

## TRANSMITTER SECTION

### Test Equipment Required

- RF powermeter
- 50 ohm load(resistive)
- RF attenuuator
- Oscillator
- Audio generator
- DC power supply(13.8 volt, 2 AMP)
- Spectrum analyzer
- Frequency counter
- Coupler

### Alignment Procedure

| STEP | SETTING                                                                                                            | CONNECTION                                                                                                                   | ADJUSTMENT   | ADJUST FOR                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | RF driver stage-<br>MIC: Transmit<br>Volume: Optional<br>Squelch: Optional<br>CH selector: 19<br>Function: CB      | Connection oscilloscope to base of Q305                                                                                      |              | Waveform on the oscilloscope                                                                                                                                                                                         |
| 2    | RF power stage-<br>MIC: Transmit<br>Volume: Optional<br>Squelch: Optional<br>CH selector:19<br>Function: CB        | Connect dummy load and RF power meter to the EXT-ANT jack on the set                                                         | L301<br>L302 | Maximum indication on the powermeter (3.8 watts)<br><br>If indication is not in 3.8watts range, adjust L301,L302.                                                                                                    |
| 3    | Second harmonic check-<br>MIC: Transmit<br>Volume: Optional<br>Squelch: Optional<br>CH selector:19<br>Function: CB | Connection RF power-meter with dummy load to spectrum analyzer through coupler/-40 dB attenuator to EXT-ANT jack on the set. |              | At no modulation, compare the level of fundamental frequency to the level of harmonic frequency.<br><br>Suppression of the 2nd harmonic frequency level must be lower than 60dB<br><br>Check for the other channels. |

| STEP | SETTING                                                                                                               | CONNECTION                                                                                                                        | ADJUSTMENT | ADJUST FOR                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------|
| 4    | Frequency check-<br>MIC: Transmit<br>Volume: Optional<br>Squelch: Optional<br>CH selector:19<br>Function: CB          | Connect dummy load and frequency counter through coupler to RF power-meter.<br>Connect RF power-meter to EXT-ANT jack on the set. | CT402      | Be sure that the indication of the transmitter frequency is $27.185 \text{ MHz} \pm 300 \text{ Hz}$ on the frequency counter. |
| 5    | TX power LEVEL adjustment-<br>MIC: Transmit<br>Volume: Optional<br>Squelch: Optional<br>CH Selector:1<br>Function: CB | Connect dummy load and oscilloscope through coupler to RF power-meter.<br>Connect audio generator to microphone jack.             | RV801      | Adjust until the power meter's on bar indicate middle 3 and 5                                                                 |