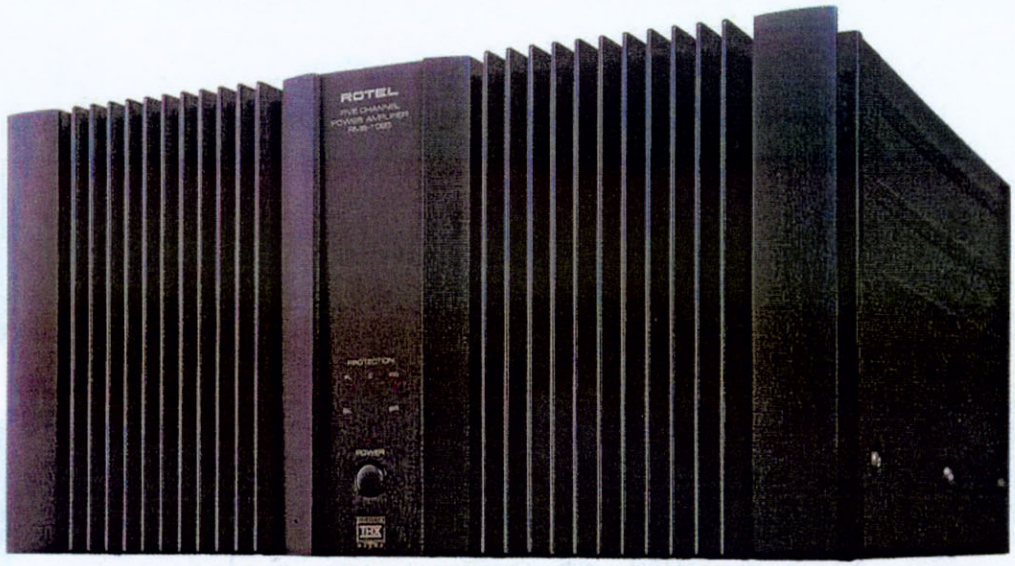
RO 240

Rotel

RMB-1095 FIVE-CHANNEL POWER AMPLIFIER



"There is nothing understated about the RMB-1095. It is a massive five-channel power amplifier, capable of providing extremely high power output in the most demanding applications. In fact, the limited factor in the RMB-1095's output levels will often be the capacity of your home's electrical supply." We hasten to point out that this is not our purple prose, but a direct quote from page six of the Rotel RMB-1095 Owner's Manual. However, it's pretty much spot-on, except that it's only US homes with their silly 120V electrical supplies that may be stressed by the RMB-1095. Downunder in the land of Oz, with our 240V, multiple-circuit home wiring standards, with power circuits rated at a *minimum* 15 amps continuous, the main factors limiting the RMB-1095's not-inconsiderable output will be the capacity of your loudspeakers and the tolerance of your neighbours (not necessarily in that order!).

Equipment

The front panel of the Rotel isn't exactly crammed with controls. In fact, there's just one: a power switch. Above this are five LEDs that show whether the protection circuit for any one or more of the five channels on-board has tripped. These LEDs are directly linked to an over-current detector that operates only when load impedances fall below 2 ohms. The left, right and centre channels have their own independent protection circuitry so any one of these can be triggered without affecting the performance of the remaining channels. The two remaining channels (the 'surround') channels, share the same protection circuit, so if one triggers, the other will also and you'll 'lose' both channels. Because the circuity has been configured in this way, you should make certain that you always connect the correct speakers to the correct channels. The RMB-1095 also has a thermal protector (an over-temperature device) that monitors the temperature of the output transistors and triggers if they get too hot. We should point out that it's extremely unlikely that any of these protection circuits *will* trigger, but even if they don't, it's nice to know they're there!

Look around the back of the RMB-1095 and you'll see that's where all the action is. The most unusual input is the dB-25 connector. Don't let anyone tell you this is where you connect your computer, because it isn't. Instead, it's an alternative multi-channel line-level input that effectively duplicates the five gold-plated RCA inputs. Rotel has included this input because it's popular with custom installers. However, to use the circuit, you first have to obtain a wiring diagram from local distributor International Dynamics. You also have to insert the five 'Open Circuit' pins supplied by Rotel into the RCA sockets. These plugs engage a switch under the centre pin of the RCA connector that ensures the signals going into the dB-25 connector will 'see' the correct impedance. In other words, these are NOT the usual 'shorting pins' that are provided with many amplifiers and shorting pins SHOULD NOT be used with the RMB-1095, nor should the Rotel 'Open Circuit' plugs be used with amplifiers that require shorting plugs. Since it's impossible to tell a shorting plug from an open-circuit plug just by looking at it, we think Rotel should have used a different plug design, or a colour other than black.

