Mini Amplifier Circuit

Description

Here is a simple and humble 2 Watts mini audio amplifier circuit suitable for small pocket radios and other portable audio gadgets. The circuit is based on Phillips Semiconductors IC TDA 7052. The amplifier can be run even from a 3V Mercury button cell. This makes it ideal for battery operated gadgets.

The IC TDA7052 is a mono output amplifier coming in a 8-lead DI package (DIP). The device is mainly designed for battery-operated portable audio circuits. The features of TDA 7052 include, no external components needed, no switch-on or switch-off click sounds, great overall stability, very low power consumption (quiescent current 4mA), low THD, no heat sinks required and short-circuit proof.

The gain of TDA 7052 is fixed internally at 40 dB. To compensate the reduction of output power due to low voltage supply the TDA7052 uses the Bridge-Tied-Load principle (BTL) which can provide an output of around 1 to 2 W Rms (THD = 10%) into an 8 Ohm load with a power supply of 6 V.

In the circuit the potentiometer can be used to control the volume. Capacitor C1 and C2 are meant for filtering the supply voltage if a battery eliminator is used as supply source. For operations using a battery C1 and C2 are no necessary.
Notes.

- Assemble the circuit on a good quality PCB or common board.
- If you are a little expert, you can assemble the circuit in a match box including the speaker.

Source: http://todayscircuits.blogspot.com/2011/06/mini-audio-amplifier-circuit.html#VUB4m9Kqqkp