

Operating Instructions



ACM120R
Receiver Amplifier
&
ACM120RC
Receiver, Cassette Amplifier





Audio Telex Communications Pty Ltd

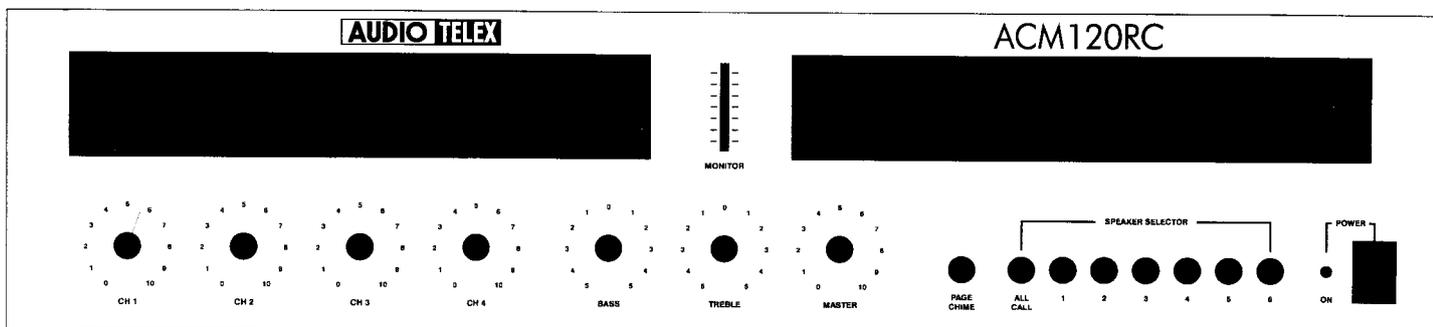
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ACM120R Receiver Amplifier & ACM120RC Receiver/Cassette Amplifier

Product Description

The ACM120R is a 120 watt, 4 channel (dual mic/line) mixer amplifier that has been optioned with an AM/FM radio receiver. Similarly, the ACM120RC is optioned with an AM/FM radio receiver and cassette player. The ACM120R and ACM120RC operate from 240 VAC, 50 Hz (or 110 VAC with factory modification) and may be desk or rack mounted (via an optional rack mount kit). Both the ACM120R and ACM120RC will deliver 120 watts into loads of 4 or 8 ohms, 70 or 100 volt line. Both amplifiers include a 6 zone, 100 volt line speaker zone select feature complete with all-call. The maximum recommended load of the ACM120R and ACM120RC on the 100 volt line output is 80 ohms.



(ACM120RC shown. The ACM120R does not include a cassette deck but is otherwise identical)

Front Panel Controls

Dual Microphone/Line Gain: The 4 dual mic/line input controls are labelled Ch1 Ch4 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 9 dB of treble boost @ 10K Hz. Adjusting the treble control in a counter-clockwise direction will provide up to 9 dB of treble cut @ 10K Hz.

Master Output: 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

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, this grey 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 output. This switch is push-on, push-off and is non interlocking.

Speaker Selector: These 6 black buttons are for switching the 100 volt line 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 zones is loaded

down for more than 60 watts, always remembering that the total amplifier load is 120 watts. It is possible to safely have one zone set for 60 watts and the other 5 zones set for 12 watts for example.

Power Switch: This switch controls the switching of AC power to the amplifier. When in the on position, the red LED to the left of the switch will glow.

