

# CINEMATECH

## Audio Recording

Fill out the attendance  
form



# Welcome!

- Instructor Introductions (name, pronouns, position)
- Production Office Overview
  - Equipment/troubleshooting questions:
    - [camsprodn@carleton.edu](mailto:camsprodn@carleton.edu) (M-F)
    - 507-222-5434
  - Hours of operation
    - Monday - Thursday: 10am - 5pm
    - Friday - Sunday: 12pm - 4pm
- Resources
  - CAMS Production Office Website
  - [Manuals/Quickstart Guides](#)



# Goals of Sound Recording

Not chasing “perfect studio” sound, but usable, clean audio using reliable tools.

Avoiding:

- Distortion
- Wind noise
- Background noises

Knowing how to choose the right mic for the situation.

# Audio Recording Tools



Tascam Handheld Audio Recorder



Headphones



Rode Shotgun Mic



Sony NX100



EV Omni Mic

# Tascam DR-100 mk III

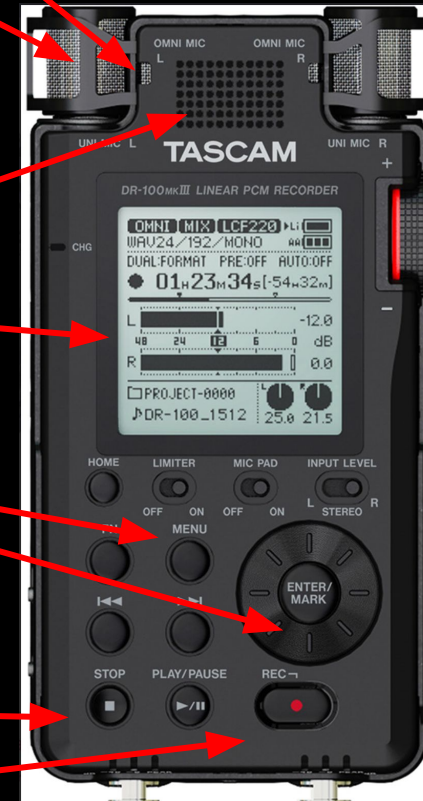
On-board mics

Built-in speaker

Display

Menu button and scroll wheel

Record/playback buttons



# Tascam DR-100 mk III

Input level knob



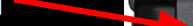
SD card slot



Battery compartment



Power button



Line out



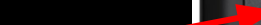
Headphones



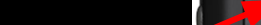
Volume FOR HEADPHONES



Hold/Lock

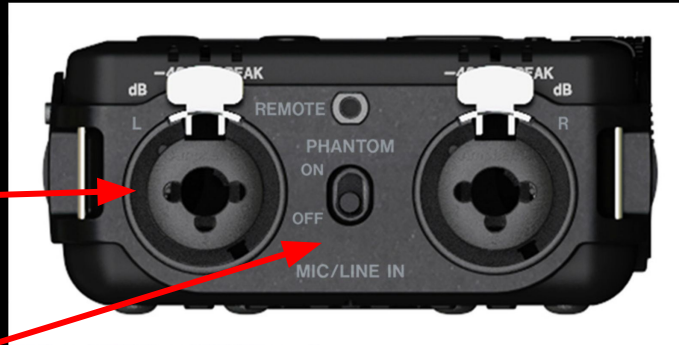


Speakers on/off



# Tascam DR-100 mk III

Mic/Line In  
L/R jacks



Phantom  
switch

Digital in  
connector



Ext in  
connector

# Batteries and Power

- Built in Lithium-Ion battery (rechargeable)

