



# SMQ500

WaveDynamics™ Quad Channel Power Amplifier

## ► Features

- 4 x 500 Watt RMS output power
- Lightweight Class-D amplifier
- Advanced DSP & loudspeaker management
- Intuitive graphical interface on 2.5" LCD display
- Pre-loadable loudspeaker & set configurations
- Unmatched technology and affordability
- Flexible input and output configuration
- XLR & terminal block source compatibility
- RS-232 control and USB loadable configurations

## ► Applications

- Clubs & pubs
- Restaurants & bars
- Warehouses & retail stores
- Public & office buildings
- Mobile applications
- ...



The SMA & SMQ amplifiers are defining a new standard in affordable amplification for both fixed and mobile audio installations. Their different channel configurations and availability in various output powers provide an enormous flexibility for numerous applications.

The SMQ500 is the four channel version of this Class-D power amplifier with an output power of 500 Watt for each channel. The WaveDynamics™ DSP processor in combination with the 2.5" LCD display gives an unmatched user experience with intuitive functions overview for easy configuration.

Acoustics can be optimized using the filters selectable between Low / High & Band Pass and the 7-Band equalizer both with adjustable frequencies and Q-factor. Other provided functions are delay and dynamic bass boost. These settings can be custom configured using the front panel of the amplifier, whereby access can be given on two different levels (User & Administrator) using password or USB-key protection. Loudspeaker protection is provided by an output power limiter whereby the maximum output power for every channel (in Watt) can be configured.

Configuration is made simple by the loudspeaker presets and full system configurations which can be selected from a library and uploaded with a USB flash drive. This ensures the best acoustical performance with a 'bullet-proof' loudspeaker protection.

A great input flexibility and source compatibility is provided by the input selection matrix in combination with the XLR and terminal block signal connections. The outputs are performed using speakon compatible and terminal block connections. System integration is made easy using the RS-232 control port.

## ► Specifications

SYSTEM SPECIFICATIONS		
RMS Power @ 4 Ohm Stereo		4 x 500 Watt
RMS Power @ 8 Ohm Stereo		4 x 300 Watt
RMS Power @ 8 Ohm Bridge		2 x 1000 Watt
Frequency response		20 Hz - 20 kHz
Signal to noise ratio		> 95 dB
THD+N by 1 kHz (1/2 Rated Power)		< 0.05 %
Crosstalk		> 70 dB
Technology		Class - D
Power supply		Switching mode
Power supply range		230 ~ 240 V AC / 50 ~ 60 Hz
Input Sensitivity		-19.5 dB ~ 27 dB
Input Impedance		10 k Ohm balanced
Common mode rejection ratio		70 dB
Damping factory		> 200
Protection	Amplifier	DC Short-circuit
		Over heating
	Loudspeaker	Over load
		Signal limiting
Access	Output power limiter	
	User & Administrator level (Through password and USB-key protection)	
Cooling system		Temperature controlled fan (Infinitely)
Operating temperature		0° ~ 40° at 95% Humidity
Connectors	Input	XLR & 3-pin Terminal block (3.81 mm)
	Output	Speakon compatible & 2-pin terminal block (5.08 mm)
PRODUCT FEATURES		
Dimensions (Width x Height x Depth)		482 x 88 x 420 mm
Weight net		8.25 Kg
Mounting		19"
Unit height		2 HE
Construction		Steel
Colour		Black
SHIPPING & ORDERING		
Packaging		Carton box
Shipping weight and volume		11.25 Kg - 0.046 Cbm
*AUDAC reserves the right to change specifications without notice: this is part of our policy to continually improve our products		

## ► Architects' and Engineers' Specifications

The amplifier shall use WaveDynamics™ audio processing technology with four independent controllable channels each of them with an output power of 500 watt. The construction shall be transformerless, using Class-D amplifier technology and powered by a switching power supply.

Acoustics shall be adjustable using the integrated DSP which provides advanced processing functions to each channel such as parametric 7-band equalizing, filters selectable between low-pass, high-pass and band-pass with Butterworth, Linkwitz-Riley or Bessel characteristics. Other functions such as output power limiting, time alignment delay and dynamic bass boost shall also be implemented.

Each channel shall have integrated circuitry to protect against short-circuits or mismatched loads and over-heating. The operating temperature for each channel shall be continuously monitored and a speed-controlled fan will keep it within the operating range while minimising the acoustic noise. Additionally, the load shall be protected against DC faults and a clip limiter shall automatically reduce the input gain at onset of distortion.

Full system control and monitoring shall be possible from the front panel of the amplifier equipped with an AC power switch, a blue power indicator LED and channel operation indicator LED's. Two green signal LED's indicating the presence of an input signal and it's level exceeding the -20 dB level, a clip LED indicating the channel operation at maximum level and a protection LED indicating any fault detected shall be provided for each channel. Additionally, a user-friendly and intuitive graphical interface shall be shown on a 2.5" LCD on front allowing control for each of its functions. System access shall be lockable with password and USB-key protection on two different (user & administrator) levels. Uploading of pre-made configurations and loudspeaker presets shall be possible from a USB flash drive.

Great input flexibility and source compatibility shall be provided through an input selection matrix in combination with the balanced signal input connections which are available as female XLR connectors and 3-pin terminal block connectors. The output connections shall be performed using Speakon compatible and 2-pin terminal block connectors, allowing connectivity of multiple loudspeaker lines on one amplifier channel.

The amplifier shall operate on a 230~240 V AC / 50 Hz mains network and shall be equipped with a removable power cord having a standard shuko (CEE 7/7) AC plug. The connector on the amplifier chassis shall be a fused IEC C14 type. The amplifier chassis shall be a two rackspace steel constructed 19" housing. Depth from mounting surface to rear supports shall be 420 mm and the weight shall not exceed 8.25 Kg.

## ► Block diagram

