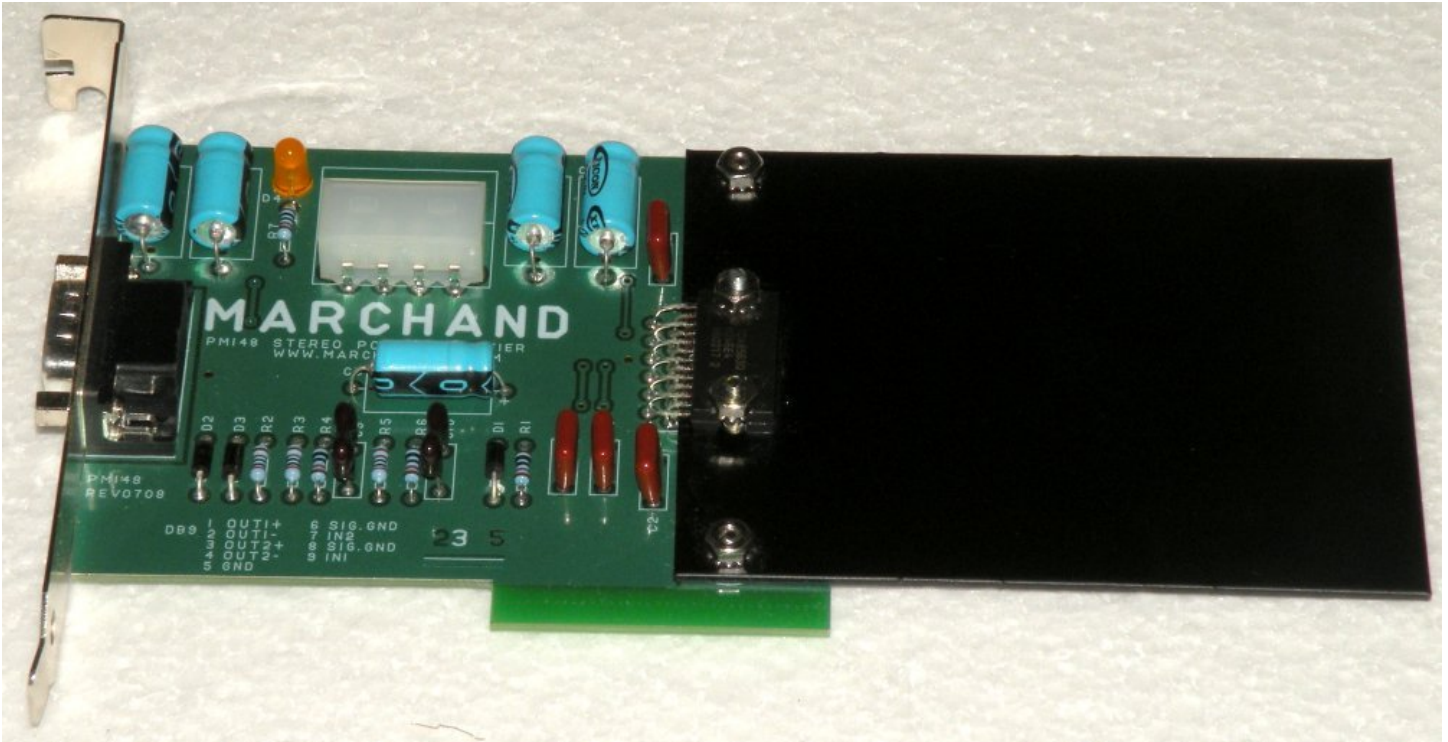


# Marchand Electronics Inc.

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## PM148 2x12W power amplifier for PC



## Features

PM148 2x12 Watt Stereo Amplifier for PC  
Fits directly into PCI slot.  
Connects directly to soundcard with single cable.  
Uses internal 12V power supply.  
Connections for standard 'home' loudspeaker for superior sound  
Low Distortion (0.1% @ 1WRMS)  
12 Watt per channel into 4 Ohm load  
6 Watt per channel into 8 Ohm load

The PM148 stereo power amplifier allows the use of quality home type loudspeaker with the Personal Computer soundcard. This results in a dramatic improvement in sound quality compared with the usual amplified speaker. The PM148 connects to the sound card using a simple patch cable with 3.5mm phono plugs. The PM148 plugs directly into an unused slot in your computer. The power comes from the internal power supply of the PC, using the same connector that is used to power optional disk drives. Most PC's have plenty of power reserves in the power supply to power the PM148. The PM148 has a 9-pin connector for input and to connect to the loudspeakers. The power amplifier on the PM148 is the TDA8563Q made by Philips Semiconductor. This device has internal protections against short circuits (in case the loudspeaker wires get shorted) and overheating, so it is completely safe.

