



Film Production

Commands & Controls Packet

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Media Production: Commands & Controls Packet

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Section 1: Camera Controls

A camera captures and processes video very differently from how your brain captures and processes it. The good video artist knows the ways in which a camera changes what the naked eye perceives, and s/he manipulates it.

Cinematography is a very complex art relying heavily on context and subtle emotional tones. It is also relatively young in the span of human existence, and it continues to evolve. The following section is intended only as a starting point for beginners. The good news is that most of what you are about to learn is intuitive. If you have been watching movies and TV all your life, your brain probably already understands how to interpret visual messages.

Safety:

Time and money has been invested so that you and your peers can have a rewarding artistic experience, so please keep in mind that future students will be relying on this equipment. Please protect the equipment for them as past students did for you.

If there is ever a problem with any of the equipment that you are using, please see the instructor immediately. I am never happy to hear about broken equipment, but I am even less happy to discover that a camera accident has been concealed.

Please keep the following in mind while using the equipment in this class:

1. These cameras record to removable SD cards. When accepting cards, some camera models are more finicky than others. Most will ask you to format the card on its first usage. Formatting will erase all footage (if any) currently on the SD card.
2. Always make sure you are recording to your group's SD card and not to the internal memory of the camera. If you are not recording to your card, there is a good chance that your footage will be lost by the next group that uses the camera.
3. Always sign out your camera using full names. Always sign your camera back in to instructor at the end of the work period.
4. Use a tripod unless you have a specific reason for not doing so. In most all cases, unsteady, unprofessional looking shots will lead to a reduction of your grade. If you are not using a tripod, be prepared to explain why not in writing.
5. Do not carry the tripod with the camera mounted to it. Always transport the camera and the tripod as separate pieces.
6. Dead batteries go directly to the instructor or to your class's designated academic aide. Never place batteries in the battery basket, the charger, or the trash.

7. Never leave class equipment unattended.
8. Never place your camera in the hands of a student who is not enrolled in our class.
9. Always place your camera on a steady and stable surface. Never take your hand from the camera unless you are sure that it is secure.
10. Plan and practice your shots before you record.
11. When you hit record, wait a few seconds before action begins. This will pad your shot and ensure that you don't accidentally clip your action. Remember, camera clipped footage cannot be fixed, but long shots can be shortened in editing.
12. Never take the camera out in bad weather. Also, do not point the camera directly at the sun or other bright light source.
13. Do not pick up your camcorder by holding the viewfinder, the LCD panel, the battery pack, or the microphone.
14. Do not touch the camera lens directly. If the lens is dirty, see the instructor and he will clean it for you.
15. Don't force anything! If the camera or tripod is resisting you, there is probably a reason. Seek help if needed!
16. Respect the library! Maintain a respectful quiet. Be courteous of the librarians. Put things back where you found them.
17. If you are leaving the classroom, you will need a pass!
18. If you are out working as a group, you will be expected to work together as a group. Stay together, help each other out, and get the work done. If any student is found repeatedly off task, they will be given more traditional classroom work to complete.
19. Always return all equipment, taking special care to remember small objects such as batteries and tripod release plates (tripod clips).
20. Have fun, and don't be afraid to experiment. (Just do so safely, please. Others need to use this equipment!)

Basic Shots:

There are several basic shots that you should be familiar with. We will be practicing many of them:

Steady (or still) Shot: The most basic of shots, it involves keeping the camera as steady and still as possible.

Panning Shot: Moving the camera horizontally from one subject to another (or to follow the movement of one subject).

Zoom Shot: Using the camera's zoom function to step toward or move away from your subject.

Tilt Shot: Tilting the camera up or down from one subject to another, or following the rise or fall of an object.

Handheld Track (Tracking Shot): to move the camera with the subject; *both the subject and the camera are in motion together.*

Rack Focus: Starting with a shallow focus, you shift the focus from one object to another. Usually the camera itself does not move, nor does it zoom.

Dolly Shot: The camera is put into motion using a wheeled cart. Often rails or tracks are used to control the camera movement, and often motorized carts are used.

Crane Shot: The camera is positioned on a crane or jib (long pole) so that the camera can rise high up out of the action.

The following terms are used by directors to tell cinematographers how far the camera should be from the subject:

Extreme Close-Up: The camera is close in a specific detail, like hands or a watch or eyes.

Close-Up: The camera is focused on just the face of the subject.

Medium Close-Up: The camera is focused on the head and shoulders of the subject.

Medium Shot: From the waist up.

Long Shot: A shot of an entire person's body.

Wide Shot: A shot which shows the entire environment in which the subject is located. If it starts off a series of shots, it is also referred to as an establishing shot.

Depth of Field:

Being able to manipulate your camera's depth of field is the first way to distinguish yourself from other amateur cinematographers and photographers. Knowing the rules below will help you improve the quality of your videos and your photos. Do you want people to see your Facebook photos and say, "Wow! That's a well-crafted photo!" Then learn about Depth of Field!

Depth of Field: The space between two planes (invisible walls), one being the plane of near focus and the other being the plane of far focus. Everything between those two planes will be in focus.

There are three factors which affect your DOF:

1) aperture (iris)

*as aperture closes, your DOF widens
as your aperture opens, your DOF narrows*

2) focal length (zoom)

*as you zoom out, your DOF widens
as you zoom in, your DOF narrows*

3) the distance from camera to the subject

*as you get farther away, your DOF widens
as you get closer, your DOF narrows*

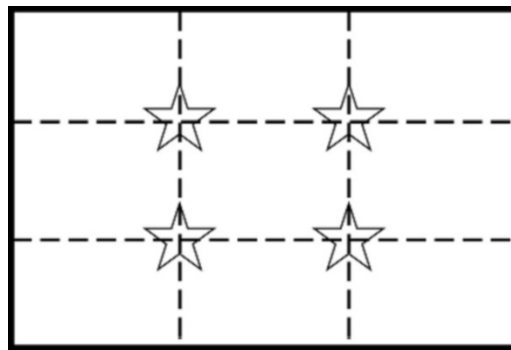


LAST NOTE: As your DOF gets narrower, you lose your sense of 3D (three dimensions).

