



# Operating Instructions



**AT60-3**  
&  
**AT120-3**  
**Mixer Amplifiers**

## Audio Telex Communications Pty Ltd

ACN 001345482 Incorporated in NSW

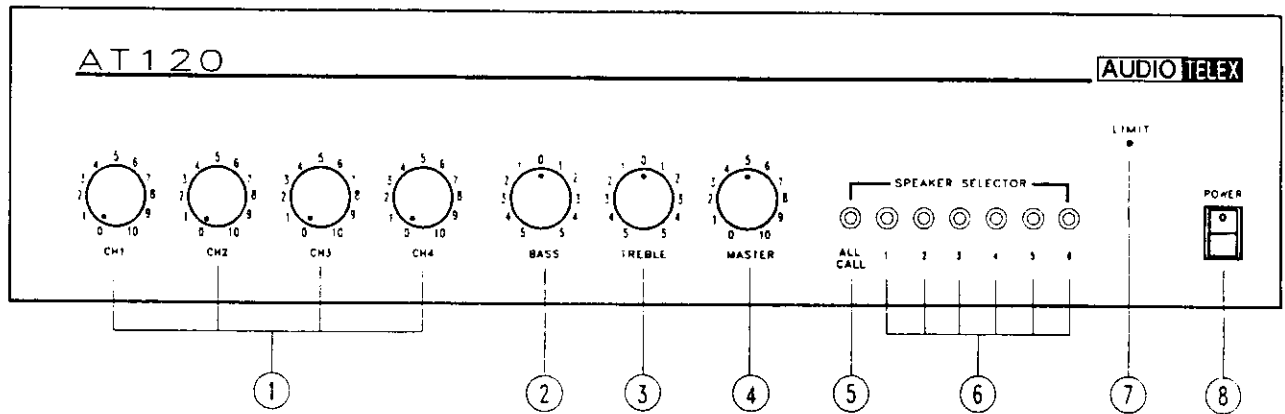
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# AT60-3 Mixer Amplifier & AT120-3 Mixer Amplifier

## Product Description

The AT60 is a 60 watt mixer amplifier and similarly the AT120 is a 120 watt mixer amplifier. Both models operate on 240 VAC, 50 Hz (or 110 VAC with factory modification) and may be desk or rack mounted via an optional rack mount kit. Both amplifiers incorporate a 6 zone 100 volt line speaker zone selector with all call. The AT60 will deliver 60 watts into a load of 8 ohms, 70 or 100 volt line. The AT120 will deliver 120 watts into a load of 4 or 8 ohms, 70 or 100 volt line. As standard both models are self standing and come with rubber feet. They may be stacked to a maximum of four units high.

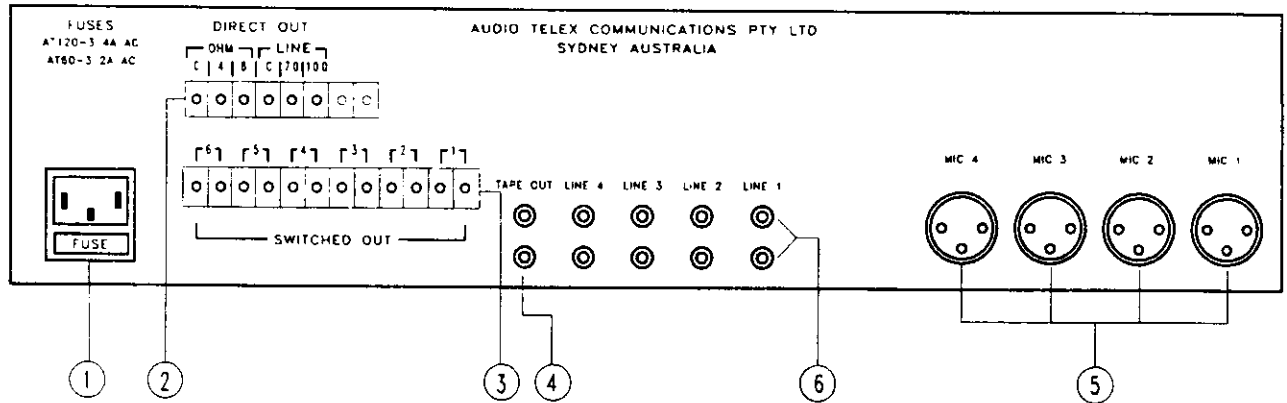
## Front Panel Controls



- Dual Microphone/Line Gain Controls:** The 4 dual mic/line input controls are labelled Ch 1 through to Ch 4 and should be adjusted to provide the required mix level for each individual channel. Start with the controls set to level 0 and turn the controls clockwise until the desired mix level for each channel is reached.
- Bass Tonal Control:** Setting this control in the centre position will give an overall flat bass response to the output of the amplifier. Adjusting the bass control in a clockwise direction will provide up to 12 dB of bass boost @ 100 Hz. Adjusting the bass control in a counter-clockwise direction will provide up to -12 dB of bass cut @ 100 Hz.
- Treble Tonal Control:** Setting this control in the centre position will give an overall flat treble response to the output of the amplifier. Adjusting the treble control in a clockwise direction will provide up to 10 dB of treble boost @ 10kHz. Adjusting the treble control in a counter-clockwise direction will provide up to -10 dB of treble cut @ 10 kHz.
- Master Output Control:** This controls the overall output level of the amplifier depending on the levels set for the individual input mix channels as detailed above. Start with the control set to level 0 and turn clockwise until the desired output level of the amplifier is reached.
- All Call Button:** When pressed, this orange button will connect the 100 volt output of the amplifier to all 6 of the switched outputs of the amplifier. Depressing this button again will disconnect the switched outputs. This switch is "push on-push off" and is non-interlocking.
- Speaker Selector Switches:** These 6 black buttons are for switching the 100 volt output of the amplifier to any combination of the 6 available speaker zones. The switches are "push on-push off" and are non-interlocking (both with each other and with the all-call button). The maximum capacity of each speaker zone is 60 watts so care should be taken to ensure that no individual zone is loaded down with any more than 60 watts, always remembering that the total load for the AT60 is 60 watts in total and for the AT120, 120 watts in total. Eg; It is possible on the AT120, for example, to safely have one zone loaded with 60 watts and the remaining five loaded with 12 watts each.

