

Bonus Point Opportunity of Video Watching

In this Bonus Point Opportunity, please watch 40 mins video. Ideally, I suggest you watch about 8 – 10 videos to ensure that you have watched enough videos for your Phase 2 project.

The recommended videos include

1. LM Amplifier
2. TDA Amplifier
3. TPA Amplifier
4. Mosfet Amplifier
5. Transistor Amplifier
6. Filters
7. IGBT
8. Bass and Treble Volume Control
9. Audio System Design
10. Audio Amplifier Circuit

Delivery

Please do Zoom Recording while you watch and comment on the video. Note, please pause video while you comment so I can hear your comments.

1. What you have learned from the video
2. What you have feel confused
3. Your questions raised after watching the video
4. You can upload videos to Google Drive, One Drive, Youtube to list links of your videos.

Please write two pages to summarize the videos. It includes what you have learned from the videos and how these videos helped you narrowed down you phase 2 design.

Report Format (Two Pages)

You can primarily use tables to summarize, to save you time!

1. Review the videos you have watched

Youtube Video Link	What you have learned from the video?	What have made you confused?
Filters https://elearn.mt.edu/d2l/le/content/9456573/viewContent/96635900/View	It was cool watching the waveforms of the bandpass he used from 1k to 30k. $F_c = 1/2\pi RC$ was the formula he used to find his bandpass.	There were not really any questions on this video since we did do a lab over filters already.
IGBT https://elearn.mt.edu/d2l/le/content/9456573/viewContent/96635937/View	I thought this video was awesome, compared to the other video he just mounted his components to a piece of wood and soldered everything as needed. I like the bass ones. It sounded great.	Awesome video. Not really any questions since he just showed how the circuit was built and then how it sounds. I was a little confused on what the white block was at first until I realized it was a resistor.
Deep bass and treble volume https://elearn.mt.edu/d2l/le/content/9456573/viewContent/96635942/View	Awesome video as always. I like how he built the circuit onto a heat sink. Now I know how to implement potentiometers to control volume, treble, and bass.	I was a little confused on what each of the potentiometers did. I figured one would be bass one for treble and one for output sound. I was not sure which was which. After the video I now see the circuit diagram linked below. It was more sense now and my guess was correct.

2. Second phase design choice

Youtube Video Link	Why this video is important for phase 2?	Questions?
Rectifier https://elearn.mtsu.edu/d2l/le/content/9456573/viewContent/96635944/ <u>View</u>	This could be very useful to the project considering if we wanted to use a bass amplifier bridge diode for bass. Considering we have to have bass in our final project.	It was an awesome circuit. I like how he just solders everything together but it can be hard to tell what the diagram is like with only seeing everything soldered together.
Bass amplifier https://elearn.mtsu.edu/d2l/le/content/9456573/viewContent/96635946/ <u>View</u>	The iron transformer was really cool to see it added to the circuit. I'm guessing it could also be replaced with a mydaq if needed. Of course this could be useful if we wanted to use a transformer in our final project.	How effective is the massive heat sink he puts all his components on? Is the heat sink needed or does he just use it for extra percausion?

3. Conclusions of the most significant learning from these videos

Watching those five videos about building circuits and understanding audio electronics was really helpful. They showed how to put theory into practice, like making bandpass filters and using potentiometers to control sound.

One cool thing was seeing different ways to build circuits, like mounting components on wood or soldering them together directly. It showed how flexible electronics can be.

They also taught about different components and how they work, like resistors and transformers. Learning about these parts helps understand how circuits function.

The videos stressed the importance of being careful and precise when building circuits. Paying attention to details like using a heat sink ensures circuits work well.

Overall, those videos were a great learning tool, covering a lot of useful information about building circuits and understanding audio electronics.

After watching these videos, I feel like I have a better grasp of how circuits work, especially in the context of audio electronics. One key takeaway was the practical application of theoretical concepts. For instance, learning about bandpass filters in theory is one thing, but actually seeing one being built and understanding how it affects audio signals was eye-opening.

I also appreciated the variety of techniques demonstrated in the videos. From simple soldering to more complex circuit mounting methods, it showed that there's not just one right way to build a circuit. This flexibility encourages creativity and problem-solving skills.

Understanding the role of different components like resistors and transformers was another significant learning point. These videos helped me understand these components, showing how they contribute to the overall functionality of a circuit.

One area I found challenging was deciphering circuit diagrams from the soldered components. While it's impressive to see a circuit come together physically, it can be tricky to understand the schematic representation without seeing the circuit diagram. However, the

videos provided a helpful link to circuit diagrams afterward, which helped me understand how everything was connected.

Overall, I feel more confident in my understanding of circuit building and audio electronics after watching these videos. They provided a solid foundation of knowledge and practical skills that I can apply to our final project. Especially any of the videos with bass considering bass will be used in our final and we didn't previously have a ton of bass in the first part of the project.