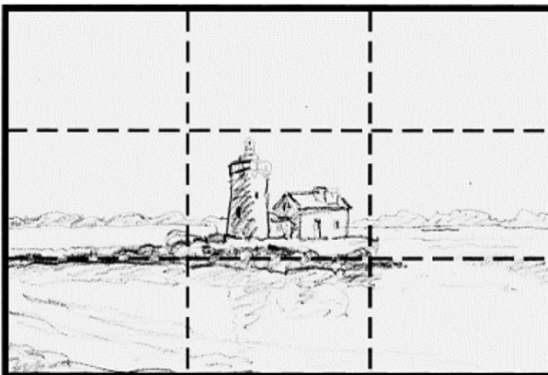
In the space below, feel free to write a few words about Alfred Hitchcock!

Rules of Composition:

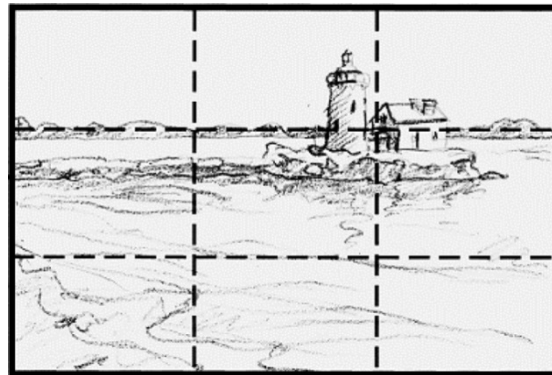
- It's a good idea to employ the rule of thirds whenever possible. The human eye is less interested in centered imagery. **Rule of Thirds:** Imagine that the frame is divided into sections at thirds both horizontally and vertically. Anything placed at the intersection of these thirds or along the lines is given additional emphasis.



It's like that pattern you see on your phone. The stars mark the sweet spots for the placement of important objects. Place strong, straight lines (the horizon, the side of buildings, etc.) along the dotted lines.



POOR COMPOSITION



GREAT COMPOSITION

- **Use extreme asymmetry.** (But not too often.) If you're feeling daring, overwhelm your subject by 'pushing' it off to the corner and filling the frame with some other object/entity
- Use '**Angular Thinking.**' If your subject is facing the camera, have the background angle away into the distance. Never shoot perpendicular to a flat wall unless you're also employing some other effective visual composition tool.
- **Low angle or high angle,** and never forget the incredibly effective **canted angle!** Never use eye level!
- **Exploit contrasts between light and dark** especially when using silhouettes or shadows. Find patches of sunlight and use them!
- **Create a frame within the frame.** Your camera will frame the world inside four walls, but often it is effective to create a second frame within the camera frame. This can be especially effective when used with contrasting light.

- **Use reflections to surprise your viewer, but make sure we don't see the camera in the reflection!**
- **Use shallow focus to draw us into the world of your subject.**
- **Capture Prominent Lines to bring either chaos or order into your composition.**
- **Layer your photograph by placing objects between you and your subject. Look through and around things.**

The Canon Vixia HF G21 series

This section will focus on screenshots from the Canon Vixia HF G21 series cameras. Other G series Canon cameras should function along similar lines. If you have any trouble finding a specific function, please let the instructor know.

Full copies of the owner's manual for this camera can be provided in digital format.

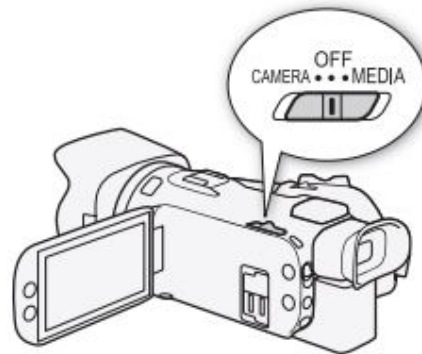
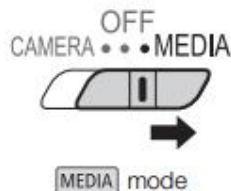
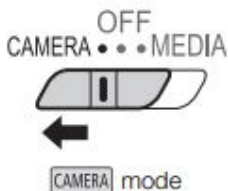
This camera will only function properly when used with an SD card that it specifically formats. Use a new SD card or format one of your old cards in the camera before shooting. **WARNING: FORMATTING WILL ERASE ALL OLD FOOTAGE ON THE CARD!** Instructions on formatting are contained in this packet.

Turning the Camcorder On and Off

You can choose to turn the camcorder on in CAMERA (CAMERA) mode for making recordings or MEDIA (MEDIA) mode for playing back recordings. Select the mode using the power switch.

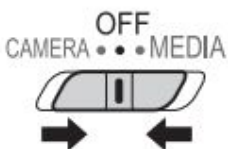
To turn on the camcorder

Set the power switch to CAMERA for CAMERA mode (p. 32) or MEDIA for MEDIA mode (p. 88).



To turn off the camcorder

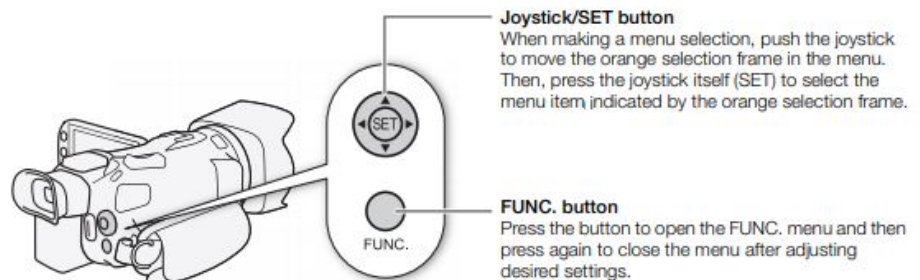
Set the power switch to OFF.



CAMERA MODE allows you to record video
 MEDIA MODE allows you to review your footage

THE COMPUTER PANEL FEATURES A TOUCH SCREEN THAT YOU CAN USE WHEN REVIEWING YOUR FOOTAGE. PLEASE BE RESPECTFUL OF THIS EQUIPMENT. **USE THE TOUCH SCREEN GENTLY AND MAKE SURE THAT YOUR HANDS ARE CLEAN BEFORE USAGE.**

YOU CAN ALSO USE THE **FUNC** BUTTON AND JOYSTICK.



