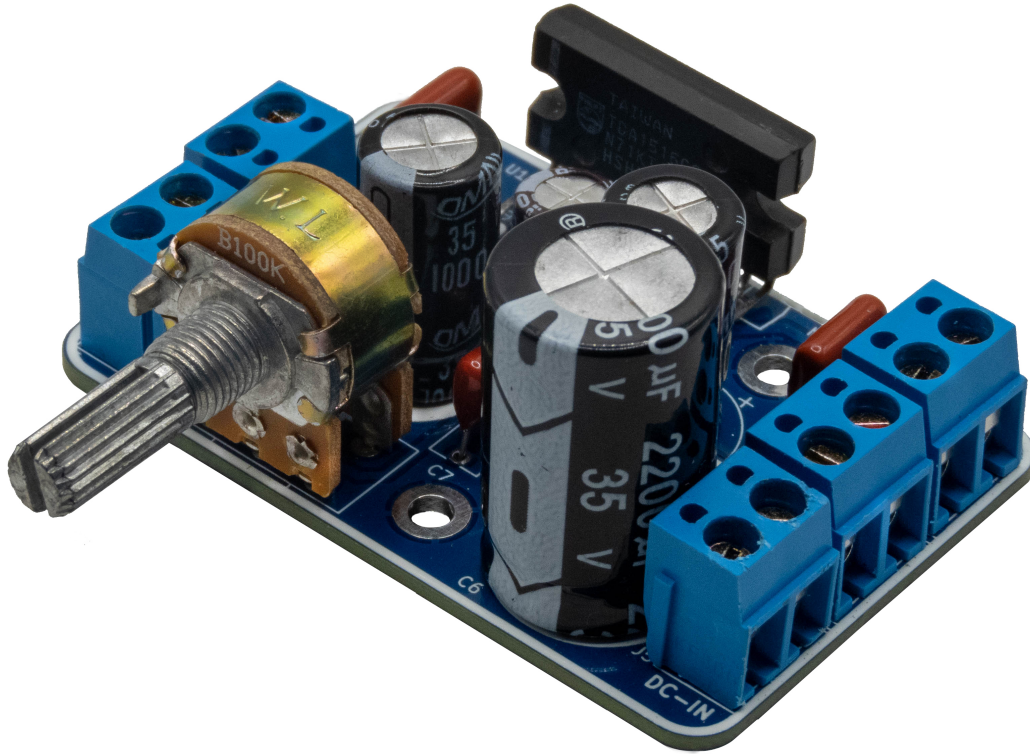


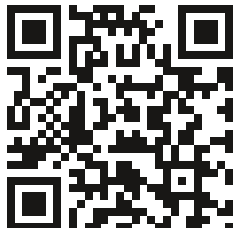
# Simtelic



## TDA1516 Stereo Power Amplifier

Thank you for purchasing this Simtelic DIY Electronic Kit.

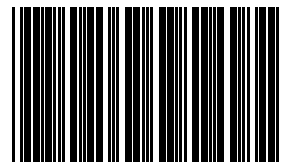
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Revision: 1.0.0-EN

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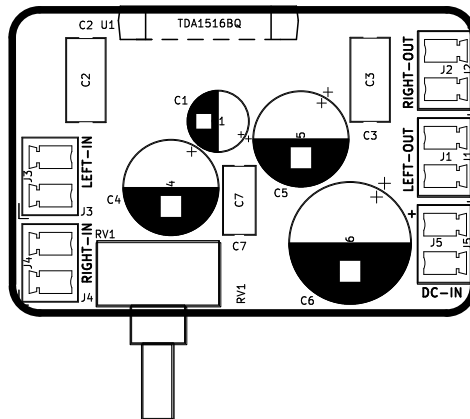
# Introduction

This module is a high-performance, low-voltage, 2 x 12W stereo power amplifier module designed for various audio applications. This versatile module provides a robust and efficient audio solution, ideal for powering small to medium-sized speakers in various devices like:

- **Design:** With its compact size and easy-to-use design, this module offers a convenient and powerful way to amplify your audio signals.
- **High efficiency:** Thanks to its efficient Class AB design, it operates with low power consumption, making it suitable for portable applications.
- **High-Quality audio:** Wide frequency response ensures accurate representation of the entire audio spectrum. The low distortion level provides clear and natural sound reproduction.
- **Compact design:** The small and compact module is ideal for space-constrained applications.
- **Applications:**
  - Automotive audio systems
  - Portable audio systems
  - Speaker systems
  - Mini home theater systems
  - Computer and AV system

