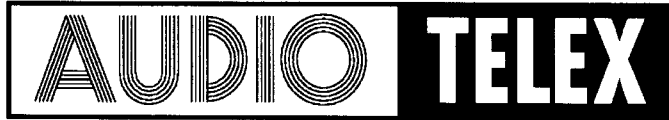


# Operating Instructions



COMMUNICATIONS PTY LTD

www.audiotellex.com

**ACM60**  
&  
**ACM120**  
**Mixer Amplifiers**





## Audio Telex Communications Pty Ltd

ACN 001345482 Incorporated in NSW

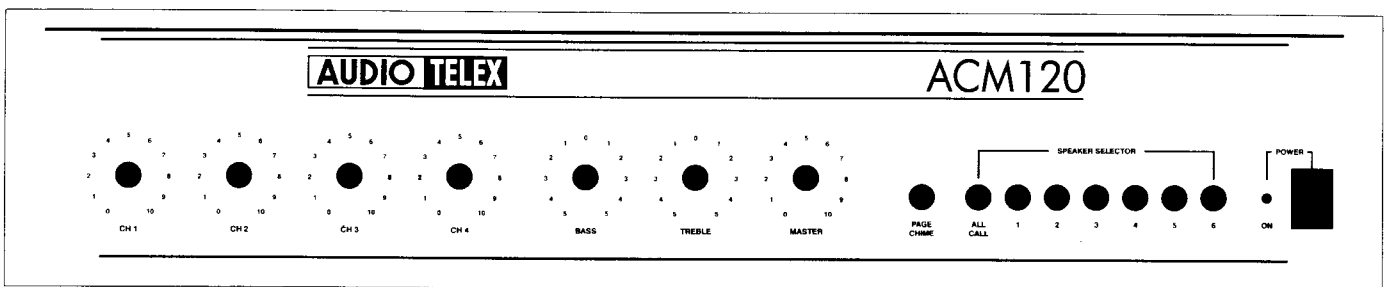
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# ACM60 Mixer Amplifier & ACM120 Mixer Amplifier

## Product Description

The ACM60 and ACM120 mixer amplifiers are designed for commercial installations. Both models operate on 240 VAC, 50Hz (or 110 VAC, 60Hz 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 ACM60 will deliver 60 watts into a load of 8 ohms, 70 or 100 volt line. The ACM120 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



(ACM120 shown. The ACM60 has identical front panel features)

**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 level mix 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 Control:** Setting this control in the centre position will give an overall flat bass response. 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 Control:** Setting this control in the centre position will give an overall flat treble response. Adjusting the treble control in a clockwise direction will provide up to 9 dB of treble boost @ 10kHz. Adjusting the treble control in a counter-clockwise direction will provide up to -9 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 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.

**Page Chime Button:** This allows the user to disable or enable the Pre-Announce Chime. This switch does not however activate the chime. Activation is accomplished via the rear panel barrier strip (normally wired to a paging microphone). If the pre-announce chime is connected to a paging microphone (meaning that it would be activated by the switch on the microphone), the Page Chime switch on the front panel of the amplifier allows the user to disable the chime function for those occasions when it is not wanted.

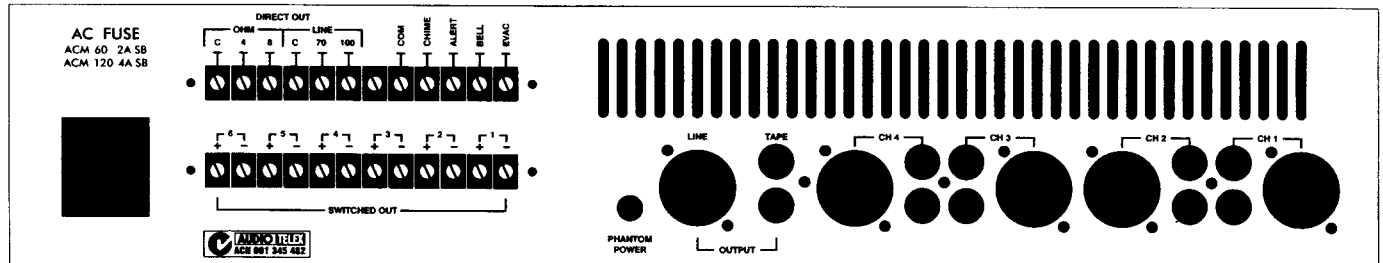
**All Call Button:** When pressed, the All Call button will connect the 100 volt output of the amplifier to all 6 of the switched outputs. Depressing this button again will disconnect the switched outputs. This switch is "push on-push off" and is non-interlocking.

**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 ACM60 is 60 watts and for the ACM120, 120 watts in total. **Eg;** It is possible on the ACM120, for example, to safely have one zone loaded with 60 watts and the remaining five loaded with 12 watts each.

**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. A red LED to the left on the switch will indicate whether the amplifier is switched on or off.