The Canon Vixia HF G21

Different modes for recording video:

The instructor recommends that you shoot in **M** Manual Mode



AUTO (Auto) mode

Set the mode switch to **AUTO**. With this mode, the camcorder takes care of all the settings while you concentrate on recording (📖 32). This operating mode is suitable if you just prefer not to bother with detailed camcorder settings.



M (Manual) mode

Set the mode switch to **M**. With this mode, you can enjoy full access to menus, settings and advanced functions (📖 34).



CINEMA (Cinema) mode

Set the mode switch to **CINEMA**. With this mode, you can give your recordings a cinematic look and use cinema-look filters to create unique movies (📖 42).



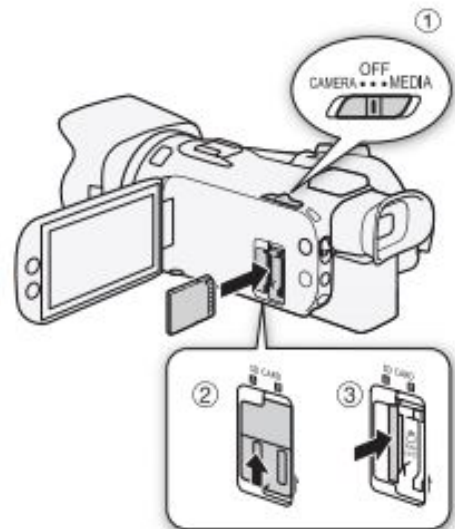
The instructor recommends that you shoot in **M** Manual Mode

The Canon Vixia HF G10

Inserting and Removing a Memory Card

Make sure to initialize (☞ 29) all memory cards before using them with this camcorder.

- 1 Turn off the camcorder.
 - Make sure the POWER/CHG indicator is off.
- 2 Open the double memory card slot cover.
- 3 Insert the memory card straight, with the label facing the front of the camcorder, all the way into one of the memory card slots.
 - You can also use two memory cards, one in each memory card slot.
- 4 Close the double memory card slot cover.
 - Do not force the cover closed if the memory card is not correctly inserted.



To remove the memory card

Push the memory card once to release it. When the memory card springs out, pull it all the way out.

! IMPORTANT

- Turn off the camcorder before inserting or removing a memory card. Inserting or removing the memory card with the camcorder on may result in permanent data loss.
- Memory cards have front and back sides that are not interchangeable. Inserting a memory card facing the wrong direction can cause a malfunction of the camcorder. Be sure to insert the memory card as described in step 3.

Initializing a Memory Card

Initialize memory cards when you use them with this camcorder for the first time. You can also initialize a memory card to permanently delete all the recordings it contains.

Operating modes: CAMERA MEDIA | AVCHD MP4 | AUTO M CINEMA

- 1 Power the camcorder using the compact power adapter.
 - Do not disconnect the power source or turn off the camcorder until the initialization is completed.
- 2 Open the initialization screen for the desired memory card.

[FUNC.] ➤ [MENU] ➤ [☞] ➤ [Initialize SD] ➤ [A Mem. Card A] or [B Mem. Card B] ➤ [Initialize]

 - Touching [FUNC.] is necessary only when performing the procedure in CAMERA mode.
 - In the initialization screen, touch [Complete Initialization] to physically erase all the data rather than just clear the file allocation table of the memory card.

The Canon Vixia HF G10

Focus Adjustment

The camcorder offers manual and automatic focus adjustment. When using manual focus, you can use the focus preset and peaking functions to assist you. When using automatic focus, you can use face detection & tracking to help make sure the subject is in focus.



POINTS TO CHECK

- Adjust the zoom before you start the procedure.

You will not be able to adjust the focus if you are not shooting in M Manual Mode! See page 10 if you don't know what this means!

Manual Focus

Use the focus/zoom ring to focus manually. You can change the direction and sensitivity of the focus/zoom ring (☐ 117). Manual focus is available even after touching the screen to adjust the focus automatically.

Operating modes: CAMERA MEDIA | AVCHD MP4 | AUTO M CINEMA

- Set the focus/zoom ring switch to FOCUS.

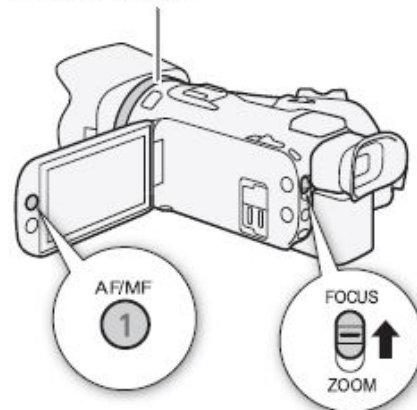
Focus/zoom ring

To focus using only the focus/zoom ring



- Press the AF/MF button.
 - [MF] will appear on the screen.
- Turn the focus/zoom ring to adjust the focus.

To focus by touching the subject on the screen

- Open the focus controls.
 - [FUNC.] ➤ [Focus]
 - The focus adjustment screen will appear.
- Touch a subject that appears inside the  frame.
 - The Touch AF mark (•••) will flash and the focusing distance will be adjusted automatically.
 - To return the camcorder to autofocus, touch **MF**.
- If necessary, turn the focus/zoom ring to further adjust the focus.



NOTES

- The center of the screen will be magnified to help you focus more easily. You can also turn off this function with the [FUNC.] ➤ [MENU] ➤  ➤ [Focus Assistance] setting.
- The focusing distance displayed will change as you adjust the focus with the focus/zoom ring. You can change the units used for the distance display with the [FUNC.] ➤ [MENU] ➤  ➤ [Distance Units] setting.

Make sure you change your focus back to AUTO when done or all your other shots may be out of focus!

The Canon Vixia HF G10

Exposure Adjustment

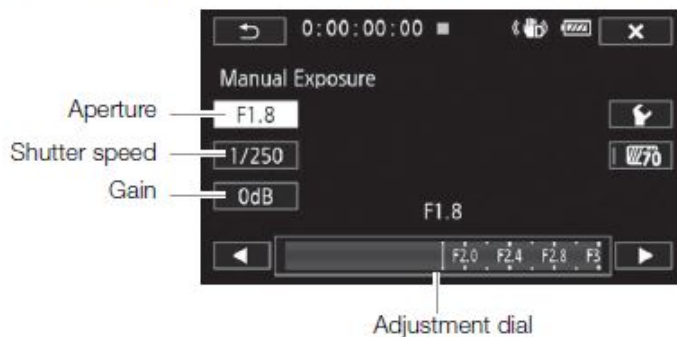
At times, backlit subjects may appear too dark (underexposed) or subjects under very strong lights may appear too bright or glaring (overexposed). In such cases, adjusting the exposure will correct this. This camcorder features a dedicated recording program, [M Manual Exposure], for adjusting the exposure manually. However, you can also compensate the exposure when using other recording programs.

