

Build Your Own Mini Amplifier

A small, portable, battery operated practice amp is helpful when you are out playing for your friends. In this course, students will build a mini amp utilizing electronic components soldered onto a circuit board. They will also design their own enclosure.

How much is the course?

Although the course is free, there is a \$20 materials fee per student. Payable to NJ Guitar & Music Society.

Where does the course meet?

The course meets in Bergen Makerspace on the campus of Bergen County Academies: 200 Hackensack Avenue. Hackensack, NJ 07601. Bergen Makerspace is across the parking lot from the main school building (adjoining the Adult Education building). Enter Bergen Makerspace near the traffic light at the parking lot exit.

What is included in the course?

All tools and materials are included. You only supply your own instrument and cable.

Are there any prerequisites?

Students should be comfortable with basic hands-on tools, as they will be learning to use a soldering iron. The minimum age is 14.

Is there an enrollment limit?

The course has an enrollment capacity of 8 students and one teacher.

How long is the course?

The course is 3 hours. NJGMS will work with the teacher in determining a convenient date and time!

Who is the instructor?

The course is taught by Michael Lemma, founder of NJGMS and co-founder of Bergen Makerspace. He created Soundwave Audio Lab, a network of courses where kids build electro-musical devices. Michael has presented at the NJ Music Technology Expo and built hundreds of these devices, developing modifications to inspire the curiosity of music enthusiasts. This program was covered on Classroom Closeup TV.

How do I enroll?

Enrollment is made by the teacher for his/her class. Please contact us to discuss details

What will the students learn?

Students will learn basic circuitry, electrical components/hardware, safe use of a soldering iron, and common tools. They will learn how amplifiers function, troubleshooting, and will develop a sense of accomplishment.

Intro, safety, and soldering basics (30 minutes)

Electrical components and tools (15)

Function and preparation of hardware (30)

Soldering the PCB and circuit design (30)

Preparing the enclosure (30)

Testing, troubleshooting, installation, and bring home your amp (45)

NJGMS provides participating teachers with a Professional Development certificate for this course.

