

INTRODUCTION

A **sound bar**, **sound bar** or **media bar** is a type of loud speaker that projects audio from a wide enclosure. It is much wider than it is tall, partly for acoustic reasons, and partly so it can be mounted above or below a display device (e.g. above a computer monitor or under a home theater or television screen). In a sound bar, multiple speakers are placed in a single cabinet, which helps to create stereo sound or a surround-sound effect. A separate subwoofer is typically included with, or may be used to supplement,^{[1][2]} a sound bar.

Sound bars were primarily designed to generate strong sound with good bass response. Sound bar usage has increased steadily as the world has moved to flat-screen displays. Earlier television sets and display units were primarily CRT-based; hence the box was bigger, facilitating larger speakers with good response. But with flat-screen televisions the depth of the screen is reduced dramatically, leaving little room for speakers. As a result, the built-in speakers lack bass response. Sound bars help to bridge this gap.

CHAPTER 1

ABSTRACT

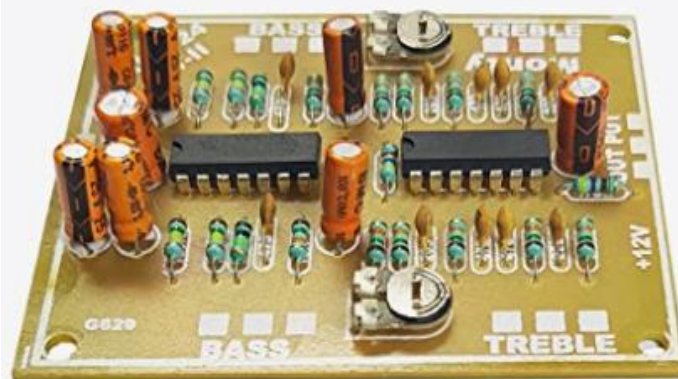
The sound bar is a volume gain device. It is use to give the nice audio experience. The USB connector, AUX and Bluetooth Connectivity is available in this product. The user can easily connect the audio using available connectivity in this product to experience the sound quality of the product. Sound bars are relatively small and can be easily positioned under a display, are easy to set up, and are usually less expensive than other stereo sound systems. However, because of their smaller size and lack of flexibility in positioning, sound bars do not fill a room with sound as well as separate-speaker stereo systems do.

CHAPTER -2

COMPONENTS

2.1 BASE TREBLE BOARD

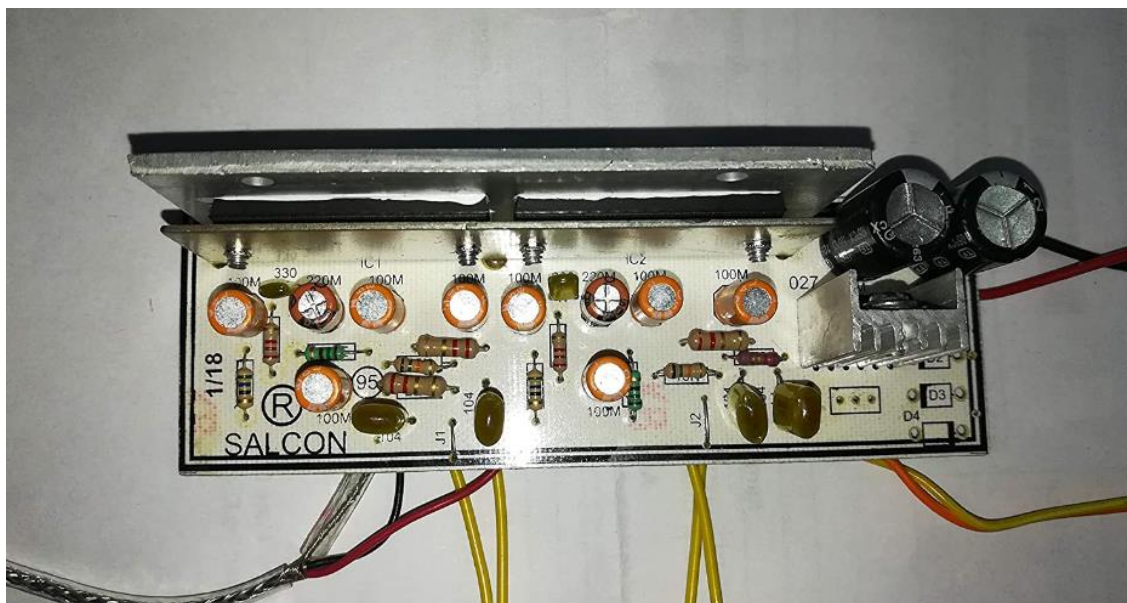
I have using the base treble board. It is used to gain the base of the music and increase the treble volume .The treble is the highest sound in music while the bass is the lowest sound in music. The treble is located on the line in the staff that is a space higher than the bass while the bass is located on the line in the staff that is a space lower than the treble. Bass and Treble refer to pitch. Pitch is determined by the length of the wave form. When referring to music, 523.251 Hz is the frequency of "middle c" or C5. There are two clefs that music is written on. C5 is the not that sits in the middle of the two clefs separating the two. Notes with frequencies lower are bass and notes with frequencies higher are treble.