Using the Manual Exposure Recording Program

Using the [M Manual Exposure] recording program, you can adjust the aperture, shutter speed and gain to achieve the desired exposure.

Operating modes: CAMERA MEDIA | AVCHD MP4 | AUTO M CINEMA

- 1 Activate the [M Manual Exposure] recording program.
 - [FUNC.] ➤ [Rec. Programs] ➤ [M Manual Exposure]
 - The exposure adjustment screen appears.
- 2 Touch the onscreen button of the setting you wish to adjust.



- 3 Touch [◀] or [▶] to set the desired value.
 - You can also drag your finger along the dial.

You will not be able to adjust the exposure if you are not shooting in M Manual Mode! See page 10 if you don't know what this means!

To adjust your iris, only change the APERTURE setting.

Make sure you change your exposure back to AUTO when done or all your other shots may be overexposed or underexposed!

The Sony NX series

This section will focus on screenshots from the Sony NX series cameras. If you have any trouble finding a specific function, please let the instructor know.

Full copies of the owner's manual for this camera can be provided in digital format.

Before you read any further, know this. When using the NX series cameras, you always have to be aware of your



AUDIO

AUDIO

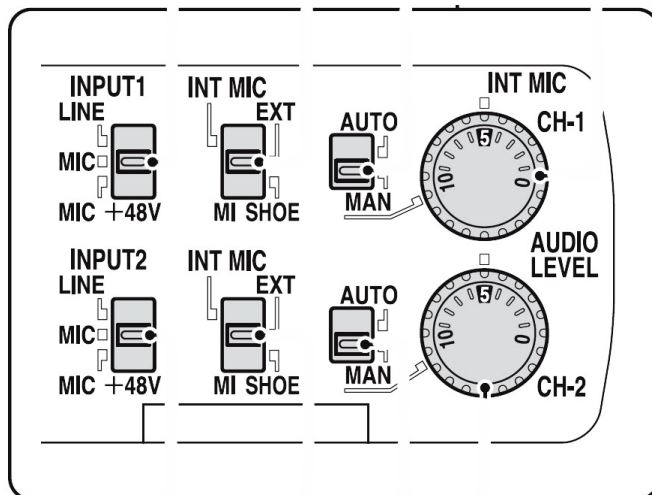
AUDIO!!!!!!!



Let me explain:

If your camera settings are not correct, you will either end up with very poor audio or no audio at all. There are two steps that you can take to help solve this problem. Do them BOTH each time you use the NX cameras.

- 1) Always use headphones to monitor your audio.
- 2) Always check the settings on this side panel:

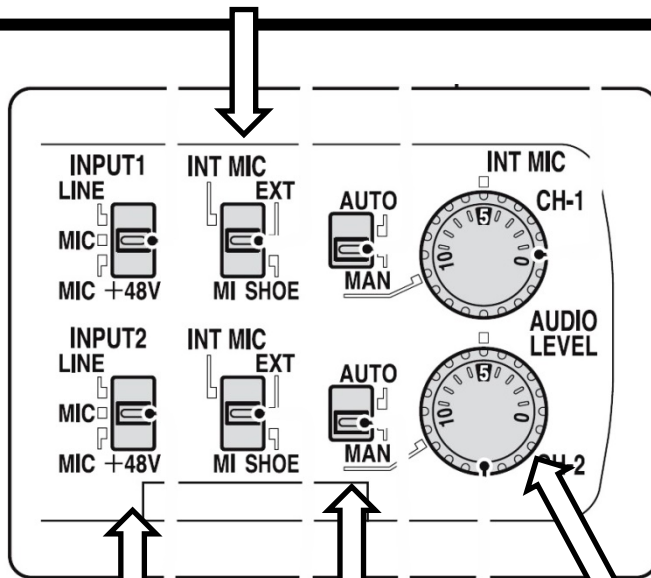


CONTINUED ON NEXT PAGE:

Check this column very carefully!

If you are recording with the built in camera microphone, make sure both are checked to INT MIC (top position). [Usually for ambient sound, room noise, etc]

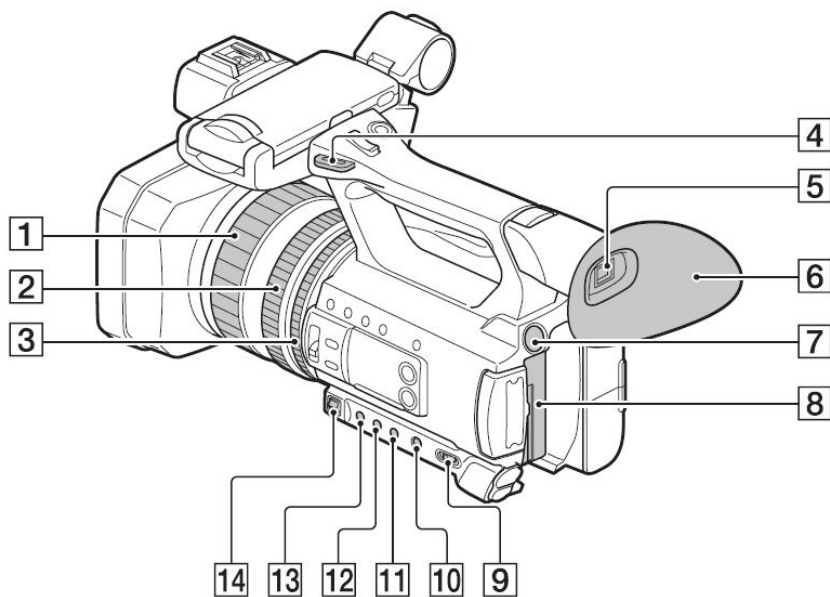
If you are recording with an external (add on) microphone, make sure both are checked to EXT (middle position). [Use for interviews, speeches, most all on camera voice recording]



