUBES), PA (4 TUBES).)
- 7) RF TUNER - CYLINDER BEHIND SET.
- 8) COUPLER - RED CAGE - 125V. DANGER

AN/WRT-1A TUNING INSTRUCTIONS (continued)

3. OPERATING ADJUSTMENTS:

1. Set tuning controls A and B to tens, hundreds, thousands and ten thousands digits of the assigned frequency. (Hz NOT MHz or kHz)  
*.8 MHz      800 kHz      80000 Hz*
  2. Set tuning controls C and D for the assigned frequency in kHz.  
*8000 Hz*
  3. Readjust tuning control D for ZERO indication on FREQUENCY ZERO ADJUST meter.  
*8000 Hz*
  4. Set tuning control F to the assigned frequency in MHz.  
*.8 MHz*
  5. Set COUPLING CONTROL G to a reading of 50.
  6. Set POWER SELECTOR to the TUNE position.
  7. Place CARRIER TEST KEY in the ON position.
  8. Readjust tuning control F for MAXIMUM reading on the RF OUTPUT meter.
  9. Set LOW POWER ADJUST for 100W level on the RF OUTPUT meter.
  10. Place CARRIER TEST KEY in the OFF position.
  11. Set POWER SELECTOR switch to the 100W position.
  12. Place the CARRIER TEST KEY in the ON position.
  13. Alternately depress buttons J or K for an indication on the RF OUTPUT meter. Alternately press buttons J or K while keeping button L depressed for a MINIMUM reading on SWR meter (less than 2:1)\*.
  14. Readjust controls G and F respectively for a MAXIMUM reading on RF OUTPUT meter.
  15. Set LOW POWER ADJUST for 100W level on the RF OUTPUT meter.
  16. Place the CARRIER TEST KEY in the OFF position.
  17. PLACE LOCAL REMOTE SWITCH IN REMOTE POSITION.
- \*If unable to obtain less than a 2:1 SWR ratio add these steps:
- (A) Place CARRIER TEST KEY in the OFF position.
  - (B) Set TRANSFORMER switch to the opposite position.
  - (C) Place CARRIER TEST KEY in the ON position.
  - (D) Return to STEP 13 of the Operating Adjustments and continue.