

Model Name ATW-T702

## **Operational Description of ATW-T702 Transmitter**

### **CIRCUIT TO SUPPRESS SPURIOUS RADIATION AND CONTROL MODULATION**

#### **AUDIO CIRCUIT**

- The signal output from a microphone element is input to MIC IN, AF GND.
- The input AF signal is compressed with IC1(2/2) OPAMP and IC2 compander after amplified with IC1(1/2) AF-AMP.
- The circuit consisted with D6, Q2 is modulation limiter.
- 32.768kHz signal is generated by crystal oscillation circuit which consisted with X51, Q51. IC51 is LPF to control spurious which is collaterally generated with TONE oscillation circuit.
- The AF signal is adjusted with VR2, and TONE signal is adjusted with VR51, then mixed to VCO input.
- Users are able to adjust input signal level with VR2.

#### **MODULATOR CIRCUIT**

- The signal output from AF circuit is input to VCO after level adjustment.
- The input signal will be modulated inside VCO to RF signal.
- The modulated RF signal is processed by amplifier circuit after output from VCO.

#### **RF PRE-AMPLIFIER & FINAL AMPLIFIER**

- Users are able to set the desired frequency with SW151.
- The RF signal output from VCO, goes through Q201: 2SC4226 Buffer-AMP, then amplified with Q202, Q203: 2SC5226 transistor.
- The amplified RF signal is adjusted to 10mW at VR202.
- The adjusted RF signal is controlled high harmonic signal level by passing through L204-207, C224-C226 Low-Pass Filters.
- The signal passed through Low-Pass Filters is radiated as RF signal which connected to build in antenna of wireless microphone.