

Operational Description of ATW-T1801D Transmitter

1. Audio

- 1.1 Audio signal produced by the Microphone element is feed in to the audio IC 200.
- 1.2 Audio signal injected in to the IC200 is then amplified by the internal AF Amp.
- 1.3 Amplified audio signal is feed in to the compander circuit that const by IC250 operational amp and IC251 compander IC, and compressed.
- 1.4 Audio signal that coming from the Guitar cable also feed in to the IC200, through the buffer amplifier, then feed in to the same AF amp listed item 1.2.
- 1.5 The compressed audio signal Is feed in to the IC200 and pre-emphasized and out from the IC200 and adjusted it level to appropriate by VR201.
- 1.6 32.15KHz signal that produced by the tone generator circuit in the IC200, is superposed with the control signal that produced by the micro-controller IC300 and out from the IC200 and adjusted it level to appropriate by VR200.
- 1.7 Properly adjusted Audio and tone signals are mixed and send to the VCO, VCO100.
- 1.8 Q280 detects peak signal level that feed in to the microphone and line input and dimmer the Power LED D349.

2. RF

- 1.9 RF signal produced by the VCO, VCO100 is modulate by the mixed audio and tone signal.
- 1.10 Modulated RF signal is through the buffer amp Q101, feed to the RF amplifier, consist by Q102 and Q103.
- 1.11 Amplified RF signal is then set it RF output power to; Hi position, 30mW by VR101 and Low position, 10mW by VR100.
- 1.12 Amplified RF signal is suppress it harmonics by through Low pass filter consist by L104 to 108, C132 to 136 and feed in to Antenna terminal.
- 1.13 RF signal feed in to the Antenna terminal is then transmitted to the air by antenna screwed on to it.