Rotel has also engaged in some strange design with the speaker terminals. These are standard banana plug/screw lock types, but the 'hot' (+) side moves from left to right, depending on what speaker is involved. The right surround, centre, and front-left speaker terminals have the (+) terminal on the left and the (–) on the right, whereas the front right and surround left terminals have the (+) terminal on the right and the (–) terminal on the left. There's nothing actually wrong with configuring the terminals this way, and Rotel has done it for a very good reason (it keeps the internal wiring to a minimum), but it's very 'non-standard', and means you will have to be VERY careful when connecting your speaker wires to ensure you get the correct phasing between channels. The terminals are colour-coded for channel, as well as polarity. The (+) terminals of the left channels are blue, the (+) of the right channels are red, and the (+) of the centre channel is green. Given the potential for confusion,

it was gratifying to find that Rotel has mounted the terminals on posts spaced 12.5mm apart, so you'll be able to do all your speaker connections by terminating your cables first into dual Pomona banana plugs, then inserting these into the terminals on the Rotel.

The five (unbalanced) RCA input terminals are paired with matching balanced inputs. Obviously, if your ancillary equipment has balanced outputs, you should use the balanced XLR connectors, because this will result in the best performance but otherwise, use the RCAs.

Need we point out that the Rotel RMB-1095 is very large, and very heavy? Check your shelf size, because the RMB-1095 is 440 mm wide, 240 mm high and 398 mm deep. It'd better be a strong shelf too, because this amp weighs in at 34 kg. To ensure that you won't bust a gut lifting the Rotel into a shelf or equipment rack, the RMB-1095 has a pair of wheels at its rear instead of the usual round feet. This means you can put the back edge of the amplifier on a shelf, then roll it backwards into position. In order to distribute the weight evenly, it's spread across five points: the two wheels and three feet (the third foot being in the centre of the amplifier, at the bottom). When considering where you will mount the amplifier, it would be as well to remember that all that expensive aluminium finning on the front panel is just for show, and doesn't really get hot at all — the real heat-sinking is done *inside* the amplifier, and without the benefit of a fan, so whatever else you do, remember to allow adequate ventilation above and below the amplifier.

Manufacturers' Specifications

Rotel rates the RMB-1095 with a continuous power output of 200 watts continuous per channel into 8 ohms, from 20 Hz to 20 kHz, at less than 0.03 percent distortion. You may see it with a 330 watt rating in some advertisements, but this is the DIN rating into 4 ohms, and applies only at one frequency (1 kHz) and with 1.0 percent distortion. The frequency response extends from 15 Hz to 100 kHz, making it a wide-band design, suitable for DVD-A or SACD. Damping factor is 400, so your cable and loudspeaker choice will be wide (though Rotel recommends a 4 ohm minimum nominal impedance for any speakers connected). Signal-to-noise ratio is claimed at 116 dB IHF-A (presumably below rated output, rather than 1 watt).

Rotel RMB-1095 Five-Channel Power Amplifier

$ $3699

3 years

- Power, power, power
- Very low noise
- High degree of finesse

- Output terminal arrangement
- Cosmetic finning
- No auto power switching

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Performance

When building 'king hit' amplifiers like this, many designers make the mistake of trading off subtlety for brute force. We weren't terribly surprised to find Rotel has not made such an elementary mistake. Although the RMB-1095 has sufficient power on board to wake the dead, its precision and finesse at low power/volume levels is exceptional, to the point that most, if not all, listeners could easily be persuaded they were listening to a low-power pure Class-A amplifier, such is the purity of sound at low volume. As for high volumes, the Rotel virtually dares you to 'wind up the wick' and it may be only the whimpers of protest from your loudspeakers, unused to such gargantuan power levels, that force commonsense to prevail. A very quick spot check on power output at 1kHz confirmed the Rotel was capable of delivering almost 300 watts into 8 ohms and more than 500 watts into 4 ohms — as if there was any doubt.

Conclusion

We can envisage myriad applications for an amplifier of the Rotel's quality, power output and channel complement. A great amp at a great price. Bb