

### ***MTS10W Transmitter Manufacturing Test Procedure***

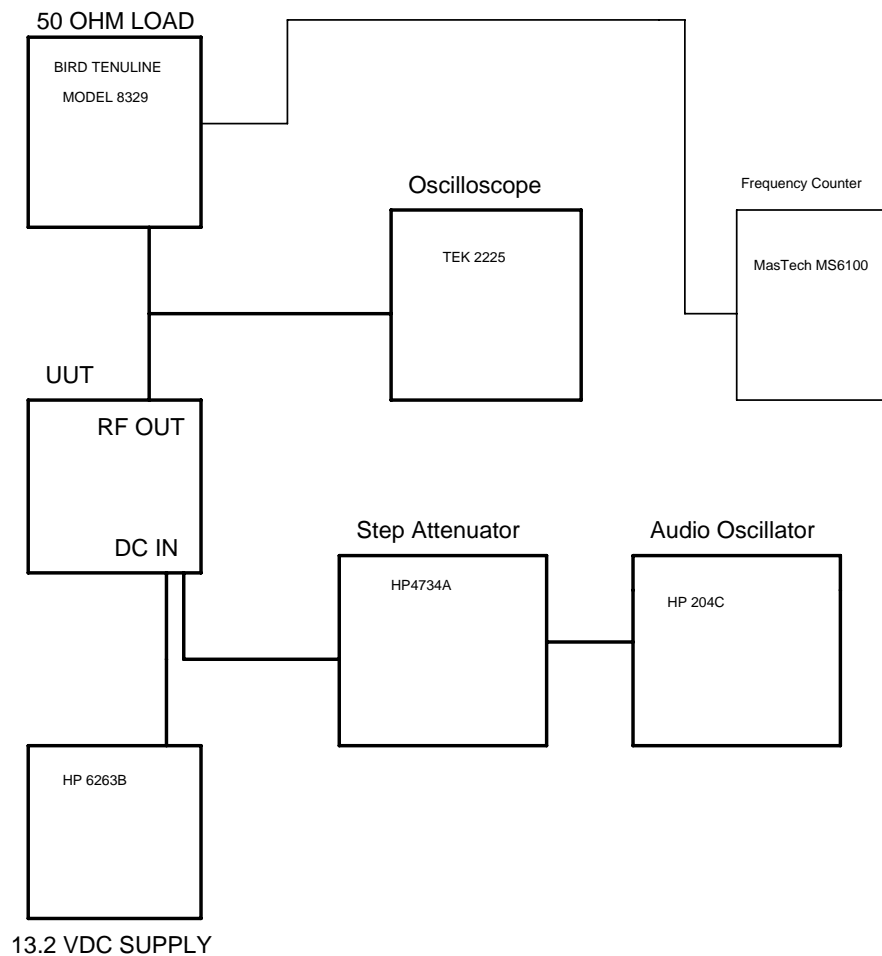
Assemble test equipment per equipment list and Fig 1.

- (1) Set the audio oscillator output to 0.
- (2) Connect the Unit Under Test as shown in Figure 1.
- (3) Apply power.
- (4) Adjust Pot R76, LCD Contrast Adjustment, for correct contrast.
- (5) Start the MTS10W configuration software on the computer.
- (6) Set the operating frequency to 530 kHz by using the drop down frequency control.
- (7) Using the power control slider, adjust the power for 22.4 Volts on the RF Voltmeter.
- (8) Set Pot R66 for an indication of 10.0 watts Forward Power on the LCD Display.
- (9) Disconnect the RF Load at the transmitter.
- (10) Set Pot R59 such that the Forward and Reflected power indicated at the LCD are the same.
- (11) Reconnect the RF Load and note that the Reflected power indicated in the LCD is less than 0.2 watts.
- (12) Check the indicated RF Voltage across the load and note that it is within 0.2 Volts of 22.4 Volts RMS. This insures that the transmitter power is **within 0.2 dB of its rated 10 watt output (+40 dBm 50 ohms)**.
- (13) Note that the frequency counter indicates 530 KHz +/- 2 Hz.
- (14) Change the frequency to 750, 990, 1000, 1010, 1350, and 1700 kHz. After each frequency change perform steps 15 and 16 below.
- (15) Note the output voltage is 22.4 Volts, the RF power displayed on the LCD is 10 watts.
- (16) Note the frequency counter indicates the selected frequency +/- 2 Hz.
- (17) Set the Audio Oscillator frequency to 3.2 kHz. Set the amplitude to 0 dBm. Connect the oscilloscope probe to U7 pin 5. Adjust R53 such that the amplitude of the signal decreases with any increase in frequency. There should be no apparent change in amplitude below 3.2 kHz but the amplitude should decrease noticeably by 3.3 kHz.

(18) Set the Audio Oscillator frequency to 1 kHz. Set the amplitude to -20 dBm. Adjust the Modulation Control, R81, for 98% Modulation as indicated on the Oscilloscope.

(19) Adjust the Audio Oscillator amplitude to +10 dBm and note the Oscilloscope display continues to indicate 98% Modulation.

(20) Install the Transmitter assembly in its cabinet and burn-in at 50 degrees C for 48 hours and repeat steps 1 thru 19.



MULTI-TECHNICAL SERVICES, INC.

Test Setup : Manufacturing Test Setup

By: L. Williams 02/17/2012

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