[Power Amplifier bridge 180W or stereo 2 x 80 Watts](http://diy-spot.blogspot.com/2012/03/power-amplifier-bridge-180w-or-stereo-2.html)

[**Circuit dynamic power amplifier circuit with IC Dmos TDA7294 – bridge 180W or stereo 2 x 80 Watts**](http://xtronic.org/circuit/amplifier/power-amplifier-circuit-tda7294-bridge-stereo/)

This circuit described here uses two cis tda 7294 for use in stereo (2 x 80Watts) or bridge mode (1x 180 Watts), to configure this setting just four jumpers. To facilitate mounting the circuit has power supply attached. The power is kind of simple symmetrical with a bridge rectifier 6A, and two large electrolytic capacitors , 10000μF the 22000μF/50v. This Power supply will for the two modules. The processor is recommended 22-0-22 to 28-0-28 / 5A, depending on the quality of the transformer is recommended at least 6 amps of current.
The TDA7294 is a monolithic integrated circuit in Multiwatt15 package, intended for use as audio class AB amplifier in Hi-Fi field applications (Home Stereo, self powered loudspeakers, Top-
class TV). Thanks to the wide voltage range and to the high out current capability it is able to supply the highest power into both 4Ω and 8Ω loads even in presence of poor supply regulation, with high Supply Voltage Rejection. The built in muting function with turn on delay simplifies the remote operation avoiding switching on-off noises.
Another application suggestion is the BRIDGE configuration, where two TDA7294 are used,  In this application, the value of the load must not be lower than 8 Ohm for dissipation and current
capability reasons. A suitable field of application includes HI-FI/TV subwoofers realizations.
In stereo, all jumpers must be open and the speakers (speakers) are plugged into connectors Lout and Rout and audio input connectors in the Lin and Rin. In the amplifier in bridge mode all jumpers should be closed and the audio output Lout is (+ the speaker) Rout (- the speaker) and audio input will be Lin, Rin will be shorted to ground via JB2.
**The main advantages offered by this solution are:**
- High power performances with limited supply voltage level.
- Considerably high output power even with high load values (i.e. 16 Ohm).
With Rl= 8 Ohm, Vs = ±25V the maximum output power obtainable is 150 W, while with Rl=16Ohm, Vs = ±35V the maximum Pout is 170 W.



In bridge mode short circuit the jumper JB1, JB2, JB3, JB4

 **Suggested printed circuit board (PCB) for mounting circuit dynamic audio amplifier with tda7294 – Scale 1:1**



**Component side to guide the assembly of the amplifier circuit – Click to enlarge**



Component list

|  |  |
| --- | --- |
| **Components** | **Value** |
| **Resistors 1/4 Watt 5%** |
| R1,R3,R7,R9,R13 | 22k – Red, Red, Orange, Gold |
| R2,R8 | 680 – Blue, Gray, Brown, Gold |
| R4,R10 | 100k  – Brown, Black, Yellow, Gold |
| R5,R11 | 27k – Red, Violet, Orange, Gold |
| R6,R12 | 47k – Yellow, Violet, Orange, Gold |
| **Capacitors** |
| C1,C3 | 0.22µF – 100 volts – Polyester film capacitor |
| C2,C4 | 10000µF/50v – Electrolytic Capacitors |
| C5,C7,C8,C9,C13,C14,C15,C18 | 22µF/35v – Electrolytic Capacitor s |
| C6,C12 | 0.560µF – 100 volts – Polyester film capacitor |
| C10,C11,C16,C17 | 100nF – 100 volts – Polyester film capacitor |
| **Semiconductors** |
| CI1,CI2 | TDA7294 – Integrate Circuit  from ST Microelectronics |
| D1,D2 | 1n4148 – Diode |
| B1 | Rectifier Bridge  6A/200 Volts |
| **Connectors** |
| CN1 | Connector to trafo  22-0-22 a 28-0-28 |
| CN2 | Output Connector left channel (stereo mode) or (+) bridge mode |
| CN3 | Input Connector Left Channel (stereo mode) or Bridge input |
| CN4 | Input Connector Right Channel (stereo mode) |
| CN5 | Output Connector left channel (stereo mode) or (-) bridge mode |
| **Several** |
| J1,J2,J3,J4,J5 | Wires – note the current driven it will go through them |
| JB1,JB2,JB3,JB4 | Jumper to switch between the amplifier modes |
| Transformer 22-0-22 a 28-0-28 / 5 amperes, wires, box, etc. |

**Users electronic tags:**

tda7294 BTL-paralleled circuit diagram, amplificador de audio bridge, bridging power amplifiers, Jrc4558 circuit pcb, power amplifier 80 watt with ic tda, tda7294 amplifier circuit stereo, tda7294 bridge amplifier, tda7294 bridge schematic pcb, tda7294 stereo