ADONIS

AM-7500E

DESKTOP TYPE COMPRESSOR MICROPHONE

(W/NON-MODULATION PREVENTION CIRCUIT
& 4 ELEMENTS GRAPHIC EQUALIZER)

SPECIFICATIONS

- Microphone ---------- Electret Condenser Mic. Element1pcs.
- IC ---------- 3pcs.
- Transistor ---------- 16pcs.
- Diode ---------- 8pcs.
- Compressor Level ---------- HIGH :45 dB, MED : 30 dB, LOW : 10 dB
- S/N Ratio (Graphic Equalizer Part) ---------- 80 dB
- Distortion Factor ---------- 0.05%(at flat)
  (Graphic Equalizer Part)
- Graphic Equalizer ---------- 4elements(270,540,1000,2000Hz)+12dB range
- Output Voltage ---------- COMP : 0-30mV(RMS)
- Matching outputs impedance ---------- 500Ω-100KΩ
- Power Voltage ---------- DC6V(UM3×4 pcs.)
- Current Consumption (at Equalizer "Off") ---- Receiving: 3.5mA, Transmitting: 4.5mA
  (at Equalizer "On") Receiving: 10mA, Transmitting: 11mA
- Alarm Sound ---------- Approx. 4.5KHz Intermittent Tone
- External Size ---------- 227(W)×130(D)×320(H)mm
- Weight ---------- Approx. 950g.

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DESKTOP MICROPHONE AM-7500E INSTRUCTIONS

Thank you very much for your Purchase of "ADONIS" Desktop Microphone Model AM-7500E. To enjoy this unit satisfactorily, please read the instructions carefully and we hope you can enjoy this microphone for a long time.

FEATURES :

o Electret Condenser Microphone Elements equipped.

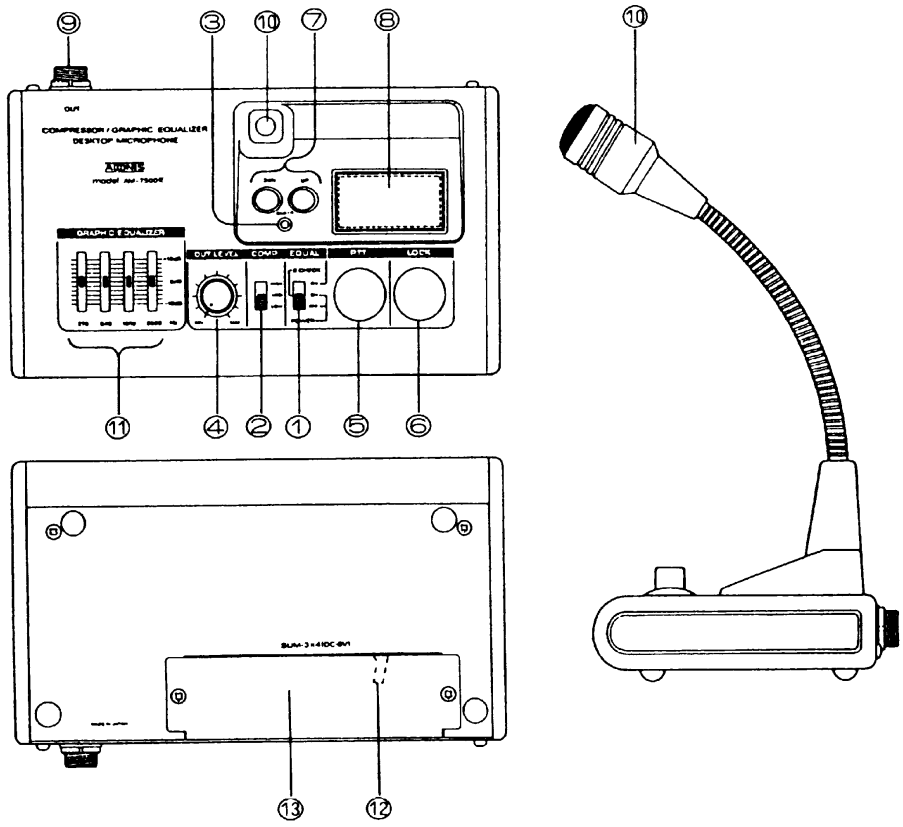
o High Quality Compressor Amplifier (High, Med., Low Selectable) built-in. It sends out always constant and optimum level without distortion regardless of audio input level.