Make sure the switches in this column are always set to MIC

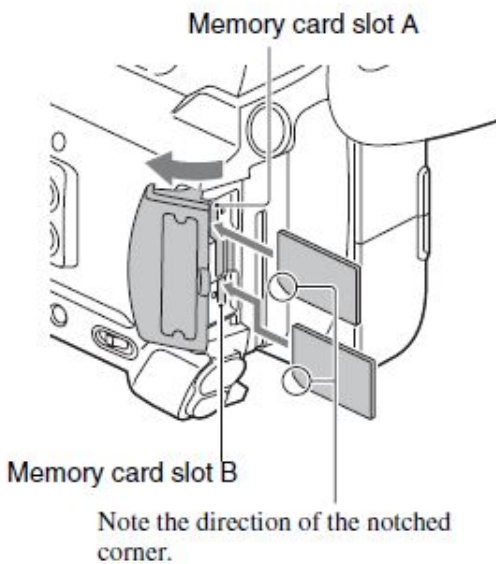
Make sure the switches in this column are always set to AUTO...

...and if you do, you won't have to bother with these dials at all



- 1 Focus ring (p. 33)
- 2 Zoom ring (p. 32)
- 3 Iris ring (p. 38)
- 4 Hook for shoulder strap
- 5 Viewfinder (p. 24)
- 6 Large eyecup (p. 24)
- 7 BATT RELEASE button (p. 20)
- 8 Battery pack (p. 19)
- 9 ON/STANDBY switch (p. 22)
- 10 FULL AUTO button (p. 45)
- 11 SHUTTER button (p. 39)
- 12 WHT BAL button (p. 41)
- 13 GAIN button (p. 39)
- 14 Manual lever (p. 39, 41)

Open the cover, and insert the memory card with the notched edge in the direction as illustrated until it clicks into place.



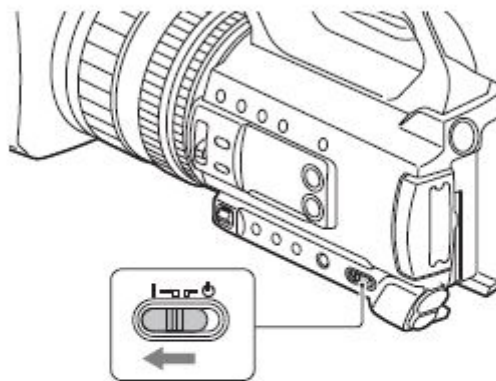
- If you insert a memory card into the slot in the wrong direction, the memory card, the memory card slot, or image data may be damaged.
- Memory card slot A accepts either “Memory Stick PRO Duo” media or an SD card. Memory card slot B accepts an SD card only.

To eject a memory card

Lightly push the memory card once.

Turning on the camcorder

Turn the ON/STANDBY switch to ON (I).



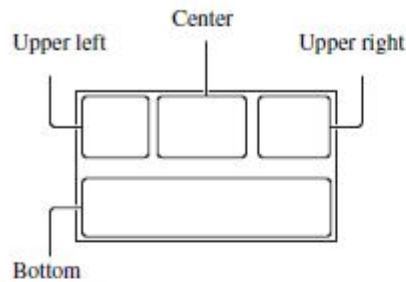
To turn off the power

Turn the ON/STANDBY switch to STANDBY (⏻).

Note

- If a warning message is displayed, follow the instructions.

Screen Indicators



Upper left

Indicator	Meaning
100%	Remaining battery
	INTELLIGENT AUTO (face detection/scene detection/camera-shake detection) (p. 45)
	SCENE SELECTION (p. 45)
AVCHD 1080/60i EX XAVCS 1080/60p 50	REC FORMAT (p. 36)
	WIDE REC (p. 80)
	Optical zoom
Z99 ×1.2	Clear image zoom
Z99 ×2.3	Digital zoom
	SIMUL/RELAY REC
100-0001	Playback folder of memory card

Center

Indicator	Meaning
	Vibration warning
	Recording media
REC STBY	Recording standby
	Warning (p. 100)
	Playback indicator (p. 60)
	Processing
	Relay recording
	HDMI REC CONTROL

Upper right

Indicator	Meaning
Omin	Estimated remaining recording time
	Recording/playback media
00:00:00:00	Time code (hour:minute:second:frame)

Bottom

Indicator	Meaning
	Face detection [ON]
PEAKING	PEAKING (p. 85)
	ZEBRA (p. 85)
	STEADYSHOT (p. 78)
	Manual focus (p. 33)
PP1 to PP6	PICTURE PROFILE (p. 47)
F5.6	Iris (p. 38)
9dB	Gain (p. 39)
100 180°	Shutter speed (p. 39)
	AVCHD AUDIO FORMAT (p. 82)
-2.0EV	AE SHIFT (p. 78)
	Auto setting (p. 38)
	White balance (p. 41)
	HISTOGRAM (p. 84)
	LOW LUX (p. 46)
	AUDIO LEVEL DISPLAY (p. 87)
	Digital extender (p. 78)
	NIGHTSHOT (p. 46)
ND OFF ND1 ND2 ND3	ND filter (p. 40)

Indicator	Meaning
	Multi Interface Shoe video light (p. 79)
	Manual volume adjustment (p. 44)

Tip

- Indicators may look different or appear at different positions.

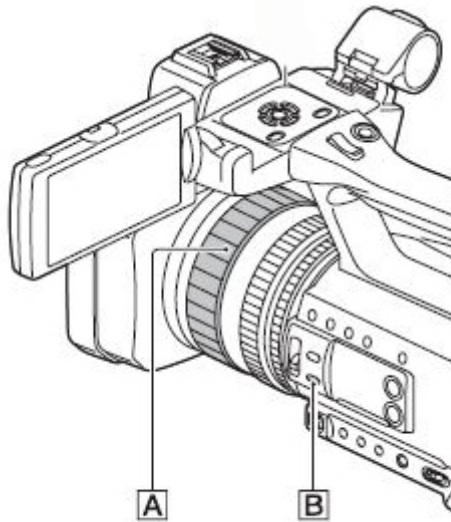
Data during recording

The recording date, time and condition are recorded automatically on the recording media.

