

Operating Instructions



**ACM250
Mixer Amplifier**





Audio Telex Communications Pty Ltd

ACN 001345482 Incorporated in NSW

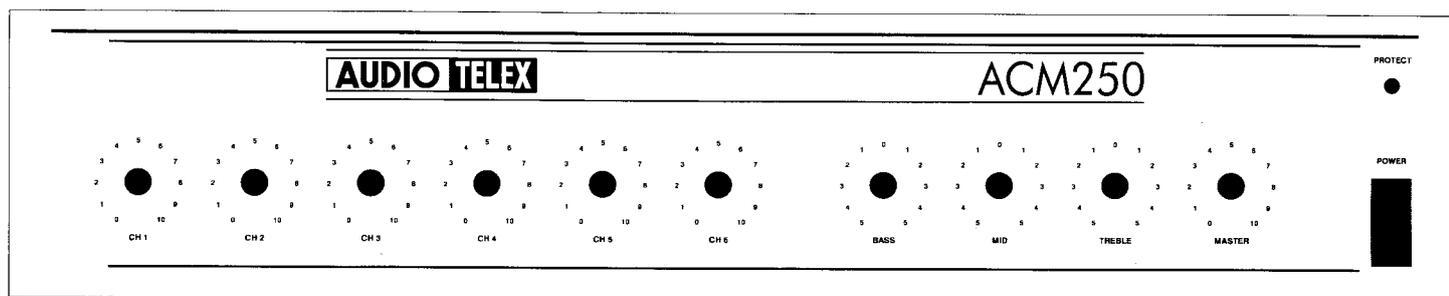
NSW & ACT 149 Beaconsfield Street Private Bag 149 Silverwater NSW 2128 Australia Ph 02 9647 1411 Fax 02 9648 3698	QLD & NT 42 Commercial Road PO Box 871 Fortitude Valley QLD 4006 Ph 07 3852 1312 Fax 07 3252 1237	VIC 22/277 Middleborough Road Box Hill VIC 3128 PO Box 151 Blackburn South VIC 3130 Ph 03 9890 7477 Fax 03 9890 7977
WA 299 Fitzgerald Street West Perth WA 6005 PO Box 404 North Perth WA 6906 Ph 08 9228 4222 Fax 08 9228 4233	SA Electronic Concepts Pty Ltd 76 George Street Thebarton SA 5031 PO Box 7034 Hutt Street Adelaide SA 5000 Ph 08 8234 9444 Fax 08 8234 9441	TAS K W McCulloch Pty Ltd 54a Albert Road Moonah TAS 7009 Ph 03 6228 6373 Fax 03 6278 1063
New Zealand Unit B, 11 Piermark Drive PO Box 512 Albany NZ 1331 Ph 09 415 9426 Fax 09 415 9864		

ACM250 Mixer Amplifier

Product Description

The ACM250 mixer amplifier is designed for commercial installations. It operates on 240 VAC, 50Hz (or 110 VAC, 60Hz with factory modification) and may be desk or rack mounted via an optional rack mount kit. The ACM250 delivers 250 watts into a load of 4 ohms, 70 or 100 volt line. As standard, the ACM250 is supplied self standing with rubber feet. They may be stacked to a maximum of four units high.

Front Panel Controls



Dual Microphone/Line Gain Controls: The 6 dual mic/line input controls are labelled Ch 1 through to Ch 6 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.

Mid Control: Setting this control in the centre position will give an overall flat middle response. Adjusting the mid control in a clockwise direction will provide up to 12 dB of mid boost @ 600 Hz. Adjusting the mid control in a counter-clockwise direction will provide up to -12 dB of mid cut @ 600 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.

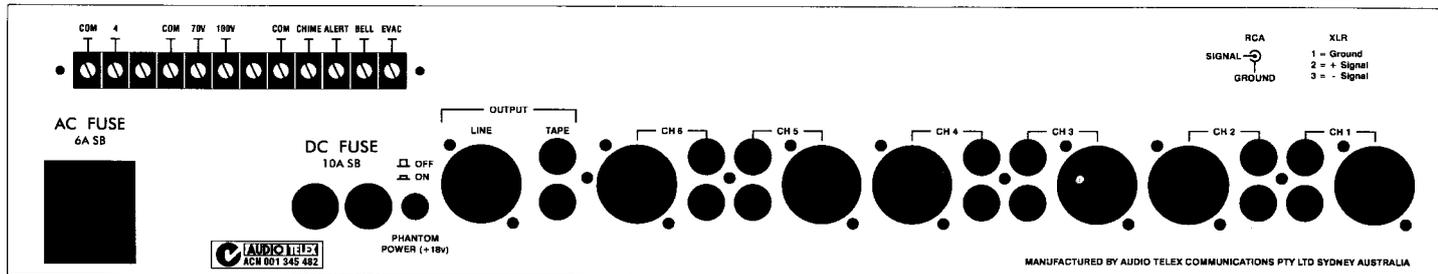
Master Output Control: This controls the overall output level of the amplifier depending on the levels set for the individual input channels as detailed above. Start with the control set to level 0 and turn clockwise until the desired output level of the amplifier is reached.

Power Button: This switch controls the switching of AC power to the amplifier. A red neon within the switch will indicate whether the amplifier is switched on or off.

Protect LED: A feature of the ACM250 is high temperature protection. In most applications, the internal cooling fan will most probably never switch on. When used with demanding speaker loads or in difficult operating environments, the fan may regularly switch on to cool the amp down and then switch off again. This switching on and switching off is quite normal. The "Protect" function is there to protect the amplifier from a high temperature problems which would only occur if the fan stopped working or became clogged up. In this very rare occurrence, the amplifier will shut down and the protect LED will illuminate. The amplifier will

automatically restart once it's internal temperature has fallen within "safe" limits. If the protect LED illuminates, it is best to switch the amplifier off, let it cool down and then try it again. If the protect LED illuminates again, please contact either Audio Telex or the company who supplied or installed the equipment.

Rear Panel Connections



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 6 amp fuse plus a spare within the holder. Power consumption is 400 watts.

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 ohms)
- 4 Ohms
- Spare
- 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 40 Ohms.

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 ACM250 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 6, 5, 4, 3, 2, & 1 respectively.

RCA Sockets For The Monaural Line Level Inputs. Line inputs 1, 2, 3, 4, & 5 have an input sensitivity of 75mV @ 47K ohms. Input 6 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 6, 5, 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 ACM250 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 ACM250. 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, 5 & 6. 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, 240 VAC: 6 Amperes Slow Blow
DC: 10 Amperes Slow Blow