No. FM23-0*** Model Name ATW-T1801

ATW-T1801 Adjustment Procedure

1. Required Equipment

a.	Audio Signal Generator	: Leader	LAG-126
b.	Oscilloscope	: Kenwood	CS-4135
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.	RF Custom cable, BNC to MM121454	: Audio-Technica custom made RF cable	

2. How to enter the Adjustment Mode

2-1 Push and hold both SW300 (SET) and SW340 (Power) together until turn the power "ON"

2-2 Push and hold both SW302 (UP) and SW301 (Down) together until "ADJ" appeared on LCD screen.

3. Adjustment

3-1 Frequency response

3-2-1 Spectrum Analyzer set up:

Center Frequency	668.000MHz
Frequency Span	100KHz
Counter Mode	ON

3-2-2 T1801 set up

Frequency	668.000MHz
RF HI / LOW	RF HI
AF Gain	-6DB
Lock	NO.LOC
MIC/INST	MIC
PE ON/OFF	PE ON
LMT. ON / OFF	LMT.OFF
PRESET	PRESET
QUIT	QUIT

3-2-3 Adjustment

a. Adjust the VC300 to put main carrier signal to center of the screen on spectrum analyzer.
b. Adjust the VR101 to set main carrier peak leading to 120.1dBuV.
c. Using power button and switch T1801 output power setting to "RF LOW"
d. Adjust the VR100 to set main carrier peak leading to 115dBuV.

3-2 Pilot tone deviation level

3-3-1 Spectrum Analyzer set up

Center Frequency	668.000MHz
Span	100KHz

Counter Mode	ON
DSP LINE	ON, Set it to 20dBc below peak

3-3-2 T1801 set up

Frequency	668.000MHz
RF HI / LOW	RF HI
AF Gain	-6DB
Lock	NO.LOC
MIC/INST	MIC
PE ON/OFF	PE ON
LMT. ON / OFF	LMT.OFF
PRESET	PRESET
QUIT	QUIT

3-3-3 Adjustment

a. Adjust the VR200 to set level difference between main carrier and tone peak to 20dBc

3-3 Audio deviation level

3-4-1 Modulation Analyzer set up

Deviation Sens.	p-p /2
Range	40KHz
HPF	50Hz
LPF	3KHz
Frequency	668.000MHz

3-4-2 Audio Signal Generator set up

Signal Level	-3dB
Frequency	1KHz

3-4-3 T1801 set up

Frequency	668.000MHz
RF HI / LOW	RF HI
AF Gain	-6DB
Lock	NO.LOC
MIC/INST	MIC
PE ON/OFF	PE ON
LMT. ON / OFF	LMT.OFF
PRESET	PRESET
QUIT	QUIT

3-4-4 Adjustment

a. Apply audio signal from the Audio Signal Generator to the CNP201
b. Adjust the VR201 to set deviation to +/- 33KHz

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	668.000MHz

4-1-2 Noise Meter set up

Response	AVE
Weighting	WIDE

4-1-3 Audio Signal Generator set up

Level	-33dB
Frequency	1KHz

4-1-4 T1801 set up

Frequency	668.000MHz
RF HI / LOW	RF HI
AF Gain	-6DB
Lock	NO.LOC
MIC/INST	MIC
PE ON/OFF	PE ON
LMT. ON / OFF	LMT.OFF
PRESET	PRESET
QUIT	QUIT

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 -1 +/- 1dB 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 +8 +/- 1dB of range.

4-2 Guitar input frequency response

4-2-1

Deviation Sens.	p-p /2
Range	40KHz
HPF	50Hz
LPF	20KHz
Frequency	668.000MHz

4-2-2 Noise Meter set up.

Response	AVE
Weighting	WIDE

4-2-3 Audio Signal Generator set up

Level	-31dB
Frequency	1KHz

4-2-4 T1801 set up

Frequency	668.000MHz
RF HI / LOW	RF HI
AF Gain	-6DB
Lock	NO.LOC
MIC/INST	INST
PE ON/OFF	PE ON
LMT. ON / OFF	LMT.OFF
PRESET	PRESET
QUIT	QUIT

4-2-5 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 0 +/- 1dB 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 +8 +/- 1dB of range.

4-3 Current consumption

a. Set RF power to Hi
b. Measure the current consumption by the Multi Meter and confirm that it not exceeded 210mA.
c. Turn the RF power to Low
d. Measure the current consumption by Multi Meter and confirm that it not exceeded 190mA