They are not displayed while recording. However, you can check them by selecting (DISPLAY SET) → [DATA CODE] and choosing the data that you want to display, or by pressing the ASSIGN button to which the DATA CODE function is assigned, during playback.

Adjusting the focus




You can adjust the focus manually for different recording conditions.



1 During recording or standby, press the FOCUS AUTO/MAN button **B** to set the focus to manual.


 appears.

2 Turn the focus ring **A** to adjust the focus.

 changes to  when the focus cannot be adjusted any farther, and changes to  when the focus cannot be adjusted any closer.

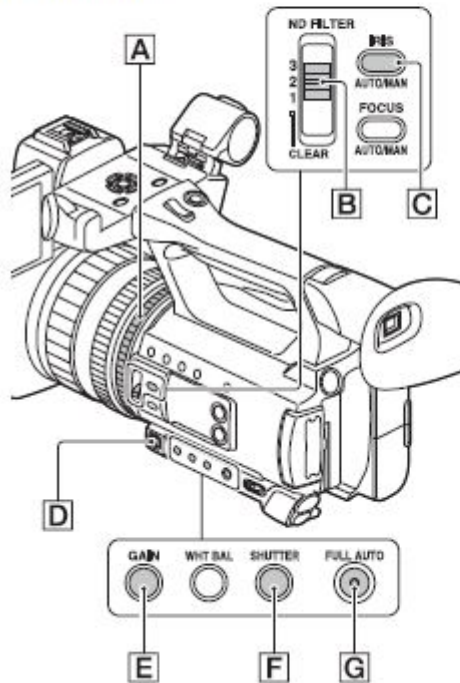
To adjust automatically

Press the FOCUS AUTO/MAN button **B** to set the focus to automatic.

 disappears and the automatic focus adjustment is restored.

Adjusting the brightness

You can adjust the image brightness by adjusting the iris, gain or shutter speed, or by adjusting the light volume with the ND filter switch **B**.



Note

- When you set the FULL AUTO button **G** on, the iris, gain, shutter speed, and white balance are adjusted automatically. You cannot adjust any of them manually.

Adjusting the iris

This is handy for making the background blurred or sharp.

1 Press the FULL AUTO button **G** to set auto mode off.

The FULL AUTO button lamp turns off.

2 Press the IRIS AUTO/MAN button **C** to set the iris to manual.

The **A** next to the iris value disappears.



3 Turn the iris ring **A** to adjust the value.

The volume of the light increases the more that you open the aperture (decreasing F value). The volume of the light decreases the more that you close the aperture (increasing F value).

To temporarily adjust the iris automatically

If the [IRIS PUSH AUTO] function has been assigned to an ASSIGN button (p. 58), press and hold the button to adjust the iris automatically.

To adjust automatically

Press the IRIS AUTO/MAN button **C** when the **A** mark beside the iris value is not displayed.

The iris value disappears or **A** appears next to the iris value.

Adjusting the volume of light (ND filter)

You can record a subject clearly by using the ND filter switch **[B]** when the recording environment is too bright.

The ND filters 1, 2 and 3 reduce the volume of light to about 1/4, 1/16 and 1/64, respectively.

If **ND1** flashes during the iris automatic adjustment, set the ND filter to 1. If **ND2** flashes during the iris automatic adjustment, set the ND filter to 2. If **ND3** flashes during the iris automatic adjustment, set the ND filter to 3.

The ND filter indicator will stop flashing and remain on the screen.

If **NDOFF** flashes, set the ND filter **[B]** to "CLEAR." The ND filter icon will disappear from the screen.

Notes

- If you change the ND filter switch **[B]** during recording, the movie and sound may become distorted.
- When adjusting the iris manually, the ND filter icon does not flash even if the light volume should be adjusted with the ND filter.
- If the camcorder cannot detect the ND filter position (CLEAR/1/2/3), **ND** flashes on the screen. Make sure that the ND filter is set correctly.

Tip

- While recording a bright subject, diffraction may occur if you close the aperture further down, resulting in a fuzzy focus (this is a common phenomenon with video cameras). The ND filter switch **[B]** suppresses this phenomenon and gives better recording results.

ND filters come in handy under bright conditions. In some instances, they might allow you to get shallow focus despite brightness.

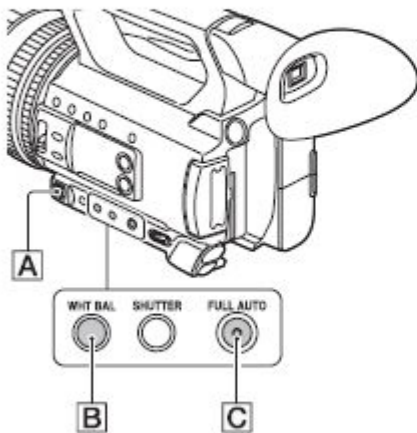
A small iris generally makes your DOF larger, making shallow focus impossible.

The ND filter allows you to open up the iris a few stops even under bright conditions.

Please always remember to turn the ND filter off when finished!

Adjusting the color tone

Adjusting the white balance



You can adjust and fix the white balance according to the lighting conditions of recording environment.

You can store white balance values in memory A (A) and memory B (B), respectively. Unless a white balance is readjusted, values will remain even after the power has been turned off.

When you select PRESET, [OUTDOOR], [INDOOR] or [MANU WB TEMP] is selected, according to which one you previously set with [WB PRESET] in the (CAMERA SET) menu.

Tip

- You can assign [WB PRESET] to an ASSIGN button (p. 58).

1 Press the FULL AUTO button (C) to set auto mode off.

The FULL AUTO button lamp turns off.

2 Press the WHT BAL button (B).

The white balance value is highlighted.



3 Select PRESET, A, or B using the manual lever (A).

■ Setting the A/B value

Select A or B for recording with the white balance setting stored in memory A or B.

■ To use the PRESET value of white balance

Select (CAMERA SET) → [WB PRESET] and select a desired setting.