## Rear Panel Connections



(ACM120 shown. The ACM60 does not have a 4 ohm output)

**3 Pin IEC Mains Power Inlet:** The operating voltage is 240 VAC @ 50 Hz or 110 VAC @ 60 Hz. The AC power voltage is factory set and not externally user adjustable. The inlet is equipped with an inbuilt AC fuse holder fitted with a 4 amp fuse (ACM120) or a 2 amp fuse (ACM60) plus a spare within the holder. Power consumption is 125 watts for the ACM60 and 250 watts for the ACM120.

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

**Direct Output Terminal Strip:** The screw terminals on the left hand side of the strip allow access to the direct speaker outputs of the amplifier. The screw terminals on the right hand side are for activation of the in-built 4 tone generator. Reading from left to right the terminals are:

- Low Impedance Common (use with 4 or 8 ohms)
- 4 Ohms (not available on ACM60)
- 8 Ohms
- Constant Voltage Common (use with 70v or 100v)
- 70 Volt Line
- 100 Volt Line
- Spare
- Tone Generator Common (use with one of the 4 tones listed below)
- Pre-Announce Chime
- Alert Tone
- Bell Chime
- Evacuation Tone

**Note:** The minimum impedance (or maximum load) at 100 Volt line should be no less than 80 Ohms for the ACM120 and no less than 160 Ohms for the ACM60.

**Switched Outputs Terminal Strip:** Reading from left to right, these screw terminal pairs correspond to the switched 100 volt line outputs and are numbered 6 through 1 as indicated on the front panel of the amplifier. For each pair, the left hand terminal is the 100 volt output and the right hand terminal is the common.

**Phantom Power Button:** This button enables or disables the 18 volts DC phantom power which is available on all microphone inputs (XLR's). The "in" position indicates that phantom power is on for all mics. The "out" position means that phantom power is switched off for all mics. Phantom power is required for electret condenser microphones which require DC power to operate. While some of these microphones can operate from an internal battery, having phantom power available on the amplifier eliminates

the need to regularly change batteries in the microphone. While phantom power is not required for the more common Dynamic microphones, it will not damage them providing that they are balanced. **Do not plug an unbalanced microphone in any amplifier or mixer when phantom power is switched on.**

**Line Output:** The balanced XLR line level output provides a maximum of 700mV to allow for connection to up to 6 power amplifiers. Simply run a balanced cable from the line out of the ACM60 or ACM120 to the line input of the power amplifier. Pin connections are: pin #1-earth; pin #2-signal (high, +); pin #3-signal (low, -).

**Tape Output:** RCA style phono output connectors provide a line level output with a maximum of 350mV into 10K Ohms which is 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.

**Active Balanced, XLR Sockets For The Microphone Inputs.** The mic input sensitivity is 1mV @ 200 ohms. Pin connections are: pin #1-earth; pin #2-signal (high, +); pin #3-signal (low, -). Phantom power of +18 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.

**RCA Sockets For The Monaural Line Level Inputs.** Line inputs 1, 2 & 3 have an input sensitivity of 75mV @ 47K ohms. Input 4 has an input sensitivity of 300mV @ 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.

## Other Features

**Tone Generators:** Four separate tones are available from the in-built tone generator board. All four tones can be activated individually via a contact closure connected to the screw terminals on the rear of the amplifier. To activate the bell chime for example, just run a pair of wires from the Tone generator common and the Bell terminal to an external switch. Activating the switch, or closing the pair of wires, will activate the bell. When any tone is activated, all inputs (except for inputs one and two) will automatically mute. **To adjust the level of the tone generator,** disconnect the power lead, remove the amplifier lid and locate the pot labeled R6. (located behind the Bass adjustment pot). This pot adjusts the level for all 4 tones.

Tones available on the ACM60 and ACM120 include:

- Evacuation Tone (to Australian Standard AS2220.1.2)
- Alert Tone (to Australian Standard AS2220.1.2)
- Bell Tone
- Pre Announce Chime

**Muting:** A VOX muting card is installed in the ACM60 and ACM120. This feature provides automatic muting of some channels when others are active. It is normally used so that a paging microphone can have priority (by muting) over background music. VOX muting is available from channels 1 and 2 meaning that any signal on channels 1 and 2 (mic or line) will mute channels 3 & 4. The muted channels will automatically ramp back up to normal volume when the signal on channels 1 and/or 2 is no longer active. **The amplifier ships with the VOX muting function enabled.** To disable the VOX muting, disconnect the mains power lead and remove the lid of the amplifier. Looking down from the front of the amplifier, a three position jumper (labeled JP2) is located just to the left and behind the level pot for channel 1. To disable VOX muting, move the jumper to the middle and left pins. (Factory setting for VOX enabled is the jumper on the middle and right pins).

**Accessories:** ACMRK: 19" rack mount kit

**Fuse Sizes:** Mains ACM120, 240 VAC: 4 Amperes Slow Blow  
Mains ACM60, 240 VAC: 2 Amperes Slow Blow

## Notes

The DC fuse is located on the circuit board. This is a feature of the ACM 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.