2.2 MONO IC BOARD

The LA4440 is a very popular dual-channel **audio** amplifier commonly used to build high power audio amplifiers. The IC is known for its high power, easy availability and cheap price which makes it popular among Home Theatre and Car Amplifier Systems which operate on 12V. Hence in this article, we will learn how to build a High-Power Stereo Audio Amplifier **using the LS4440** Audio Amplifier IC. The circuit will have two LS4440 amplifiers ICs and will be able to drive two 20W Speakers (20W+20W) with volume, bass and treble control. Also, the audio input for our amplifier board can either be provided directly from an audio jack or wirelessly using Bluetooth.

We have previously built a lot of Audio Amplifier circuits ranging from small 10W amplifiers to heavy 100W Power amplifier using different classes of the Power amplifier to suit various applications. You can also check them out if your requirement is different.



2.3 VOLUME CONTROLLER

I have using one stereo volume controller. An audio control circuit allows you to change the volume on a speaker system. These circuits come built-in on most radios and receivers. In addition to volume control, many will allow you to turn off the speaker altogether. You can add external volume control to any speaker you like. If you don't connect the input device or the speaker to some kind of audio amplifier, chances are you won't get much sound from the device. If your speaker is powered, it will amplify the sound for you.



2.4 CONTROL NOB

A control knob is a rotary device used to provide manual input adjustments to a mechanical/electrical system when grasped and turned by a human operator, so that differing extent of knob rotation corresponds to different desired input. Control knobs are a simpler type of input hardware and one of the most common components in control systems, and are found on all sorts of devices from taps and gas stoves to optical microscopes, potentiometers, radio tuners and digital cameras, as well as in aircraft cockpits.