Setting values:	Example of recording conditions
 Outdoor ([OUTDOOR])	<ul style="list-style-type: none"> When recording a night scene, neon lighting, fireworks, etc. When recording a sunrise, sunset, etc. Under daylight fluorescent lamp
 Indoor ([INDOOR])	<ul style="list-style-type: none"> Where lighting conditions change, such as at a party place, etc. Under video light, such as in a studio, etc. Under a sodium or mercury lamp
Color temperature setting ([MANU WB TEMP])	<ul style="list-style-type: none"> You can set a desired color temperature between 2300K and 15000K with (CAMERA SET) → [WB TEMP SET] (default setting is 6500K).

Section 3: Video Editing

In this class we edit using the Adobe Premiere. Your instructor will do an overview of the program with you, and you can use this portion of the packet for reference if you run into trouble.

By the way, people used to edit like this. Be happy those days are behind us!



When you are done for the day, PLEASE REMEMBER TO ALWAYS LOG OUT OF GOOGLE!!!! Choose HELP and then SIGN OUT!

General Instructions:

1. Log on to the computer by typing your class number for both the username and password.
2. If you have a basic (review) question, check your resources and/or ask a friend. If you ask me, I will usually redirect you to your class materials.
3. If you have a tricky question, ask me! I love figuring tricky things out. If I don't know the answer, I'll try my best to find one.
4. When you are done, **PLEASE LOG OUT OF GOOGLE!!!! Choose HELP and then SIGN OUT.**
5. If yours is the last class of the day, please power the computer down.
6. Here are a few DON'Ts to avoid:
 - *Once you start editing, don't switch computers. You must use the same computer every day. Video files cannot be sent from computer to computer.*
 - *Under no circumstances should you access any student work other than your own, even if you have that student's "permission." Other student work is considered private and you must respect that privacy.*
 - *Under no circumstances should you load any file or program onto any computer without the direct supervision of the instructor.*
 - *Do not attempt to rewire any of the connections on these computers. Do not yank or pull on any cords. If there is a problem, report it to the teacher and he will assist you with it.*
 - *Do not use any punctuation in the naming of any of your files. This can cause serious problems when using your file.*
 - *Do not place anything on the desktop apart from your final rendered project. Erase from the desktop any draft versions of your project.*
 - *Don't click too much. If the program is too slow, then wait for it to catch up. Too much clicking leads to the corruption of your file, and if that happens you will need to start over.*

STEP 1: Transferring your footage:

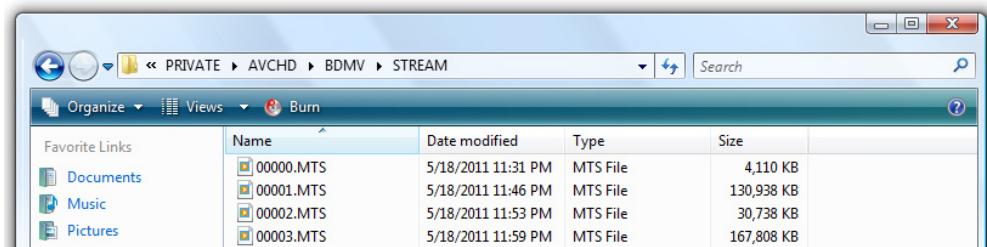
When using our cameras, your footage is recorded to that camera's SD card. Before you can edit, you will need to copy that footage from the SD card onto the computer's hard drive. Trying to edit directly off the SD card will slow down your computer's performance and can endanger your project.

Please follow these four steps:

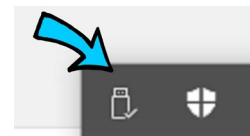
1. Log on to the computer using your class's username and password
2. Go to the WINDOWS START BUTTON and choose DOCUMENTS.
3. Choose the VIDEOS folder in the left hand panel.
4. Once in the VIDEOS folder, right click and create a NEW FOLDER.
5. Rename that folder with your last names (no punctuation) and the project name. For example: **Reagan Nixon Carter Project 2 Footage**.
6. Connect your SD card to the computer using the USB dongle (get it from the teacher). Click the WINDOWS START BUTTON again, but this time choose THIS PC. You should see your SD card under DEVICES & DRIVES. For the Canon cameras, it should show up as CANON. For the Sony NX series, it should show up as USB DRIVE. Click through the folders until you find your footage.

This is the general filepath you will follow to find your footage on the SD card:

G:\PRIVATE\AVCHD\BDMV\STREAM



7. Single click on any one shot, then hit CTRL + A on the keyboard. This should select all of your footage. Right click and choose COPY.
8. Go to your newly created folder. Right click in the folder and choose PASTE. Check to make sure that all your footage has safely copied to the computer!
9. Disconnect your SD card and return it to the instructor. (To protect your footage, always SAFELY EJECT your SD card by clicking on the icon in the lower right hand corner!)



10. Once your SD card is returned to the instructor, move on the *STEP 2: Getting started in Adobe Premiere Pro* on the next page.

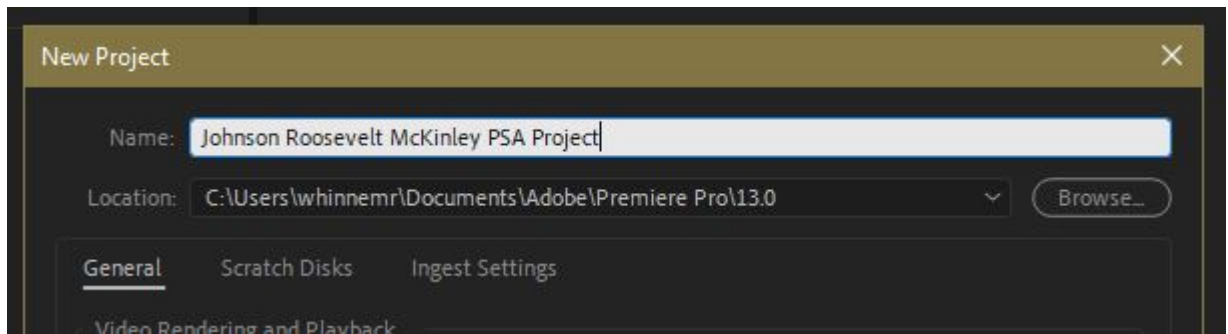
STEP 2: Getting started in Adobe Premiere Pro

Follow these basic steps each time you start a new project. A view version of these steps can be found at: <https://helpx.adobe.com/premiere-pro/how-to/easy-video.html>

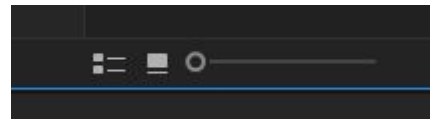
1. **ADOBE PREMIERE PRO:** The editing software is Adobe Premiere Pro and can be found by clicking the Windows start icon (lower left hand corner), then PROGRAMS, and then ADOBE PREMIERE PRO.

