



Class-T Digital Audio Amplifier Module

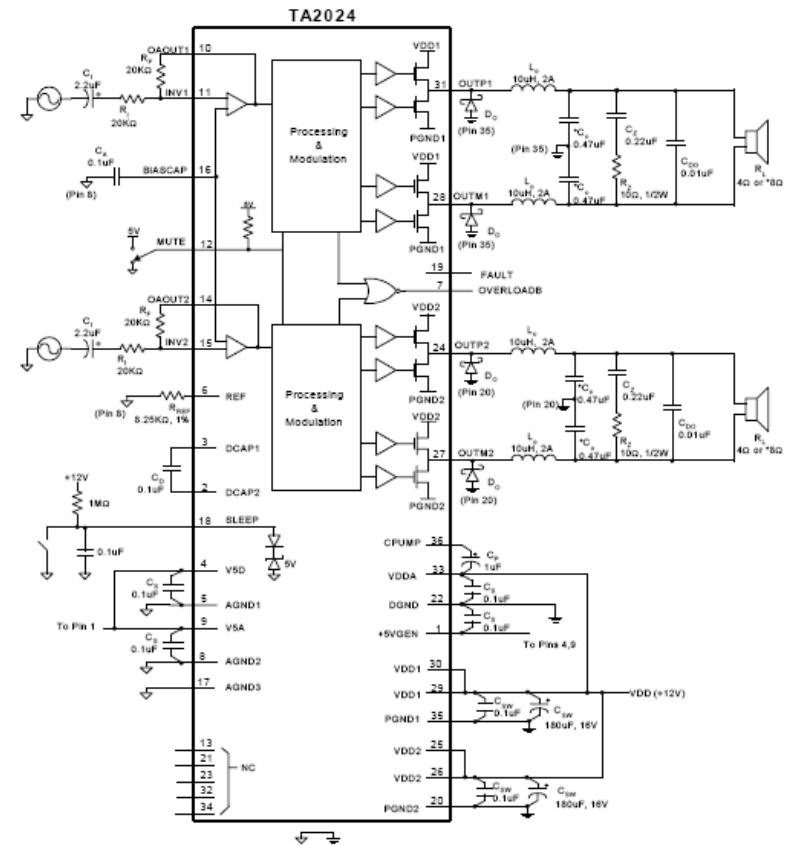


Introduction:

The Class-T Digital Audio Amplifier is designed around the Tripath TA-2024 IC. The TA2024 is a 15W/ch continuous average two-channel Class-T Digital Audio Power Amplifier IC using Tripath's proprietary Digital Power Processing™ technology. Class-T amplifiers offer both the audio fidelity of Class-AB amplifier and the power efficiency of a Class-D amplifier.

This PCB amplifier is ideal for any audio enthusiast that enjoys building and modifying speaker systems. The applications are virtually limitless since this tiny PCB measures a mere 2-11/16" x 1-5/16". Build your own speakers or incorporate the amplifier into an existing speaker cabinet.

Schematic Diagram:

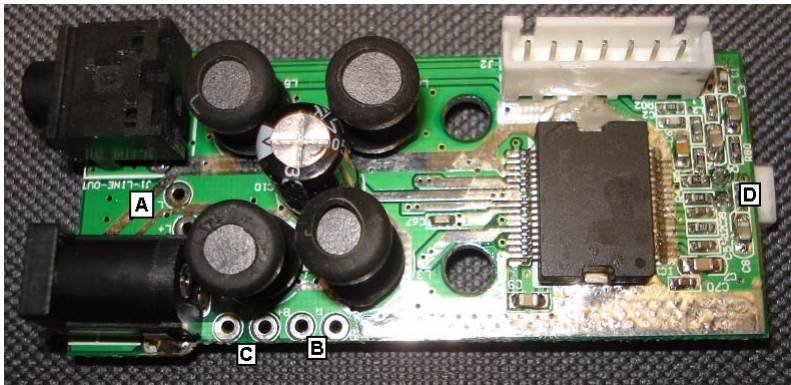


The schematic diagram above is provided for reference. It illustrates the TA-2024 IC and the input and output circuits on the PCB. C_{DO} are two output capacitors. These capacitors are ideally placed close to the speaker terminals or crossover input terminals as appropriate.

Warranty:

This Dayton Audio® product is warranted free from defects in material and workmanship for one year from date of purchase. Warranty does not apply to misuse, abuse, neglect, accident, improper use, etc. Contact your Dayton Audio reseller for a Return Merchandise Authorization.

Assembly:



- Remove the amplifier PCB from the static protective sleeve using static protective gloves or wrist band
- Solder the speaker wires to the PCB at points "A & B"
 - There are polarity marks (L+/- R+/-) printed on the bottom of the PCB
- Solder the power leads (if desired) at point "C"
 - There are polarity marks (B+/B-) printed on the bottom of the PCB
- Plug the LED ribbon cable into the white two-pin socket at point "D" and mount the power indicator LED
 - Polarity: the anode (+) lead is long, the cathode (-) is short
 - Clip the leads of the LED to the desired length
 - Plug the black LED socket onto the LED leads; anode to red wire and cathode to black wire
Refer to this diagram if for correct polarity
- Wrap each speaker wire through a ferrite core; one wrap per core is all that is required
- Solder the speaker wires to the speaker terminals
- Solder an output capacitor across the speaker terminals in parallel with the speaker wires
- Connect power via the power leads or DC power jack; we recommend a 12VDC, 2000mA power supply similar to Parts Express model 120-052
- Mount the volume control in the desired location and connect to the amplifier PCB using the 12" ribbon cable
- Mount the PCB using adhesive pads or with a zip tie

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Features:

- Class-T architecture
- "Audiophile" Quality Sound
 - 0.03% THD+N @ 9W, 4Ω
 - 0.10% IHF-IM @ 1W, 4Ω
 - 11W @ 4Ω, 0.1% THD+N
 - 6W @ 8Ω, 0.1% THD+N
- High Power
 - 15W @ 4Ω, 10% THD+N
 - 10W @ 8Ω, 10% THD+N
- High Efficiency
 - 81% @ 15W, 4Ω
 - 90% @ 10W, 8Ω
- Dynamic Range = 98 dB
- Over-current protection
- Over-temperature protection

Package Contents:

- (1) Class T Digital Audio Amplifier PCB
- (1) Volume control PCB with 12" ribbon cable
- (1) LED power indicator with ribbon cable
- (2) 12" Speaker Wires (Red & Black)
- (2) 12" Power Wires (1 Red & 1 Black)
- (2) 12" LED Wires (1 Red & 1 Black)
- (2) Ferrite Cores
- (2) Output Capacitors



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