7. **Limit LED:** This red LED is designed to give the user an indication of the operating condition of the amplifier and is integral to the inbuilt protection included in the amplifier. This LED will glow red if the amplifier is operating into an excessive load or if one or more of the input channels is supplying an unacceptably high level of signal. It is normal for this LED to flicker on and off however, if it glows steady, the amplifier will shut down for a period of approximately 3 seconds and continue to cycle in this fashion until the abnormal connection is removed or rectified. This is a feature of the amplifier designed to protect the amplifier circuitry and the speakers connected to the output.
8. **Power Button:** This switch controls the switching of AC power to the amplifier. Rocking this switch upwards turns on AC power to the amplifier while rocking the switch downwards turns power off to the amplifier. When in the upward position, the red neon in the body of the switch will glow.

## Rear Panel Connections



1. **3 Pin IEC Mains Power Inlet:** The operating voltage is 240 VAC @ 50 Hz or 110 VAC @ 60 Hz. The AC power voltage level is not externally user adjustable but is factory pre-set. The inlet is equipped with an inbuilt AC fuse holder fitted with a 4 amp fuse (AT120) or a 2 amp fuse (AT60) plus a spare for each found within the holder. Power consumption is 225VA for the AT120 and 125VA for the AT60.

⚠ **Please ensure that the mains power cord is disconnected before attempting to check or replace this fuse.**

2. **Direct Output Terminal Strip:** These screw terminals allow access to the direct outputs of the amplifier. 2 spare screw terminals allow for the connection of various tone module accessories. Reading from left to right the terminals are-

- Low Impedance Common
- 4 Ohms (Not available on AT60)
- 8 Ohms
- Constant Voltage Common
- 70 Volt Line
- 100 Volt Line
- Spare
- Spare

Note: The minimum impedance at any time on maximum load for 100 Volt line should be no less than 80 Ohms for the AT120 and no less than 170 Ohms for the AT60.

3. **Switched Outputs Terminal Strip:** Reading from left to right these screw terminal pairs correspond to the switched 100 volt line outputs numbered 6 through 1 as indicated on the front panel of the amplifier. For each pair, the left hand terminal is the common and the right hand terminal is the 100 volt output
4. **Tape Output:** RCA style phono output connector for line level output. Provides a maximum of 350mV into 10K Ohms, ideal for a connection to most standard tape recorders. This output is sourced before the master gain control and as such, the tape output level is not influenced by the operation of the master gain control.

5. **Active Balanced, XLR Sockets For The Microphone Inputs.** With an input sensitivity of 0.8mV @ 200 ohms. Pin connections are: pin #1-earth; pin #2-active (high, +); pin #3-active (low, -). Phantom power of +15 volts is available on all microphone inputs. Reading from left to right across the rear panel, the connection are for microphone inputs 4, 3, 2, & 1 respectively.
6. **RCA Sockets For The Monaural Line Level Inputs.** Inputs #'s 1, 2 & 3 have an input sensitivity of 75mV @ 47K ohms. Input #4 has an input sensitivity of 250 mV @ 47K ohms making it suitable for high level inputs such as a CD player. Reading from left to right across the rear panel, the connections are for inputs 4, 3, 2, & 1 respectively.

## Optional Accessories

⚠ The installation of some of the following optional accessories involves access to the inside of the amplifier. Installation should only be attempted by a qualified technician. Always turn off the AC power and remove the AC power cord before attempting to access the inside of the amplifier. Please contact your nearest Audio Telex office for details of your nearest qualified technician.

**Tone Generators:** Four separate tones are available as an option via the ATC5488 tone generator board. This internally mounted PCB is easily fitted and plugs directly into a socket provided on the internal circuit board PCB6198. Please follow the instructions supplied with the tone generator. When any tone from the ATC5488 is activated all inputs will automatically mute except for input one.

Tones available on the ATC5488 tone generator board are:

Evacuation Tone (to Australian Standard AS2220.1.2)

Alert Tone (to Australian Standard AS2220.1.2)

Bell Tone

Pre Announce Chime

**TX3010 Vox Muting Module.** When installed (as per the comprehensive instructions supplied with the TX3010), channel 1 of the amplifier will mute channels 2, 3 & 4 of the amplifier.

**ATRMKBLK.** 19" rack mount kit

## Fuse Sizes AT120 Amplifier

**Mains 240 VAC:** 4 Amperes Slow Blow

## Fuse Sizes AT60 Amplifier

**Mains 240 VAC:** 2 Amperes Slow Blow

## Notes

The DC fuse is located on the circuit board. This is a feature of the AT series amplifiers, which is equipped with a current limiting circuit preventing excessive DC currents, thus eliminating the risk of blowing high tension fuses. In the unlikely event that the DC fuse actuates, the output transistors should be checked, as it is probable that the amplifier has been subjected to very extreme conditions.