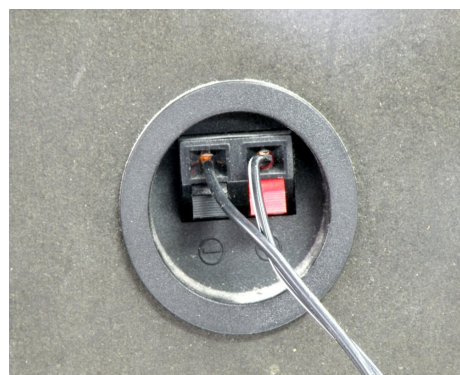
### SPECIFICATIONS:

Frequency response: 20Hz to 20 KHz, +/- 1 dB  
Insertion gain: 24 dB  
Input signal for full output: 0.45VRMS typ.  
Harmonic distortion at 1 KHz: better than 0.1%  
Output power: 12W/channel into 4 Ohm  
Signal-to-noise ratio: better than 100 dB  
Input impedance: 10K Typ.  
Output load capability: 2 Ohm min (4 or 8 Ohm typical).  
Power supply voltage: 12 VDC  
Dimensions: 8" x 4.75" x 0.75"  
Weight: approx. 1/4 pounds (.12 Kg)  
Input/Output Connector: DSUB9 male

DB 9 Input Output Connector		
1	OUT Left +	To Speaker Left +
2	OUT Right +	To Speaker Right +
3	Case Ground	Not used
4	In Right	Input from Soundcard
5	In Left	Input from Soundcard
6	OUT Left -	To Speaker Left -
7	OUT Right -	To Speaker Right -
8	Signal Ground	Ground from Soundcard
9	Signal Ground	Not used

