SIMPLE AUDIO CIRCUITS

This article is a compilation of the simple and popular audio circuits we have published over years in**CircuitsToday**. This list involves a collection of simple amplifier circuits that you can try at home and some other audio related circuits with specific applications.

Image Source

1. **150 Watt amplifier circuit** – This circuit is the most popular amplifier we have ever published. It has received over 700+ comments and is still counting. This amplifier has been tested by many readers of CircuitsToday and many of them got correct output. Most of the problems and troubles raised by readers while testing the circuit had been solved by Mr.Seetharaman (who is a contributor of this portal). If you are interested in testing or doing an amplifier project yourself, this is the first one I would ever recommend.

2. **100 Watt Audio amplifier based on TDA7294** – This is an IC based (TDA7294) amplifier circuit which can easily deliver 100 Watts RMS output into an 8 ohms speaker. The TDA7294 has low noise, low distortion, good ripple rejection and can be operated from a wide range of supply voltages. It's an IC specifically designed for Hi Fi audio applications.

3. **Digital Volume Control Circuit** - This is a simple digital volume control circuit built using MAX5486 IC. The IC – MAX5486 is a digital volume control IC with a push button interface that has a built in bias voltage source. So you dont need to connect any external circuitry for the same

purpose.The volume control circuit based on MAX5486 can be used in a lot applications like personal audio systems, hand held audio devices etc.

4. Multi channel audio mixer circuit – This multi channel audio mixer circuit has been developed using IC LM3900 which is a quad amplifier. This circuit is developed using 4 LM3900 IC's. This particular circuit application has 2 mic inputs and 2 line inputs. You can add more inputs by connecting the same in parallel which makes it a multi channel audio mixer circuit.

5. Passive tone control circuit - This is a simple tone control circuit that you can make with components available at your hand. The only active component in this circuit is an op amp TL072. The circuit is named passive because the tone control section is completely handled using passive components. A really low cost and easy to build audio circuit to try your hands on.

6. 3 Channel audio splitter circuit - This is a simple 3 channel audio splitter circuit designed with op amp NE5532 from Fairchild semiconductors.NE5532 is a dual internally compensated low noise opamp with high small signal and power bandwidth, making it well suited for high quality audio applications.

7. 2×60 Watts audio amplifier – This is a high quality audio amplifier designed using LM4780 IC, which is capable of delivering 60 watts RMS power per channel into 8 0hms speakers. The LM4780 has very low total harmonic distortion and has a power supply rejection ration (PSRR) of 85 dB. This IC from National Semiconductors requires very few external components and has a built in mute facility. The LM4780 is completely protected using their trademark SPiKe technology and has a signal to noise ratio greater than 97dB.

8. 5 Band Graphic Equalizer – This graphic equalizer circuit is designed using LA3600, which is a single integrated op amp from Sanyo semiconductors.The LA3600 can be operated from anything between 5 to 15V DC and is extremely stable to capacitive loads.

9. USB Sound Card – So what about designing a USB sound card? This circuit is a bit outdated one as it uses USB 1.0, but still worth trying for your learning curve. This circuit is designed using PCM2702 which is an integrated 16 bit digital to analog converter that has two digital to analog output channels.This IC also has a number of useful features like on-chip clock generator, digital attenuator, play back flag, suspend flag, zero flag, mute function etc. The most interesting thing is that this circuit is plug & play and doesn't need any driver software for Windows XP and Windows Vista operating systems.

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