## Identify connectors and adjustments

### Top Side



**J1** - Left Speaker Output.

**J2** - Right Speaker Output.

**J3** - Left Channel Audio In.

**J4** - Right Channel Audio In.

**RV1** - Volume controller.

**J5** - DC In.

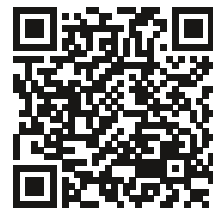
C1 .....	100μF/50V	(THT)
C2,C3.....	0.22μF/50V	(THT)
C4,C5.....	1000μF/50V	(THT)
C6 .....	2200μF	(THT)
C7 .....	0.1μF/50V	(THT)
J1,J2,J3,J4,J5.....	5.08 - 2pin Screw Terminal	
RV1 .....	B100kΩ (LOG) Potentiometer	
U1 .....	TDA1516BQ	

## How to use

1. Connect the full range LEFT speaker with J1 screw terminal
2. Connect the full range RIGHT speaker with J2 screw terminal
3. Connect Stereo audio source with J3 and J4 screw terminal (Left = J3 and Right=J4)
4. Attached the DC power source to J5 screw terminal (please refer kit specifications)



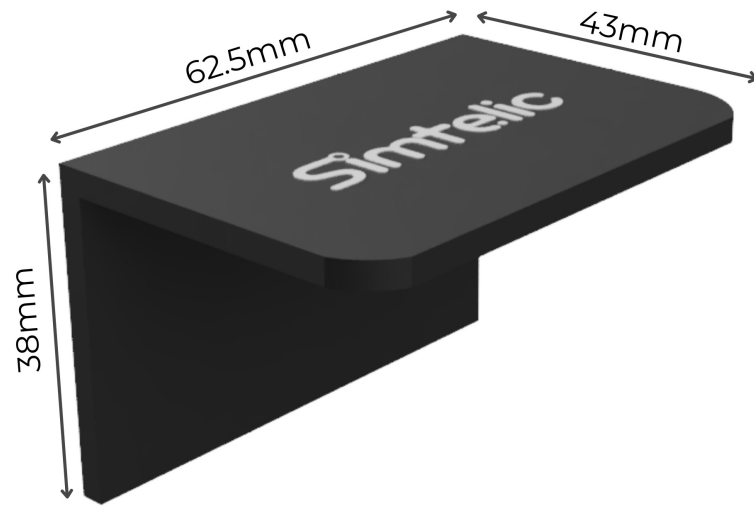
PCB assembly video : <https://youtu.be/AD2REp6pzNM>



Scan for the video



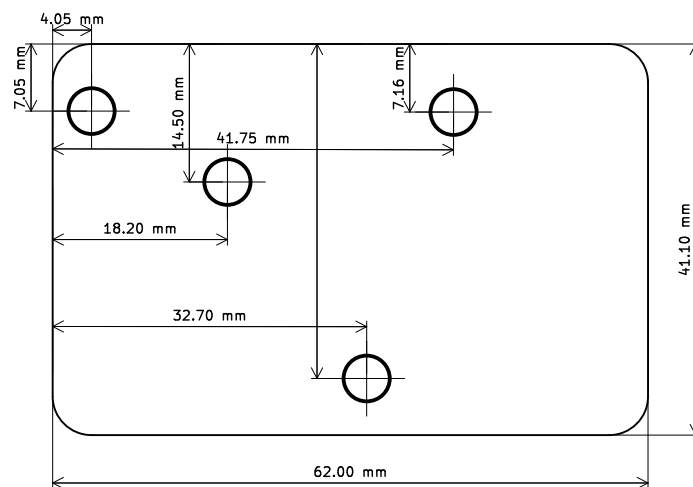
Suitable heat sink should be attached to the TDA1516. A recommended heat sink design is illustrated below. The use of thermal paste is also recommended, as shown in the video.



## Kit specifications

Power supply.....	DC 9V - 16V / 1500mA
Gain.....	Approximately 20dB
Total harmonic distortion.....	10%
Frequency Response.....	20Hz - 20kHz
Audio output power.....	2 x 12W
Dimensions.....	52.0 x 41.10mm

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**Simtelic (Pvt) Ltd cannot be held responsible in the event of damage or injury resulting from  
(incorrect) use of this electronic kit.**

The continuous improvement of its products is the policy of Simtelic (Pvt) Ltd who reserve the right to  
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