o Equipped with Graphic Equalizer for Optimum Audio Quality Control. The Audio Quality can be controlled by 4 Element Graphic Equalizer with Center Frequencies of 270, 540, 1000 and 2000Hz. It gives best Audio Quality for FM mode and maximum efficiency for SSB mode DX.

o Non-Modulation Prevention Circuit built-in.
After continuous transmitting for a few minutes, the alarm circuit will be activated with alarm sound for 30 seconds. Then, the condition returns to the receiving mode automatically.

o Battery-Check Circuit built-in.
Press the power switch and the level meter indicates the battery condition with power voltage for a few seconds.

CONTROLS(Front Panel and Rear Side) : (Fig. 1)



1)" Power" and Graphic Equalizer ON/OFF Switch (also for Battery Check) :
Set the Power Switch① to "ON" and the Level Meter⑧ indicates the battery Condition. A little while later, the level meter will return to its original function as level meter. To activate the Equalizer function, set the power switch① to "EQUAL ON" position.
(How to Check the Battery)
Turn the Power Switch ① "ON", then the pointer deflects and stops for a few seconds. If the pointer stops at the outside of green-zone, replace the battery to new one.

2) Compressor Level Selector Switch :
o HIGH (45dB) :Select this position when you speak in a low voice or away from the microphone in a quiet place.(The microphone will pick up the noise around the microphone.)
o MED (35dB) :This is optimum position for normal QSO. You can enjoy QSO with enough voice level at 10cm away from microphone.
o LOW (10dB) :The compressor function will activate only when microphone had a big input level of audio. Select this position when you operate at noisy area.

3) "ON AIR" Indicator : Turn the power switch① "ON" and LED Indicator ③ will blink on and off to indicate the receiving condition. The LED③ will light up continuously when transmitting.

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4) Output Level Volume : Use it for control of output level. Adjust it to get an optimum level output. (It has no concern with compressor control and please adjust the level with monitoring the meter pointer not to exceed "0dB".)

5) PTT Switch : Use it for short time QSO. While pressing it, the TX LED Indicator lights up and the condition is transmitting. (When press it, it sounds 'pip'. When releasing the LOCK condition also press this switch.)

6) LOCK Switch : Use it for long time QSO. Press it and it sounds 'peep'. The LED TX indicator③ will light up continuously. The condition is in transmitting until pressing the PTT switch⑤.

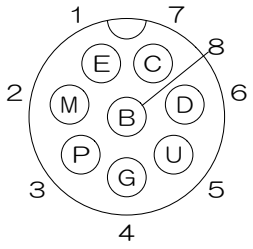
7) UP/DOWN Switch : The same function as the UP/DOWN switch of transceiver. For details, please read the instructions of transceiver.

8) Level Meter : You can watch the output level of AM-7500E with this meter. Adjust the output level not to exceed "0dB". Refer to ④ Output Level Volume and ⑪ Graphic Equalizer Volume Control. It works also as a battery checker for a few seconds just after switching the power "ON".

9) Mic. Output Connector: (8P ADONIS type) Connect with suitable conversion cable optionally available to transceiver. (The conversion cables are provided with a directional condition for connecting. Please connect with microphone correctly.)

Terminals of Microphone Output Connector ⑨ and "ADONIS" standard terminal layout (8P) (Fig. 2)

① E:MIC.EARTH
② M:MIC
③ P:PRESS TO TALK
④ G:PRESS TO TALK(EARTH)
⑤ U:UP
⑥ D:DOWN
⑦ C:U/D COMMON
⑧ B:DC FEEDING(DIRECT CURRENT)

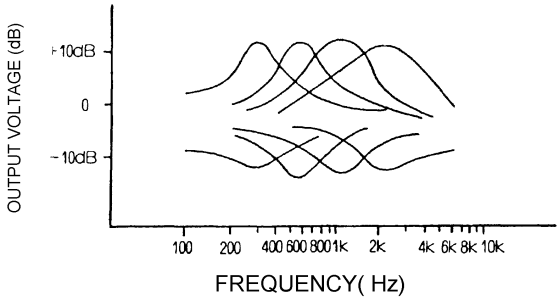


(VIEWED FROM TERMINAL PIN SIDE)

10) Microphone : This model is provided with Condenser type microphone for easy understanding sound quality.

