

**OPERATING  
INSTRUCTIONS AT  
SERIES PA MIXER  
AMPLIFIER**

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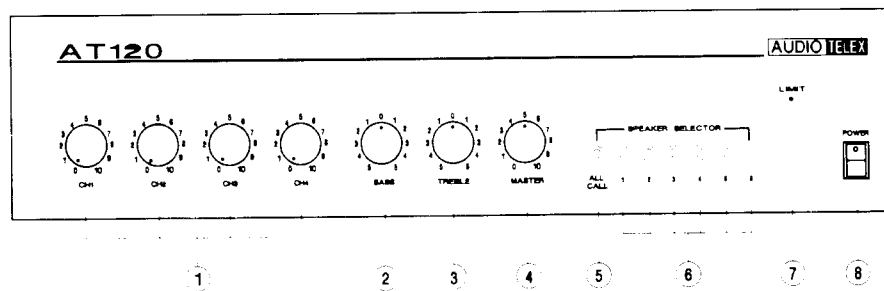
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## AT SERIES MIXER AMPLIFIERS

Congratulations on purchasing an AT Series Mixer Amplifier. As you are no doubt aware, **MAINS POWER MUST BE DISCONNECTED BEFORE REMOVING THE LID OR MAKING ANY INTERNAL ADJUSTMENT TO THE AMPLIFIER**

The AT Mixer Amplifiers are self standing with rubber feet. They may be stacked to a maximum of four units high. An IEC type mains cord and receptacle is provided, the receptacle also houses the mains fuse in a drawer, which pulls open to expose the fuse.

## SETTING UP



PANEL CONTROLS (fig 1);

**1 CH1-4** Marked one to four these controls will respond to either Microphone Inputs or the Auxiliary Inputs connected at the rear of the amplifier ( *see Connections later in these instructions* ).

The setting will depend upon the sensitivity of the Microphone or Auxiliary program source. Generally a setting of seven will be ideal for a standard dynamic microphone and five for most program inputs. However as conditions vary , adjust the setting to suit the required performance level for your system.

**2 BASS** The Bass control will normally be operated in the mid position (5) to obtain a flat response from the amplifier. To boost the bass response of the amplifier , turn the control towards the higher number setting .To reduce bass response turn the control toward the lower numbered setting . **For many paging only systems it is a good idea to operate the bass control in a lower setting, to cut bass and improve intelligibility, however this may depreciate the amplifiers' performance for music reproduction.**

**3 TREBLE** The Treble control will normally be operated in the mid position (5) , to obtain a flat response from the amplifier .To boost the high frequency response of the amplifier , turn the control towards the high numbered setting. To reduce the high frequency response of the amplifier , turn the control towards the lower number setting.

**4 MASTER** This control adjusts the overall volume from the output of the mixer section of the amplifier. The normal position for this control is 6, providing scope for the volume level to be adjusted up or down from the normal position as required.

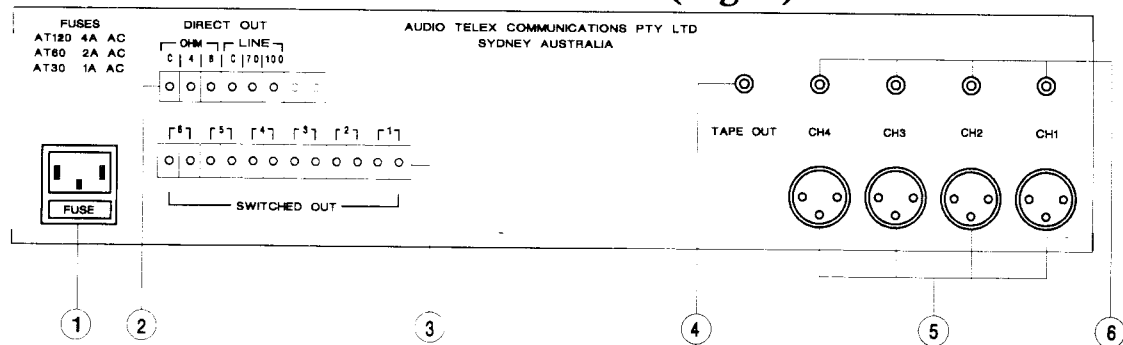
**5 ALL CALL** The ORANGE "All call " switch when pushed on , will connect the 100 volt output of the amplifier to **all speakers or zones** .Push the switch again to turn off this function.

**6 SPEAKER SELECTOR** The speaker selector consists of six BLACK speaker or zone selector switches designated one to six ( four in the case of the AT30 ) . Press the switch "IN" to turn it on, this will connect the 100 volt output of the amplifier to the speaker or zone selected . Push the switch again to turn off this function. Any combination of switches may be activated simultaneously , Each switch has a maximum capacity of 60 watts. Care should be taken to ensure the total power of the amplifier is not exceeded( *Connection for each of the speaker or zones is made at the rear of the amplifier , see "Connections " later in these instructions.* )

**7 LIMIT** The light emitting diode designated "Limit", will provide the user with an indication of any overload condition of the amplifier setting. The lamp will normally flicker occasionally RED when the amplifier is operating normally. If the lamp flickers RED for lengthy periods or glows continuously, the amplifier is being overdriven by the incoming program or microphone. If this condition is combined with a maximum load on the output the amplifier will shut down for two seconds and then turn itself back on. Should the condition still apply, the amplifier will continue to cycle off and on until the condition is removed. This is a feature of the amplifier designed to protect the amplifier circuitry and the speakers connected to the output.

**8 POWER** The switch designated "Power", turns the mains power to the amplifier "ON/OFF". A lamp will glow Red to indicate the amplifier is turned on.

