



# DUAL MONOBLOCK STEREO POWER AMPLIFIER MC-1

REGIONALNE CENTRUM EDUKACJI ZAWODOWEJ W NISKU

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Dual Monoblock Stereo Power Amplifier MC-1 has a huge potential. The amplifier has no problem building a wall of sound. Even in a very dense texture, it remains smooth and does not introduce tension that might suggest that it is approaching the end of its capabilities. The sound is solid, saturated, and dense. The solidity is emphasized by the wide dynamic range and the ability to play both quietly and loudly.



The whole performance is based on a foundation of deep and powerful bass. The midrange is smooth, warm, and seamlessly binds the highs. Transparency and detailedness are supported by excellent spaciousness.



The innovation of this design is the combination of analog and pulse technology, which results in the sound of a tube amplifier with the high performance of a transistor amplifier. The power transistors are operated with multiple transistors to reduce the capacitance of the power terminal transistors. The differential amplifier and control circuits of the power transistors were made in pulse technique, i.e., with circuits accelerating the control of the transistors with the smallest possible circuit capacitance in order to obtain rapid responses of the amplifier.

The left photograph shows the rear panel of the amplifier. It features two large ventilation grilles at the top. Below them, from left to right, are two gold-plated RCA inputs labeled 'RIGHT' and 'LEFT', a circular metal mesh cooling fan, four gold-plated output terminals (two for each channel), a yellow power switch labeled 'POWER ON/OFF', and an AC power inlet. Safety warnings in English and Polish are printed on the left side of the panel.

The right photograph is a close-up of the rear panel's controls and outputs. It highlights the 'STEREO OUTPUTS' section with four gold-plated terminals: two for the 'RIGHT CHANNEL' (labeled '2 OHM - 16 OHM PER') and two for the 'LEFT CHANNEL'. A 'CAUTION! HIGH VOLTAGE!' warning with lightning bolt symbols is placed between the channels. To the right is a yellow power switch labeled 'POWER' with 'ON' and 'OFF' positions, and an 'AC IN' socket below it. At the bottom, the fuse specification is listed: 'FUSE: T6,3A/250V 220-240VAC 50/60Hz MAX. POWER CONSUMPTION: 630VA'.





The whole design is constructed on discrete components on two printed circuit boards. The power transistors installed on a heat sink are directly soldered into the printed circuit board to reduce the inductance and capacitance of the wave leads, their functioning is stabilized by a circuit that remains outside the signal path. Filter capacitors and rectifier circuits are installed on the power amplifier board. The entire system is powered by two mains transformers with symmetrical output voltage. The heat sink is cooled by a low-noise fan. A novelty is the implementation of dual feedback independent for low and high frequencies, which is another innovation in power amplifier circuits.



The background is a dark blue gradient. In the corners, there are white line art illustrations of circuit boards or neural networks, with lines and small circles representing nodes.

THANK YOU FOR YOUR ATTENTION!