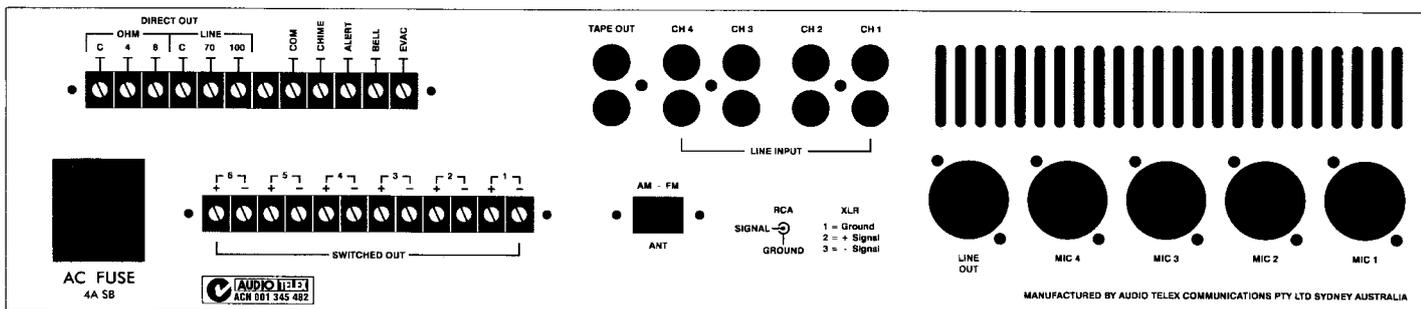
AM/FM Receiver: The receiver includes a gain control which operates identically to the mic/line gain controls described on the previous page (although it is completely independent of the controls described above). The gain control incorporated in to the receiver controls the input level to the amplifier for both the receiver and the cassette player (if installed). When installed and activated, the cassette player will override the receiver so that only one of the receiver or cassette player may be operated at once, the cassette player having priority.

You may monitor the output of the receiver via an internal monitor speaker. The volume of the monitor speaker is controlled by the vertical slider control labelled Monitor, located centrally on the front panel of the amplifier. If you want to preview the output of the receiver before sending it out live to the speakers, simply turn the amplifiers master output level control fully anti-clockwise to turn off the output of the amplifier. Note that if you do this, all output is turned off, including all microphone inputs.

Five tuning bands are available, 2 x AM and 3 x FM: the receivers display panel will illuminate to display the relevant information. To select the desired band, press the button marked AM/FM. Each time this button is pressed a different tuning band will be indicated on the display panel. Up to 30 preset channels may be stored, 6 for each tuning band. To store a channel operate the up and down arrow buttons until you locate and are properly tuned to the radio station of your choice. Then, press the memory button which will cause the channel to flash on the display panel. Press the desired storage channel (numbered 1 to 6). The radio station chosen is then stored in that memory location. You may automatically search for radio stations by operating the up and down arrow buttons. The receiver will search for and automatically lock on to threshold signals in the frequency band you have selected. Continue to press the up or down arrow buttons to resume your search or to fine tune any station selected.

Cassette Player (ACM120RC Only): The cassette player has 3 unique controls, one each for Eject, Rewind (REW) and Fast Forward (FF). In addition, there is a gain control located on the receiver module that controls the output level of the cassette deck (and, when a cassette is inserted, has priority over the receiver as detailed above). The cassette player may be monitored and previewed in exactly the same fashion as the receiver.

The cassette player will begin playing immediately a cassette is inserted though the slot in front of the cassette player. The REW and FF buttons will shuttle the cassette backwards or forwards respectively. Pressing both the REW and FF buttons together will reverse the playing direction of the cassette player and effectively change the side of the cassette being played. Pressing the eject button will eject the cassette and switch back to the receivers output. If you do not want to switch immediately back to the receivers output when you eject the cassette, make sure that the gain control on the receiver is turned fully counter clockwise.



Rear Panel Connections

3 Pin IEC AC 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 plus a spare. Power consumption is 225 VA. ⚠ **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
- 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.

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.

Receiver Antenna Connection. As described above, the receiver can tune to both the AM and FM bands. The FM band has dual 75 and 300 ohm impedance capability. For best FM results, we recommend using the 75 ohm connection to a remote antenna via 75 ohm coaxial cable.

Tape Output. This is a mono dual RCA type output and will provide an output of 350 mV in to a 10K ohm load. 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 ACM120R and ACM120RC 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 ACM120R and ACM120RC. 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:

ACMRRK: 19" rack mount kit

Fuse Sizes:

Mains ACM120R/RC, 240 VAC: 4 Amperes Slow Blow