*AND*

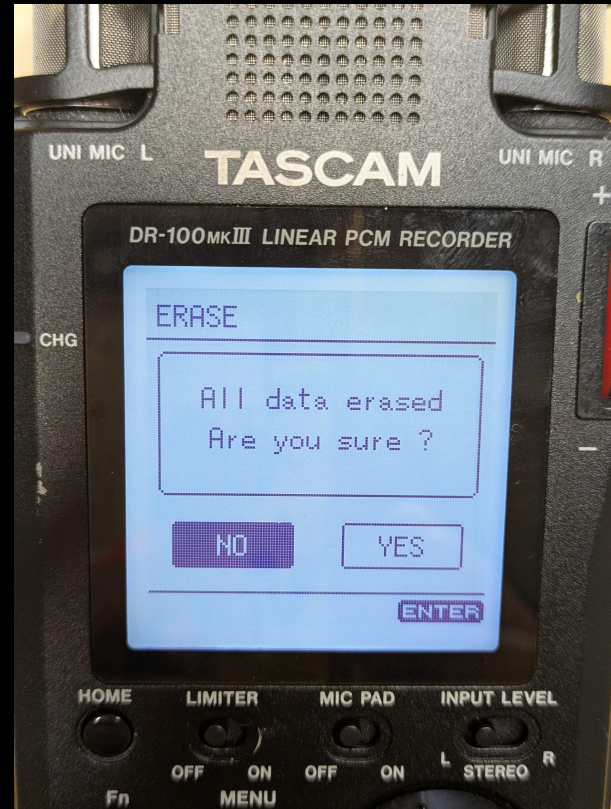
- AA alkaline battery-powered



# Insert SD card



# Format SD card



# Set battery options

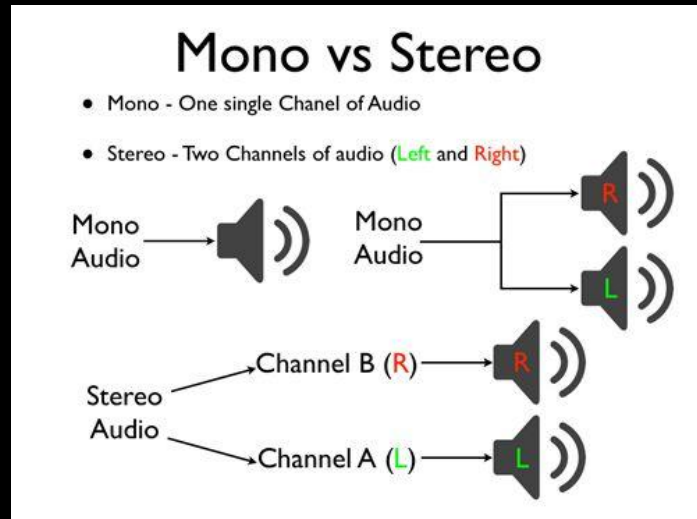


# Recording Settings

**Format:** WAV (BWF) 24 bit

**Sample:** 48.0 kHz

**File type:** MONO-L or  
MONO-R (whichever mic is  
plugged into)



# Input Level

Set to L or R depending on which channel XLR and mic is plugged into

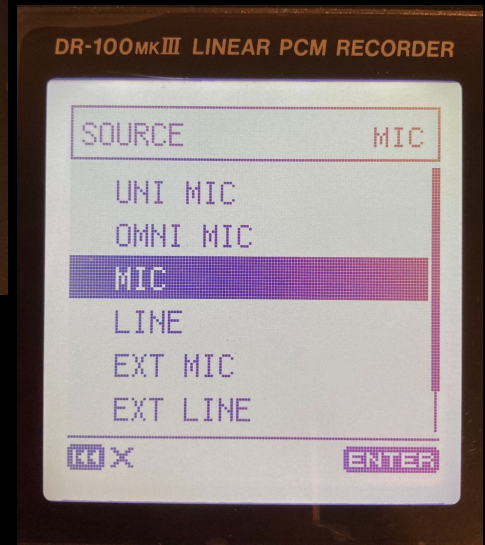
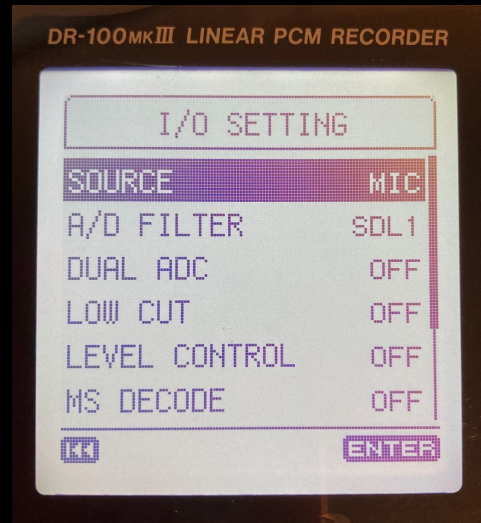


# I/O (Input/Output)

Set to **MIC** when using an external microphone.

UNI and OMNI are **built-in** microphones on the Tascam recorder.

We will be plugging in **external** microphones.



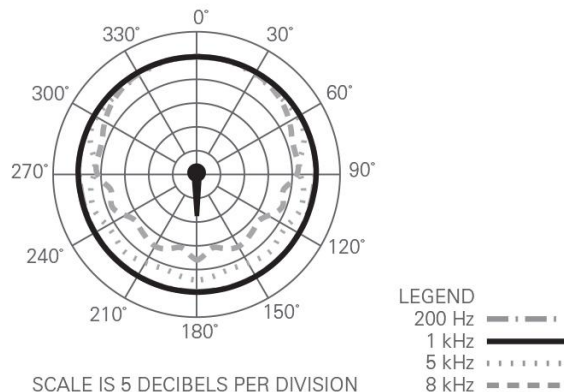
# Microphone Pick-up Patterns

How well they pick up sound from various directions.

