

Noise 101

Diagnose and Fix Common Noise Problems in Recordings

Learning Outcomes

This eLearning course is designed to equip podcasters with the skills to troubleshoot recording problems and improve the sound quality of their podcasts.

At the end of this course, learners will be able to

- Diagnose the kind of noise in an audio recording
- Explain how to fix different noise problems
- Improve their own recordings

Modules described on the following pages...

Course Outcome 1: Diagnose the kinds of noise in an audio recording

Module 1: Introduction and Expectations

Video / Audio Presentation	Video / Audio Presentation	Video / Audio Presentation	Project
<p>Introduction and welcome to the course</p> <p>Explain the course outcomes and expectations.</p>	<p>Preview: 5 sources of noise in recordings.</p> <ul style="list-style-type: none">• The microphone• The recorder• Connection between mic and recorder• The room where it happens• The background sounds	<p>Recording Project #1: Instructions</p> <p>Explain the purpose and specs for the first recording.</p> <ul style="list-style-type: none">• Record for 60 seconds• Read assigned script• Where it says "Pause: Don't talk for the next 30 seconds," be quiet in order to record the sound of the room. <p>Finally, save or export your recording as an uncompressed .wav or .aif file.</p>	<p>Recording Project #1</p> <p>Students record and submit their uncompressed audio file.</p>

Module 2: Five Categories of Noise

Video / Audio Presentation	Quiz	Video / Audio Presentation	Quiz
Microphone Problems <ul style="list-style-type: none"> • Talking too close • Talking too far away • Moving back and forth • Plosives • Mouth noises • Dynamic vs. Condenser 	Microphone Problems Quiz <p>Screen displays "Sample Recording #" and an audio clip.</p> <p>Students select the noise problem they hear. (All that apply)</p> <p>For example: 1. Talking too close. 2. Talking too far away 3. Moving back and forth. 4. Plosives 5. Mouth noises. 6. Dynamic vs. Condenser</p>	Recorder Problems <ul style="list-style-type: none"> • Recording too loud creates distortion called clipping • Recording too low makes background sounds more noticeable • Voices recorded at different levels 	Recorder Problems Quiz <p>Screen displays "Sample Recording #" and an audio clip.</p> <p>Students select the noise problem they hear. (All that apply)</p> <p>For example: 1. Clipping/Distortion. 2. Low volume with lots of background noise 3. Voices at wildly different levels</p>

Video / Audio Presentation	Quiz	Video / Audio Presentation	Quiz	Video / Audio Presentation	Project Assessment
Connection Problems <ul style="list-style-type: none"> • Hum • Electrical noise 	Connection Problems Quiz <p>Screen displays "Sample Recording #" and an audio clip.</p> <p>Students select the noise problem they hear. (All that apply)</p> <p>For example: 1. Steady hum throughout. 2. Little random electrical interference noises</p>	Room Problems <ul style="list-style-type: none"> • Reverb • Boxiness 	Room Problems Quiz <p>Screen displays "Sample Recording #" and an audio clip.</p> <p>Students select the noise problem they hear. (All that apply)</p> <p>For example: 1. Lots of echo 2. Too small of a recording space</p>	Background Sound Problems <ul style="list-style-type: none"> • Planes • Trains • Automobiles • Lawn mowers • Leaf blowers • Wind • Thunder • Refrigerator running • HVAC running • Air blowing through the vent • Dogs barking outside • Phones ringing, dinging, and binging 	Recording Project 1: Analyze your audio <p>What kinds of noises do you hear?</p> <p>List all of the specific microphone problems, recorder problems, connection problems, room problems, and background noise.</p>

Course Outcome 2: Explain how to fix different noise problems

Module 3: Fix the Noise

Video / Audio Presentation	Reading	Video / Audio Presentation	Project
<p>Fix Recording Problems Like the Pros</p> <p>At National Public Radio, making good quality audio is their job. This article goes over several of the noise problems we have already examined with advice for fixing them.</p> <p>The NPR Training article explores many different techniques depending on the situation. Here's what I want you to focus on.</p>	<p>The ear training guide for audio producers</p> <p>Article from NPR Training</p> <p>Read the section on "Recording."</p>	<p>Recording Project 1: Determine what will improve your audio</p> <p>Take the list of noise in your recording and think about what you can do to fix those problems.</p> <p>With these solutions, fix your recording setup and record again.</p>	<p>Recording Project #2</p> <p>Fix the problems you identified in Project #1. Then record again. Then submit your uncompressed audio file.</p>
	<p>Read Here</p>		

Course Outcome 3: Improve their own recordings

Module 4: Wrapping Up

Video / Audio Presentation	Project Assessment	Project	Video / Audio Presentation	Downloadable
<p>Recording Project 2: Analyze your audio</p> <p>After learning to diagnose recording problems using the five categories of noise and applying that understanding to fixing your second recording, listen to hear what worked and what still needs improving.</p> <p>Does Recording #2 sound better than Recording #1? List all of the specific microphone problems, recorder problems, connection problems, room problems, and background sounds.</p> <p>What else needs fixing? What help do you need?</p>	<p>Recording Project 2: Determine what else will improve your audio</p> <p>Take the list of noise in your recording and think about what else you can do to fix those problems.</p>	<p>Recording Project #3</p> <p>Fix the problems you identified in Project #2. Then record again. Then submit their uncompressed audio file.</p> <p>This is the final exam.</p>	<p>Review: What you learned + Checklist</p> <p>Summarize what they learned and practiced during this course.</p> <p>Walk them through the checklist they can download and personalize.</p>	<p>Checklist</p> <p>Editable document so learners can personalize it to their specific recording setup.</p>