11) Graphic Equalizer Adjustment Volume : The Graphic Equalizer consists of 4 elements with center frequencies 270, 540, 1000 and 2000Hz. The general characteristics including microphone's are designed as shown on the Fig.3 and you can change the output characteristics freely as shown on the Fig. 3. If you speak in a low voice tone, turn down the volume of 270 and 540Hz and clear sound quality can be sent to the transceiver. At DX operation, it is recommendable to slide up the higher tone range, 1000HZ and 2000HZ to get the plain sound quality. When you are in local QSO, turn down the volume of higher tone range and you can send the soft sound quality. The level change of each element is about 12dB and when you increase the all elements 12dB Level, the output level of microphone should be increased by 12dB and you must turn down the output volume accordingly. (The above condition will cause the distortion.)

Graphic Equalizer General Characteristics (Fig.3)



12) The Leadwire for canceling the Non-Modulation Prevention Circuit.

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NON-M:ODULATION PREVENTION CIRCUIT:

When the transmitting condition continues for 2-3 minutes, the alarm circuits will be activated with sounding the alarm for 30 seconds. Then, the condition will return to the receiving condition automatically.

(Timer Reset Function)

When using the microphone with "LOCK"(continuous transmitting), press the "LOCK" switch again and the timer for alarm will be reset and the timer again starts for counting. When sounding the alarm, the alarm will stop by pressing "LOCK" switch.

CANCELLING OF NON-MODLTLATION PREVENTION CIRCUIT:

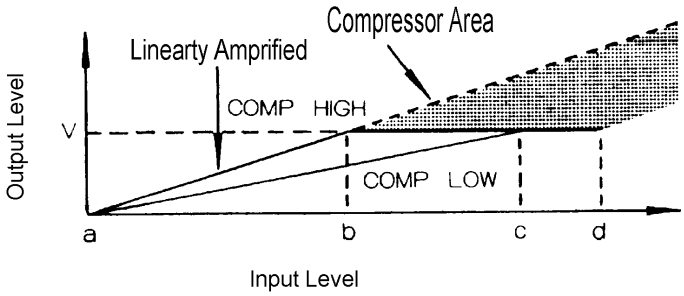
Remove the battery cover⑬ and cut off the leadwire⑫ yellow which is the wire for canceling. the Non-Modulation Prevention Circuit. After cutting, please be sure to cover the wires (tip of wire) with insulation tape.

13) Battery Cover : Remove the 2 set screws of bottom plate and set the batteries (4 × UM3) correctly. The batteries are not provided with this microphone. (Optional Accessories: External Power Supply Adaptor model PS-6A will enable you to use with DC13.8V External Power Supply Unit.)

COMPRESSOR AMPLIFIER FUNCTION:

Compressor Amplifier serves constant distortionless output level regardless of the audio input level conditions. In other words, depending on the audio input level, electrical volume control is automatically made. Please refer to the sketch below. The input levels from 'a' to 'b' are linearly amplified and from 'b' to 'd' are compressed. The compressor level means the voltage ratio of input levels at 'b' and 'd'. For example, at compressor "HIGH" compressor area Includes from 1mV and it has 45dB compressor Level minimum. So, you can send out the constant output level regardless voice, whispering, small or loud. By the constant output level, you can extend the communication distance by using rated output power of transceiver without any loss. So, now it becomes common to use compressor amplifier between transceiver and microphone.

Comperessor Characteristic Curve(Fig.4)



CAUTIONS :

* Please be sure to use "ADONIS" conversion cables optionally available. Please refer to the table of Microphone Cables.
* Even when you use the "D" type microphone cables, you cannot supply the power from transceiver. Please use the batteries.
* Please be careful about high SWR of antenna and incomplete earthing, since it may cause the trouble of RF Feedback Noise depending on coaxial cable layout.
* Please be sure to turn the power switch "OFF" after QSO.
* It is recommendable to use the Alkaline batteries.
* Do not place the microphone near high temperature area or under direct sunlight.

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