

# Operating Instructions



**AT120R**  
**Receiver Amplifier**  
**&**  
**AT120RC**  
**Receiver Cassette Amplifier**




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# AT120R-1 Receiver Amplifier & AT120RC-1 Receiver/Cassette Amplifier

## Product Description

The AT120R-1 is a 120 watt, 4 channel (dual mic/line) mixer amplifier that has been optioned with an AM/FM radio receiver. Similarly, the AT120RC-1 is optioned with an AM/FM radio receiver and cassette player. The AT120R-1 and AT120RC-1 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 AT120R-1 and AT120RC-1 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 AT120R-1 and AT120RC-1 on the 100 volt line output is 80 ohms.

## 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 10 dB of treble boost @ 10K Hz. Adjusting the treble control in a counter-clockwise direction will provide up to 10 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

**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.

**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 condition is removed.

**Evac Button:** When pressed, this orange, push-on, push-off button will activate the inbuilt evacuation tone generator. When the tone is activated, input channels 3 & 4 are muted while input channels 1 & 2 remain active in case an emergency message is required.

**Bell Button:** When pressed, this black, push-on, push-off button will activate the inbuilt bell tone generator. When the tone is activated, inputs 3 & 4 are muted while inputs 1 & 2 remain active.

**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 on position, the red neon in the body 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 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 (AT120RC-1 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 through 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.

## Optional Accessories

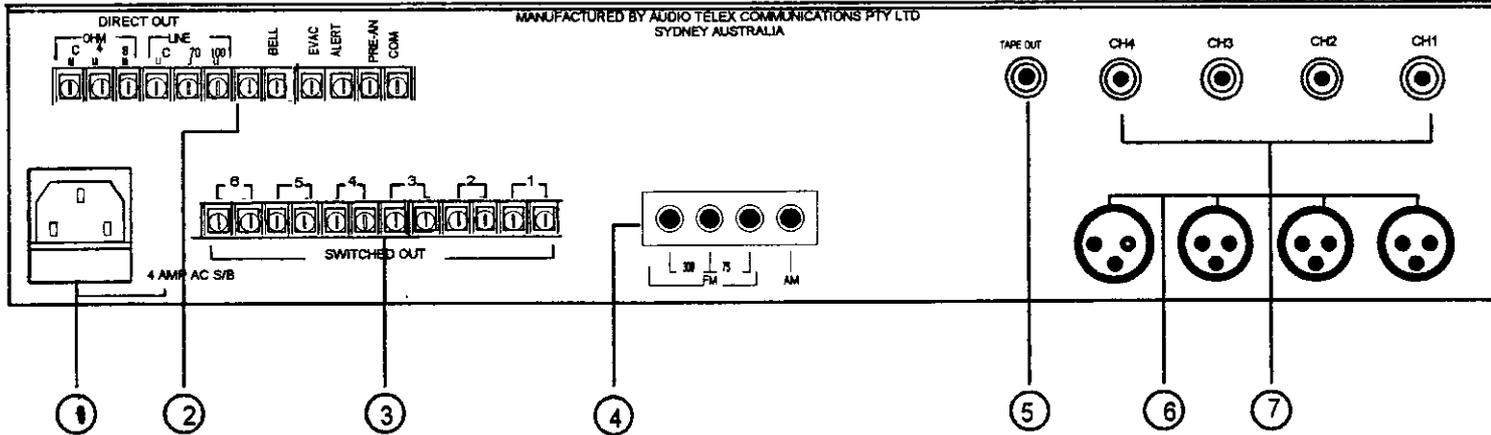
 The installation of some of the following optional accessories involves access to the inside of the amplifier. Installation should only be attempted by a qualified technician. Always turn off the AC power and remove the AC power cord before attempting to access the inside of the amplifier. Please contact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

**TX3010 Vox Muting Module.** When installed (as per the comprehensive instructions supplied with the TX3010), channels 1 & 2 of the amplifier will mute channels 3 & 4 of the amplifier. The receiver and cassette player inputs will also be muted.

**ATRMKBLK.** 19" rack mount kit

Please see over for rear panel connection details ➔

## 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 Connections.** These screw terminals allow access to the direct outputs of the amplifier and allow for the switching of the various tones available. Reading from left to right the terminals are:
  - Low Impedance Common
  - 4 Ohms
  - 8 Ohms
  - Constant Voltage Common
  - 70 Volt Line
  - 100 Volt Line
  - Spare
  - Bell +
  - Evacuation +
  - Alert +
  - Pre Announce +
  - Tone Generator Common (note that only one tone may be activated at a time)
- Switched Outputs.** Reading from left to right these screw terminal pairs correspond to the switched 100 volt line outputs 6 .... 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.
- 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 monaural RCA type connector 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.** With an input sensitivity of 0.75mV @ 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.
- 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. Reading from left to right across the rear panel, the connections are for inputs 4, 3, 2, & 1 respectively.