

TT26 Tuning Procedure

Trig Avionics Limited
Model Number: TT26
FCC: VZI01629
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Transmitter Tuning

There are three transmitter adjustments: a pair of multiturn trimpots (R4, R35) located near the input of the Q1 and the input of the Q2, and a tuning capacitor (C35) located near the output of Q1.

- 1) Select Mode A interrogation, 400 PRF at level -65dBm on the Test set.
- 2) Turn R4 until an output power of 260W is achieved, or if 260W cannot be reached, the peak power.
- 3) Remove white protective cap from the tuning capacitor, C35.
- 4) While viewing the reported output power, turn the tuning point on C35 with the tuning tool to achieve maximum power for the F1 pulse of the mode A reply.
- 5) Rotate R35 to adjust the F1 pulse to 280W or the peak power if 280W cannot be achieved. Record the power with the lid fitted, normally this value will be greater than 260W.
- 6) Readjust C35 to check that the power is still peaked.

Mode A Pulse shape check

- 1) Select Mode A interrogation, 400 PRF at level -70dBm on the Test set.
- 2) Verify that the test set shows that 100% replies are being received. If this is not the case, stop the adjustment and fail the UUT.
- 3) Fine adjust the trigger delay on an oscilloscope to show a single pulse on the screen (should be the first pulse in the reply train).
- 4) Set the oscilloscope for continuous running. The oscilloscope screen will refresh periodically.
- 5) Check the rise and fall times on the oscilloscope by looking at 5 successive samples and applying the tests to all samples. Press '**Run/Stop**' to pause the sampling on the scope.
- 6) If the width of all samples is between 400 nS and 480 nS, then the UUT is operating correctly.
- 7) If the rise time of all samples is between 60 nS and 98 nS and the fall time of all samples is between 60 nS and 190 nS, then the UUT is operating correctly.
- 8) If the pulse shape values are not within the limits specified in steps 6 and 7 above then fail the UUT.