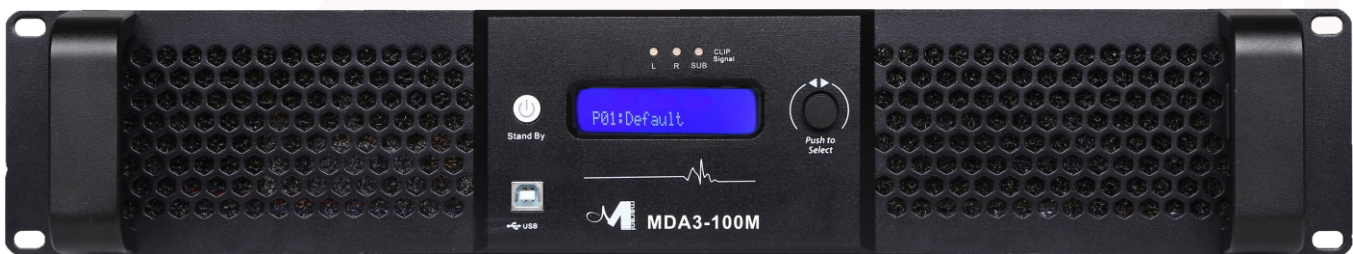


MDA3-100M is highly flexible and intelligent digital audio 3 Channels Class D power amplifier delivering up to a total of 500W@4/8Ω. To guarantee maximum reliability, for the 2 powered channels, the **MDA3-100M** includes one MARANI Linear Power Supply and 3 highly efficient NXP Class D Power Stages, 2 working in SL mode and one in BTL, for powering the Sub output. The 3 output stages are very low noise and low distortion with efficiency up to 90% @ full load and also equipped with a full set of circuit protections. Designed to meet the most demanding residential application sound systems, it provides a basic set of features such as a matrix mixing mode where inputs may be routed/mixed in any ratio to any output. The **MDA3-100M** includes a set of sophisticated processes for loudspeaker, implemented by the powerful MARANI M504 DSP running 48kHz/24bit [96 bits precision for the internal intermediate processes] and high

performance 24bit AD/DA Converters. Processes as Noise Gate, dB/Oct IIR Hp/Lp filters for X-Over, parametric EQs per input and output sections, RMS compressor(Auto Compressor), alignment delay and Notch, Variable Q Hi/Lo Shelving and Hi/Lo Pass filters are available, all in all everything needed to optimize powered loudspeaker. Moreover a Overflow/Limiter function per channel provides internal processes monitoring to prevent Overflow Clipping to occur, in order to avoid feeding Class D amps with clipped waves and finally, jointly with a powerful embedded Clip Limiter, to avoid speaker damage with gain reduction at clip threshold. In addition, efficient heat dissipation system and Over-Heat protection are implemented, which ensure a reliability without compromises. All setup parameters for input/output processes, DSP features are accessible by using remote PC software.



Features

Outstanding Performance

High power output: 2 x100W + 1 x 300W@ 4/8 Ohm
 One Linear Power Supply MARANI and 3 NXP Class D power Stages.
 Class D output stages with Efficiency up to 90% @ full load
 Full protection circuitry including Over-Current, Over/Under-Voltage, Output DC and Over-Temperature
 Excellent sonic performance with 24bit high end converters running 48kHz sample rate, 3 outputs(L/R/Sub) with full matrix mixing and extended Sound Processes set

Top-Grade DSP Engine

12 bands PEQ filters per input channel

Crossover filters with slopes from 6dB/Octave up to 48dB/Octave including Butterworth, Bessel, Linkwitz-Riley. Gain Control, Noise Gate, RMS Compressor with "AUTO" attack/Release time and Knee selectable
 Adjustable Delay time up to 961 ms per input channel and 541ms per output channel.

Direct PC/Network Connection & Control

Front Panel USB for system setup, monitoring and control via manageable remote PC software

Simultaneous control up to 32 units via PC software
 16 Preset Selection



Power&Amplifier

Number of Channels	3 Powered output: L/R/S
Dynamic Power (6dB Crest Factor)	2 x 100W + 1 x 300W (Bridge) @4/8 ohm load
Output Circuitry	Class D - Self-Oscillating PWM topology; 400kHz supplied by independent SMPS
THD @ Rated Power 4ohm (1kHz)	0.02%(1W), 0.05%(60W), 0.08%(100W)
Dynamic Range	118 dB (A-weighted, AES-17 filter)
Frequency Response	20Hz - 35kHz, ± 3 dB (1W 4ohm - 8ohm Load)
Power Supply	1 Independent Linear Power Supplies
Protections	Over-Current, Over/Under Voltage, Output DC and Over-Temperature
Analog Input	2 x RCA A/B Unbalanced, Max Input = 12dBu

DSP&Processing

DSP Engine	MARANI M504, 24 bit (data) x 24 bit (coeff.)
DSP Resolution	54 bit accumulation registers, 96 bit precision on intermediate processing data
Input Type Selection	Analog Inputs, Pink/White Noise Inputs [Level: -40dBu to 0dBu]
Noise Gate	Threshold from -90dBu up to -60dBu, 5dB Steps Attack time from 1ms up to 1000ms; Release time from 10ms up to 1000ms
Input 12 Bands PEQ	Peaker, Q from 0.4 up to 128, Gain +/-12dBu, Center Freq from 20 to 20kHz Variable Q Hi/Lo Shelving, Q from 0.1 up to 5.1, Gain +/-13dBV, Center Freq from 20 to 20kHz Variable Q Hi/Lo Pass, Q from 0.1 up to 5.1, Cutting Freq from 20 to 20kHz Notch, Q from 4 up to 104, Center Freq from 20 to 20kHz
Input RMS Compressor	Threshold from -18dBu up to 12dBu; Make Up from 0 to +10dBu Knee 0~100%; Ratio from 2:1 to 32:1; Release time from 100ms up to 3s (100ms resolution); Attack time from 5ms up to 200ms "AUTO MODE" Available
Output HPF/LPF section	Butterworth 6/12/18/24/36/48dB per octave, Linkwitz-Riley 12/24/36/48dB per octave Bessel, Linkwitz-Riley 12/24dB per octave, Filter frequency resolution 1Hz
Output Peak Limiter	Threshold: -18dBu ~ +12dBu, Attack time: 1ms ~ 900ms, Release time: 100ms ~ 5sec
Delay	Each input channel's selectable delay is up to 961ms, each output channel's up to 541ms
Load per Output Channel	4 - 8 Ohm

General

Front Panel	1 x rotary encoder, to load or select presets 1 x Type B USB 1 x Standby button 1 x 2*16 LCD screen 1 x Power Switch 3 x Green-Red LED, indicating distortion and signal for each channel: red indicates distortion and clip, while green signal
Rear Panel	4 x RCA Connectors (Analog Input & Output) 6 x Binding Post (Amplifier Output) 1 x 110V/230V Voltage Switch 1 x Locking PowerCON® 20A: AC Power Cord (Blue)
Dimensions	482 x 387.8 x 103 (mm)
Weight, Net / Shipping	8.57 kg/ 9.40 kg