**CONNECTIONS ( fig 2 )**



**1 THREE PIN IEC MAINS INLET** 240/ 120 vac with inbuilt fuse in a pull out drawer. The mains cord must be removed before the drawer can be pulled to expose the fuse. Note the fuse ratings indicated above the IEC connector are the correct AC fuse ratings for 240 VAC operation.

**2 DIRECT OUTPUT TERMINAL STRIP** counting left to right :

- C... Common connection for low impedance outputs
- 4.... 4 ohm output connection (AT120 only)
- 8.... 8 ohm output connection
- C..... Common connection for constant voltage outputs
- 70.... 70 volt output
- 100.. 100 volt output
- Spare Terminal
- Spare Terminal

**3 SWITCHED OUTPUT TERMINAL STRIP** counting left to right:

- 6.... 100 volt output connections for speaker switch 6
- 5 100 volt output connections for speaker switch 5
- 4 100 volt output connections for speaker switch 4
- 3 100 volt output connections for speaker switch 3
- 2 100 volt output connections for speaker switch 2
- 1 100 volt output connections for speaker switch 1

**NOTE 1**

For model AT30 there are four only switched speaker output connections.

**CONNECTIONS ( CONT )**

**4 TAPE OUTPUT CONNECTION** high impedance RCA type phono socket.

**5. MICROPHONE INPUTS** Four XLR Switchcraft female 3 pin active balanced microphone inputs . 200 ohms, designated CH4 CH3 CH2 CH1. Connections are :

Pin 1 ..... earth

Pin 2 ..... active balanced

Pin 3 ..... active balanced

**6. AUXILIARY INPUTS** Four RCA type single auxiliary inputs for tape or other high level program source, designated CH4 CH3 CH2 CH1 .

**NOTE 2**

All four inputs designated CH1 TO CH4 can be used for microphone and auxiliary input sources. It is also possible to connect both microphone and auxiliary inputs to one channel simultaneously, however their relative levels to one another will be fixed ,as there is one gain control for each channel on the front panel.

**ACCESSORIES**

**TX3010 MUTING MODULE** : By means of the TX3010 all AT Amplifiers provide the facility to mute Channels 2 and 3 automatically , from Channels 1, 2 or both.

Muting is voice switched from a microphone or auxiliary input. It is assumed that for most applications , microphone inputs would be connected to Channel 1 or 2 and auxiliary inputs connected to Channels 3 or 4 . Once the muting module is installed , any voice input from the microphones or auxiliary inputs in Channel 1 or 2 will automatically mute Channels 3 & 4 . Instantly the voice input ceases, both muted channels will revert to their previous condition.

**INSTALLATION** ; To install the TX3010 muting module ;

**A.** Disconnect the mains power remove the mains cord .

**B.** Remove the lid which is held to the chassis by 5 screws on either side of the cabinet and 4 screws on the top of the lid.

**C.** Locate the 5 pin socket on the circuit board associated with Channels 1 & 2.( It is the only 5 pin socket on the board.)

**D.** Plug the TX3010 module in to the socket and attach it to a convenient area on the base of the amplifier chassis by means of the industrial double sided tape provided on the module. Don't forget to remove the protective film to expose the adhesive side.

**E.** Replace the lid and reconnect the mains power.

**TONE GENERATOR MODULES**

Four types of tone modules are available for use with AT Amplifiers ;

ATC5227-1 Continuous bell tone

ATC5228-1 Pre announce tone

ATC5229-1 Evacuation tone ( complies with AS2220.1 )

ATC5230-1 Alert tone ( complies with AS2220.1 )

A feature of the modules is the automatic muting function , which mutes input number 4 of the AT amplifier automatically, when the tone generator is operated.

# OPERATING INSTRUCTIONS

# AT SERIES AMPLIFIERS

## INSTALLATION : Tone Generators ;

- A. Disconnect the mains power and remove the mains cord
- B. Remove the lid which is held to the chassis by 5 screws on either side of the cabinet and 4 screws on the top of the lid.
- C. Locate the 7 pin socket on the circuit board. ( There is only one 7 pin socket on the board, )
- D. Plug the Tone Module in to the socket and attach it to a convenient area on the base of the chassis, by means of the industrial tape provided on the module.
- E. Connect the on/off wires to the spare terminal on the direct output terminal strip at the rear panel of the amplifier. By means of these terminals , the tone generator may be connected to any remote switch to turn the generator on and off.
- F. Replace the lid and reconnect the mains power.

## NOTE 3

Full connection and circuit details are supplied with each module.

## AT AMPLIFIERS FUSE RATINGS FOR 240 VAC.

Located on the rear panel ;

AT30 .... 1 amperes ac

AT60 .... 2 amperes ac

AT120 ... 4 amperes ac

## NOTE 4

The DC high tension fuse is located on the circuit board . This is a feature of the AT Amplifier, 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 high tension fuse actuates , the output transistors should be checked , as it is probable the amplifier has been subjected to very extreme conditions .

TECHNICAL SPECIFICATIONS	AT30	AT60	AT120
Freq Response	50hz -- 15 khz +- 3dB		
Power Output (rms)	30W	60W	120W
Max Load	333 ohms	170 ohms	80 ohms
Mic / Aux Inputs	4	4	4
Mic Sensitivity	1mv	1mv	1mv
Aux Sensitivity	300mv	300mv	300mv
Signal to noise	-76dB	-76dB	-76dB
Outputs	100/70V 8 ohms	100/70V 8 ohms	100/70V 8&4 ohms
Distortion @1khz	0.2%	0.2%	0.4%
Tape Output	300mv	300mv	300mv
Phantom Power(15v)	CH1	CH1	CH1
Speaker Selection (100v)	4 zones	6 zones	6 zones