

Tune-Up Procedure
Transmitter Model XR-3
FCC ID# BRWXR-3

Transmitter R.F. Tune Up Procedure

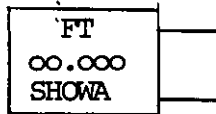
1. Remove 8 screws from transmitter.
Put PC assembly on bench, component side up.
2. Refer to transmitter schematic Figure 4.2.2.
Soften bees wax on cores in L1, L2, L3 and L4.
Using synchroscope with small 50 ohm loop, starting at L1, adjust these cores for maximum synchroscope reading.
Repeat this tuning sequence until no further increase in synchroscope reading can be obtained.
3. The MOD. IN input latch at 0 volt. Observe frequency counter.
Adjust the small ceramic trimmer capacitor on the PC assembly so that output frequency is exactly 2.0 KHz higher than the channel frequency.
4. The MOD. IN input latch at 12 Volt.
Adjust the small trimmer resistor on PC assembly so that output frequency is exactly 2.0 KHz lower than channel frequency for the module.
5. Repeat step 2.
Repeat step 3 and 4.
6. Using spectrum analyzer with small 50 ohm loop, verify that subharmonic and harmonic components are at least 50 dB below carrier component. Pay special attention to 105 MHz and 150 MHz components.
7. Remove PC assembly from Transmitter. Re-apply bees wax to L1, L2, L3 and L4. Put PC assembly back into its case, replace the 8 screws and re-seal opposite edge.

SPECIFICATION OF CRYSTAL UNIT

ORDERD BY J.R

SPEC. No

1. FREQUENCY 18 MHZ (72MHZ) TX
2. HOLDER TYPE HC-50/U
3. FREQUENCY TOLERANCE +- 7 PPM/+25°C
4. EQUIVALENT RESISTANCE 20 OHMS MAX/SERIES
5. OPERABLE TEMPERATURE RANGE -20 °C----- +60 °C
6. TEMPERATURE DRIFT +- 20 PPM
7. LOADING CAPACITY 52 PF
8. DRIVE LEVEL 1 mW
9. SHUNT CAPACITY 7 PF MAX
10. MODE OF OSCILLATION FUNDAMENTAL (AT CUT)
11. INSULATION RESISTANCE 500 M OHMS MIN AT 100 V DC
12. SHOCK TEST
DROPPING FROM 75 CM HEIGHT 3 TIMES ON FIRM WOOD
VARIATION : FREQUENCY LESS THAN +-5 PPM
RESISTANCE LESS THAN +-15 %
13. VIBRATION TEST
FREQUENCY 10 TO 55HZ; AMPLITUDE 1.5mmP-P 1 CYCLE/MINUTES
TEST TIME 120 MINUTES IN EACH DIRECTION
VARIATION : FREQUENCY LESS THAN +-5 PPM
RESISTANCE LESS THAN +-15 %
14. AGING
+- 5 PPM/YEAR
15. MARKING



SHOWA CRYSTAL CO.LTD.

59.12. 100 × 100 (FN)

Figure 4.5

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