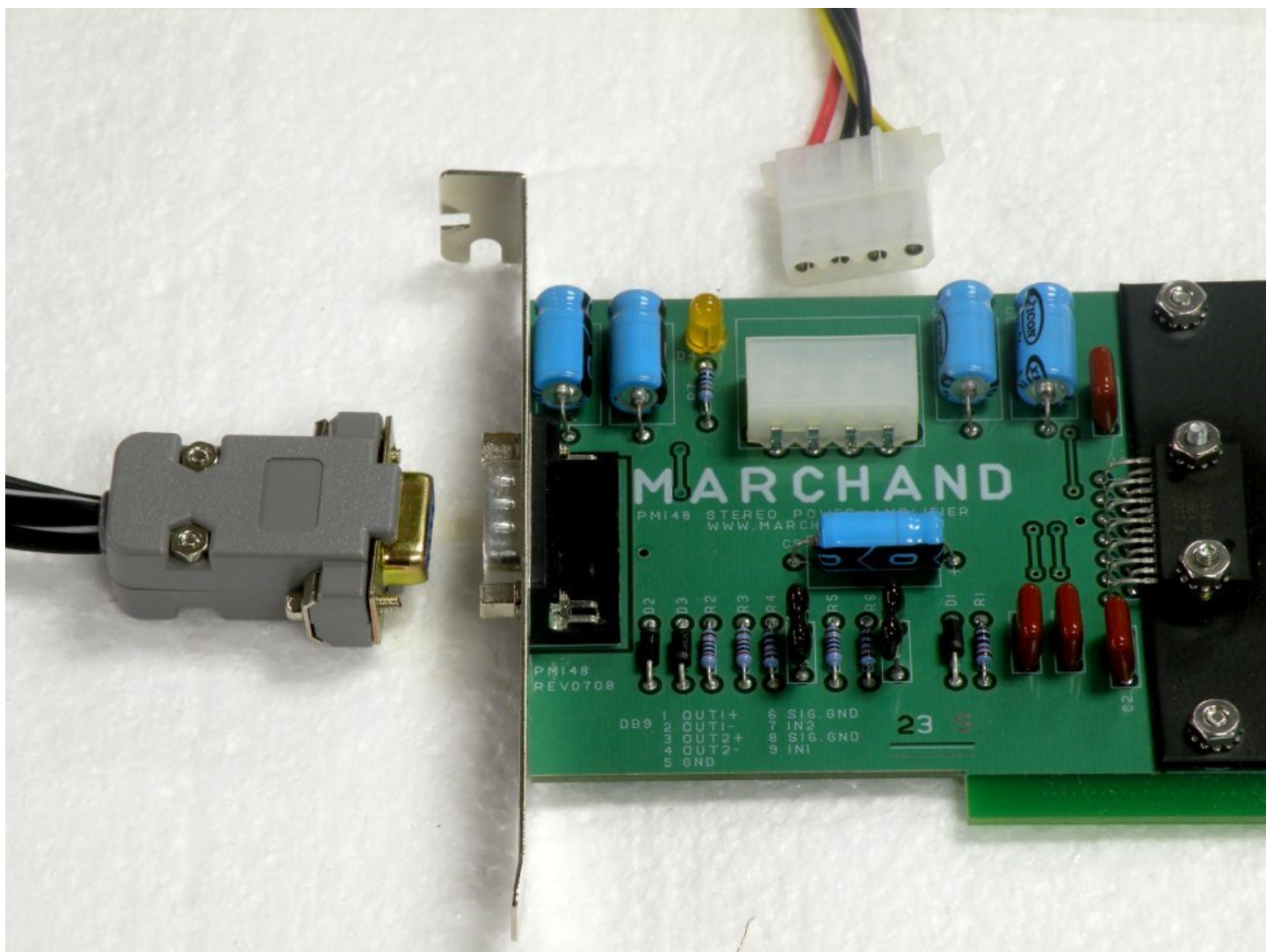
## Installation

- 1: Plug PM148 into empty slot in PC and fasten the mounting screw.
- 2: Insert power supply connector into top of PM148.  
Most PC's have one or more spare connectors.  
If not Y-splices are available at most computer stores.
- 3: Connect speaker wires to the loudspeaker.
- 4: Connect the patch cord with the 3.5mm phono plug into the 'line-out' connector on the soundcard.  
The line-out connector is usually the green connector
- 5: Enjoy the music



Attaching speaker wire to speaker.

**note:** No software needs to be installed for the PM148.



## Parts list

R1	10.0K	1/4W, 1% metal film resistor	C2	0.22uF	Stacked film capacitor
R2	2.00K	1/4W, 1% metal film resistor	C3	0.22uF	Stacked film capacitor
R3	2.00K	1/4W, 1% metal film resistor	C4	0.22uF	Stacked film capacitor
R4	10.0K	1/4W, 1% metal film resistor	C5	220uF	25V, radial electrolytic capacitor
R5	2.00K	1/4W, 1% metal film resistor	C6	220uF	25V, radial electrolytic capacitor
R6	10.0K	1/4W, 1% metal film resistor	C7	220uF	25V, radial electrolytic capacitor
R7	2.00K	1/4W, 1% metal film resistor	C8	220uF	25V, radial electrolytic capacitor
D1	1N4937	1A diode	C9	220pF	film capacitor
D2	1N4937	1A diode	C10	220pF	film capacitor
D3	1N4937	1A diode	C11	220uF	25V, radial electrolytic capacitor
C4		LED	IC1	TDA8563Q	amplifier
C1	0.22uF	Stacked film capacitor			

## Contents of Kit

4	2.00K	1/4W, 1% metal film resistor	1	heatsink
3	10.0K	1/4W, 1% metal film resistor	1	circuit board PM148
3	1N4937	1A diode	4	4/40x1/4 PHMS
4	0.22uF	Stacked film capacitor	2	4/40x7/16 PHMS
5	220uF	25V, radial electrolytic capacitor	6	#4 kepsnut
2	220pF	film capacitor	1	heatsink compound
1	LED, amber		Notes:	Heatsink compound between IC1 and heatsink
1	TDA8563Q amplifier			Press tabs of P1 through hole with long-nose
1	connector DB9male			plyers. No heat!
1	P.C. bracket			



Custom cable



