

No. Model Name ATW-T701

ATW-T701 Adjustment Procedure

1. Required Equipment

- | | | |
|-------------------------------------|---------------------------------------|-----------|
| a. Audio Signal Generator | : Leader | LAG-126 |
| b. Oscilloscope | : Kenwood | CS-4035 |
| c. Spectrum Analyzer | : Advantest | R3361A |
| d. Modulation Analyzer | : Anritsu | MS616B |
| e. Noise Meter | : National | VP-9680A |
| f. DC Power Supply | : Kenwood | PA18-1.2A |
| g. Multi Meter | : Agilent | 34401A |
| h. Distortion Meter | Leader | LDM-177 |
| i. RF Custom cable, BNC to MM121454 | : Audio-Technica custom made RF cable | |

2. Default Setting

- 2-1 VR2 Min position.
- 2-2 VR1 Max position.
- 2-3 CNP203 OPEN
- 2-4 SW201 HI position.

3. Adjustment

3-1 LED Lighting Confirmation

- 3-1-1 Long push on SW101 to turn on, then LED turns GREEN for ON status.
- 3-1-2 Short push on SW101 to MUTE, then LED turns RED for MUTE, short push again to cancel MUTE.

3-2 Frequency response

- 3-2-1 Spectrum Analyzer set up:

| | |
|------------------|------------|
| Center Frequency | 552.000MHz |
| ATT | 30dB |
| Frequency Span | 100KHz |
| Counter Mode | ON |

3-2-2 T701 set up

| | |
|-----------------|------------|
| Frequency | 552.000MHz |
| SW 201 position | HI |
| Select ch | 4ch |
| Mute | ON |

3-2-3 Adjustment

- a. Adjust the VC151 to put main carrier signal to center of the screen on spectrum analyzer.
- b. Adjust the VR202 to set main carrier peak leading to 10dBm.
- c. SW201 select Low position.
- d. Adjust the VR201 to set main carrier peak leading to 7dBm.

3-3 Audio deviation level

- 3-3-1 Modulation Analyzer set up

| | |
|-----------------|--------|
| Deviation Sens. | p-p /2 |
|-----------------|--------|

| | |
|-------|-------|
| Range | 40KHz |
| HPF | 300Hz |
| LPF | 3KHz |

3-3-2 Audio Signal Generator set up

| | |
|-------------------|--------|
| Signal Level | -50dBV |
| Into 600 Ω | Load |
| Frequency | 1KHz |

3-3-3 T701 set up

| | |
|-----------------|------------|
| Frequency | 552.000MHz |
| SW 201 position | HI |
| Select ch | 4ch |
| Mute | OFF |

3-3-4 Adjustment

- Apply audio signal from the Audio Signal Generator to the TP3 Mic input , TP4 AF GND.
- Adjust the VR3 to set deviation to +/- 7kHz.

3-4 Tone deviation level

3-4-1 Modulation Analyzer set up

| | |
|-----------------|--------|
| Deviation Sens. | p-p /2 |
| Range | 40KHz |
| HPF | 4kHz |
| LPF | >20kHz |

3-4-2 T701 set up

| | |
|-----------------|-----------|
| Frequency | 552000MHz |
| SW 201 position | HI |
| Select ch | 4ch |
| Mute | OFF |

3-4-3 Adjustment

- Adjust the VR51 to set deviation to +/-6kHz.

4. Performance check

4-1 Microphone input frequency response

4-1-1 Modulation Analyzer set up

| | |
|-----------------|------------|
| Deviation Sens. | p-p /2 |
| Range | 40KHz |
| HPF | 50Hz |
| LPF | 20KHz |
| Frequency | 552.000MHz |

4-1-2 Noise Meter set up

| | |
|-----------|------|
| Response | AVE |
| Weighting | WIDE |

4-1-3 Audio Signal Generator set up

| | |
|-----------|--------|
| Level | -50dBV |
| Frequency | 1KHz |

4-1-4 T701 set up

| | |
|-----------------|------------|
| Frequency | 552.000MHz |
| SW 201 position | HI |
| Select ch | 4ch |
| Mute | OFF |

4-1-5 Measurement procedure

- a. Record the Noise Meter reading and set it as reference (0dB).
- b. Turn the Audio Signal Generator frequency to 100Hz.
- c. Read the Noise meter and confirm that level difference from 1KHz reference not exceeding -2 ± 1 dB of range.
- d. Turn the Audio Signal Generator frequency to 10KHz.
- e. Read the Noise meter and confirm that level difference from 1KHz reference not exceeding $+3 \pm 1$ dB of range.

4-2 Current consumption

4-2-1 Signal Generator set up

| | |
|-------------------|--------|
| Signal Level | -50dBV |
| Into 600Ω | Load |
| Frequency | 1KHz |

4-2-2 T701 set up

| | |
|-----------------|------------|
| Frequency | 552.000MHz |
| SW 201 position | HI |
| Select ch | 4ch |
| Mute | OFF |

- a. Measure the current consumption by the Multi Meter and confirm that it not exceeded 150mA.
- b. SW201 select Low position.
- c. Measure the current consumption by Multi Meter and confirm that it not exceeded 130mA.