2.5 1:10 HD+ WIERS

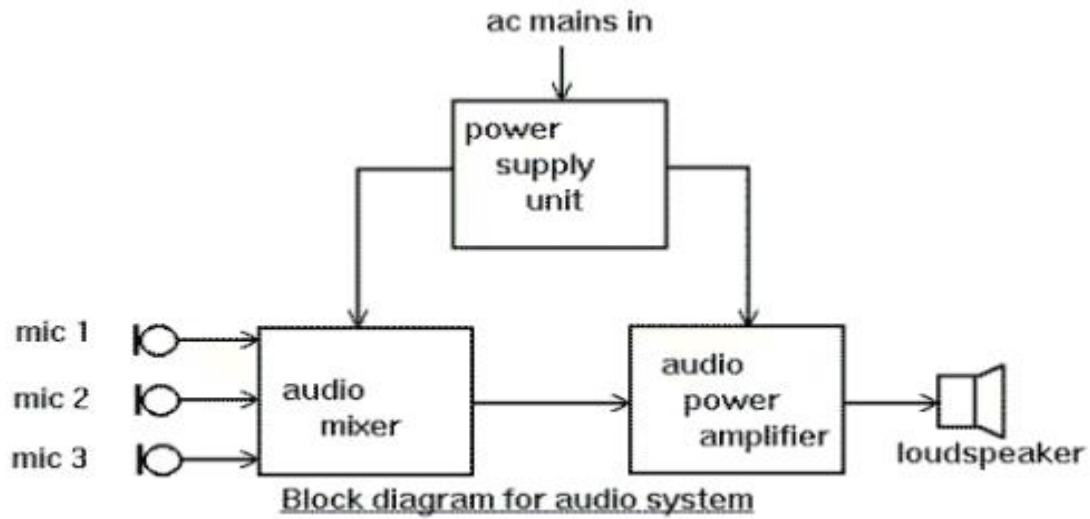
In order to ensure that your amplifier is operating properly and to its full output potential, the power and ground cables need to be large enough to handle the demand for current. This means choosing the correct wire gauge, or “thickness,” for your system. The more demanding the audio system, the larger gauge wire you will need to use. Using a proper gauge power wire will not just ensure proper current flow, but it will also improve the reliability of the product. This will also ensure the safety of your audio system, as smaller gauge wire under high current loads can potentially get extremely hot.

The common sizes of power wire fall under AWG (American Wire Gauge) sizes. The smallest wire thickness has a higher gauge number and vice versa. The most popular wire gauges are 10AWG, 8AWG, 4AWG, 2AWG and 1/0AWG (Zero Gauge). Choosing the correct wire gauge size for your application will depend on the overall current draw of your amplifier(s), as well as the length of wire needed.

