

# AST258 – TX Operating Elements

## Transmitter:

1. Power supply: Use 9V DC adapter
2. Stereo audio input jack, inside circuit the stereo signal can be combined to single, to modulation carrier wave (FM).
3. Q105, LC (L108, D101, C127, R121, C128) composing voltage-control oscillator (VCO) and frequency modulation circuit.
4. Q102, R111 (transmission line) formed a x2 multiplier from the VCO to about 2.4GHz.
5. Q103, C146 (transmission line), C114, L104, C148 composing a power amplifier for RF as well as to avoid harmonic emanated.
6. FL1 is a B.P.F. centered at 2403.7MHz bandwidth of  $\pm 3$ MHz to avoid harmonic emanated.
7. RF out emanated by a single-core wire at  $\frac{1}{4}$  wavelength of 2.4GHz.