**Omnidirectional** - all directions

Best for: ambient sound, multiple people, moving subjects

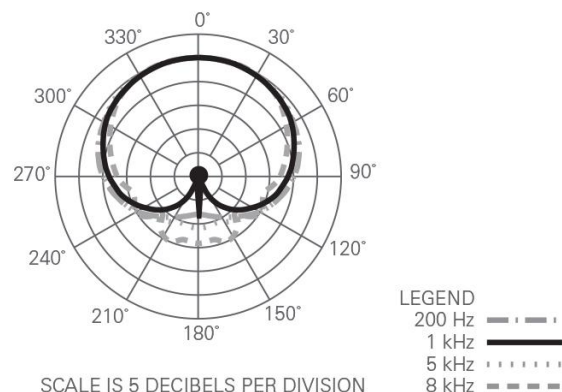
Weakness: picks up everything



**Directional** - directly in front

Best for: focused dialogue, distant sound sources

Weakness: Indoors, echo



# Directional aka “Shotgun” Microphone

Superdirectional from  
a specific, focused  
direction

Needs phantom  
power

Good for focused  
dialogue and exterior  
shots



# Plug in Microphone

Phantom power must be **OFF**  
when plugging in mic



What is phantom power  
(+48V)?

---

Electrical current from your  
device that powers your  
microphone

# Turn on Phantom Power if Needed

Shotgun mics need phantom power; omni and dynamic mics don't.

Turn on AFTER mic is already plugged in

Never plug a microphone in when phantom power is on—this causes an electrical surge upon plugin.

# Adjusting Input Levels

- Before recording, adjust input to suitable levels using the input level knob.
- Always monitor your sound with a good pair of headphones
  - Apple earbuds do not work
  - Set **INPUT LEVEL** switch to **STEREO** to adjust both channels
- Use input level knob to adjust levels
- Listen for:
  - Wind
  - Handling noise
  - HVAC hum
  - Clothing rustle

Input level knob →



# Why -12dB?

- Going over 0dB will **clip** your audio
  - Clipping = audio exceeds the max level a system can handle and creates a harsh, distorted sound
- -12dB gives you “head room” for unexpected loud sounds

# Don't Mix Up Volume with Input Levels

- Side volume wheel only controls the volume in your headphones
- Use the visual meters to monitor actual input levels

# Mic Placement & Sound Check

- Hold the microphone using the pistol hand grip.
- Do a “sound check”
  - Be sure to have you mic in the exact position you plan to shoot in while testing
- For dialogue: ask subject to talk at the level they would during the shoot.
- For foley: make the sound exactly as you would during the shoot.
- For ambient/field recording: observe the sounds, make sure all is quiet on set.

# Recording

Hit RECORD button once to put device on “Standby” (blinking red light)

Hit RECORD button again to start recording (solid red light)

Hit STOP to stop the recording. File will be saved.

Hitting PAUSE will stop the recording, but file will not be saved.

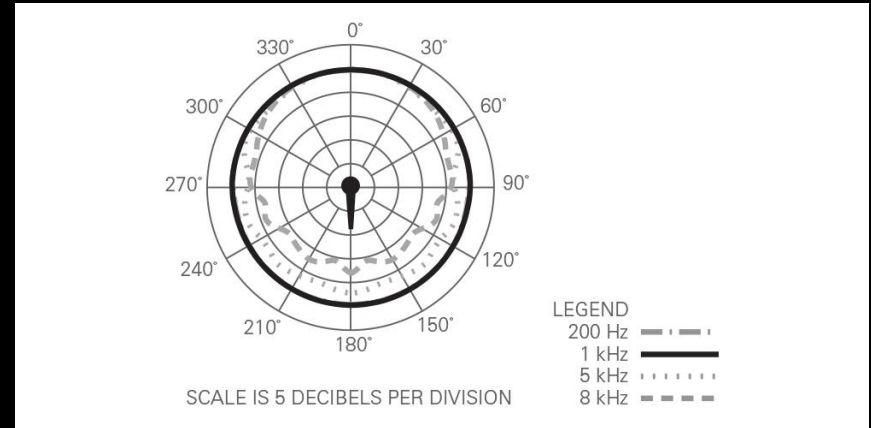
Hit RECORD again to continue recording on the same file.

# Playback

- Press PLAY/PAUSE to play most recent file
- Or go to MENU - BROWSE - PLAY/PAUSE on a selected file

# Omnidirectional Microphone

- Ideal for:
  - Room tone
  - Handheld interviews
  - Multiple speakers
  - Movement



# What is “Room Tone?”

Every space has its own sound.

Room tone = the background sound of your filming location when everyone is still & quiet.

Usually recorded right after the last take, before anyone moves or changes anything on set. 30-60 seconds per set up is standard.

Allows for editing flexibility and consistency when cutting dialogue.

“Holding for room tone—quiet on set!”

# Record with an Omni Mic

Turn OFF Phantom Power. Omni mics are self-powering.

Unplug shotgun mic, plug in omni mic.

No need to change inputs.

# Recording Audio on NX100



# Plug Mic Into XLR Input

Make sure phantom power is OFF before plugging in.

Once plugged in, turn phantom power ON.



# Map Input to Channels

In MENU, scroll down to  
AUDIO SET > XLR SET >  
INPUT CH SELECT and  
choose INPUT1/INPUT1.



# Set Levels

Set AUTO/MAN switch to MAN for both channels.

Use audio level wheels to adjust levels.



# Recording

Hit the record button. Sound will be recorded along with video.



**Clean-up:  
NEATLY Coil Your XLR Cables!!**