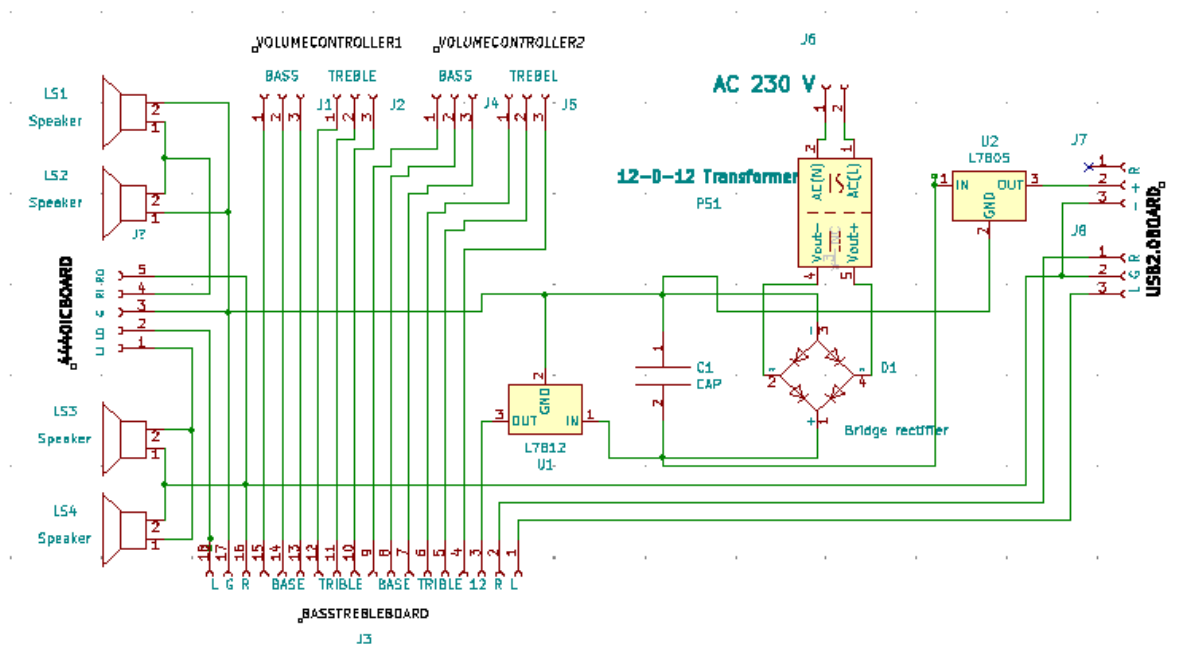


CHAPTER – 3

3.1 BLOCK DIAGRAM

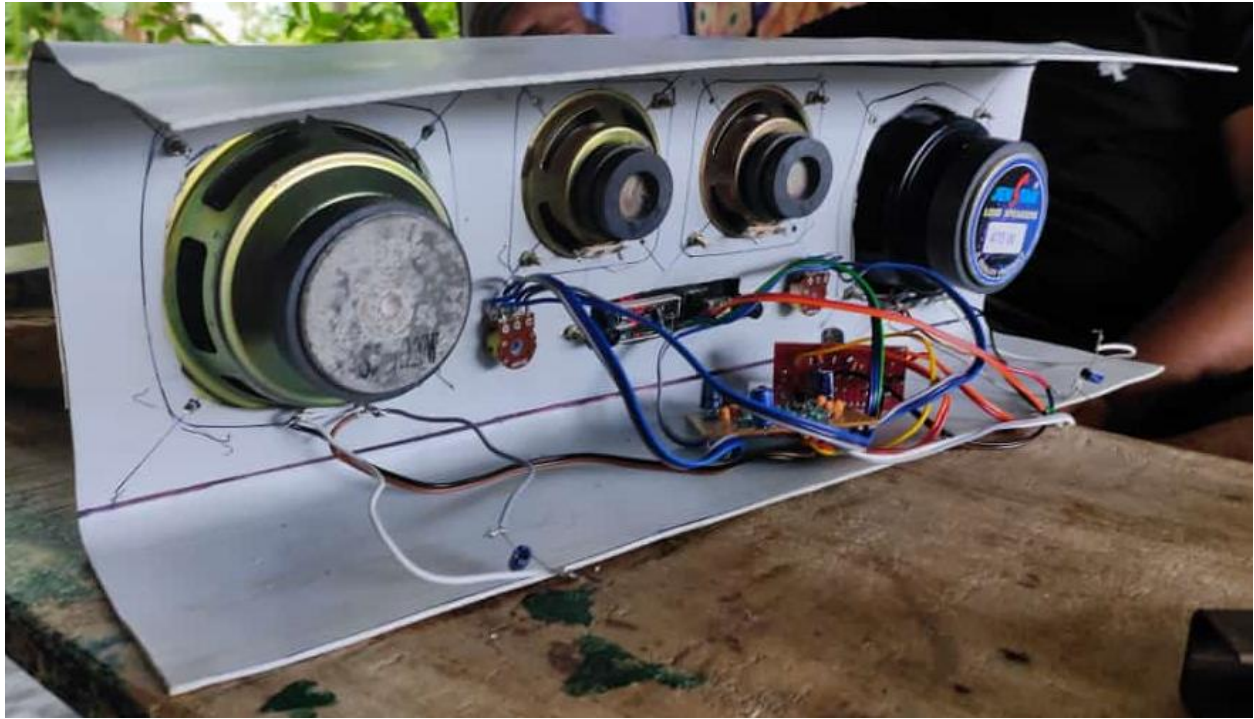


3.2 CIRCUIT DIAGRAM



CHAPTER – 4

FINAL IMPLEMENTATION OUTPUT



REFERENCE

1. Honorof, Marshall (4 September 2019). "Roku's New Soundbar Doubles as a Streaming Player: Soundbar Meets Streaming Box". Tom's Guide.
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5. "Philips HTL9100 SoundBar Announced with Detachable Speakers for 5.1 Surround". ExpertReviews.co.uk. June 26, 2013. Retrieved July 14, 2021.
6. Morrison, Geoffrey (9 July 2013). "Are Soundbars Worth It?". FORBES.