SIGN INTO ADOBE PREMIERE using your school Google account. Remember that you will need to sign out at the end of the period! (Choose **HELP** and then **SIGN OUT.**)

2. **CREATING A NEW PROJECT:** Choose FILE to NEW to PROJECT. Name your project with your last names and some work that indicates which project we are working on. For example: **Johnson Roosevelt McKinley PSA Project**



3. **LOADING YOUR FOOTAGE:** In your newly created project area, click ASSEMBLY. Then click MEDIA BROWSER. At the bottom of the left hand panel, there are icons that allow you to switch between list and thumbnail views. I suggest thumbnail.



Scroll through the folders until you find your footage. The correct filepath should be:

C: LOCAL DISK to USERS to (Your class login) to (your created folder)

Your footage should show up in the window. Right click on the selected files and choose IMPORT

NOTE: You should not have to INGEST your footage if you have already transferred it from your SD card correctly!

4. Remember to save frequently!

STEP 3: Basic Editing

1. Near the top of the screen, be sure to choose EDITING.
2. The left hand side of the screen shows your raw footage and your preview window.
3. The right hand side of the screen is your construction zone where you assemble, order, and cut clips.



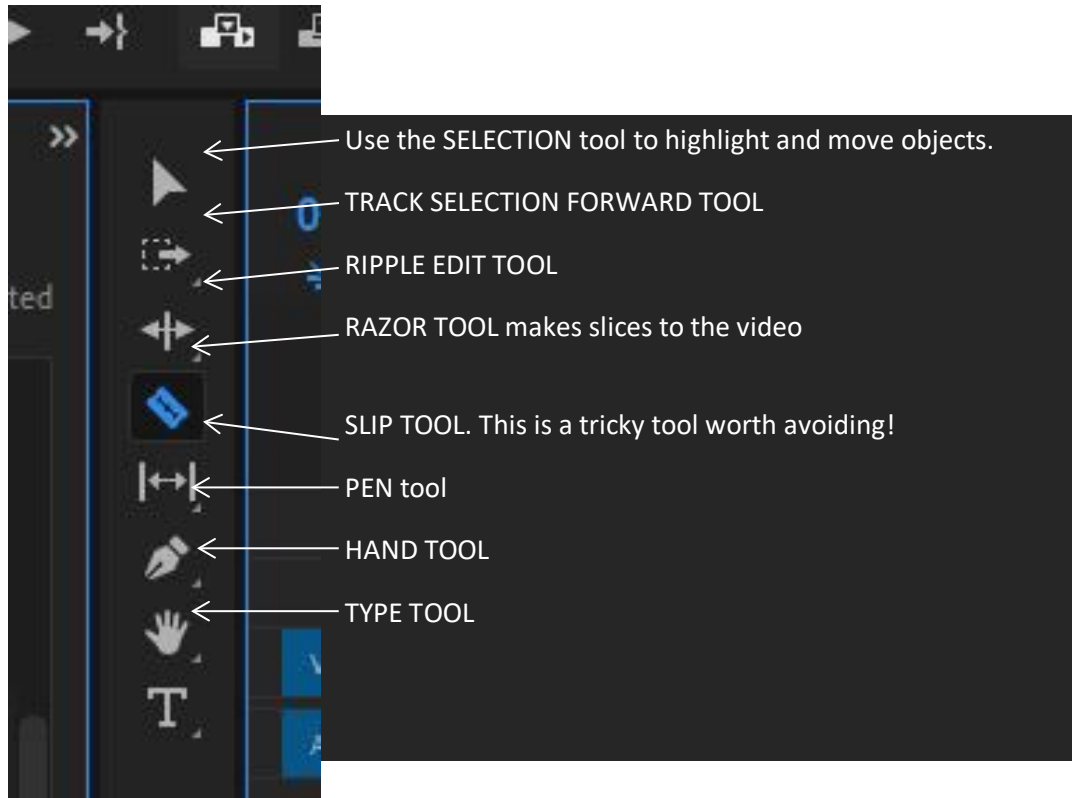
4. The begin creating your edited video, simply drag footage from the clip bank on the left into the timeline on the right.
5. If your footage does not appear to be the right size for your window (either too small or too large), right click on the footage and choose SET TO FRAME SIZE.
6. SEQUENCES: (This section is mostly for BT and Advanced Film classes.) Sequences can be used in multiple ways, but the most common are to save various versions of your project at different stages or to create smaller segments within the overall project that can be worked on independently and then assembled into the larger piece. Why would you want to do this? If you're editing a large project, it will be easier to find certain sections. Also, sometimes when working with larger projects, a change in the early timeline can throw things off later in the timeline. Sequences prevent that from happening.

For example, if you were making a long movie, you could edit each individual scene as a sequence and then assemble them together as a whole larger (master) sequence. If you see something that needs to be fixed in a certain scene, you can go back and edit it, and it will automatically change in the master sequence without disrupting edits found in other sequences.

Sequences can get confusing and will require you keep very things very organized and clearly labeled.

STEP 4: A few simple functions in Adobe Premiere Pro

1. When you are done for the day, **PLEASE REMEMBER TO ALWAYS LOG OUT OF GOOGLE!!!!** Choose **HELP** and then **SIGN OUT**.
2. **SAVE FREQUENTLY!** Save often to avoid losing your work.
3. Here are some of your most commonly used tools:



5. **To add a TITLE:** Go to FILE and choose NEW and then LEGACY TITLE. This will open up a title window where you can manipulate your fonts, colors, etc. When you close out of the LEGACY TITLE window, the title should be in your raw footage bank.
6. **To add BLACK VIDEO:** Find an empty space in your raw footage bank, right click in it, and choose NEW ITEM then BLACK VIDEO. Make sure the video settings are at 1920 X 1080. Black video will then be added to your raw footage bank. REMEMBER TO TRIM YOUR BLACK VIDEO TO 2 SECONDS!
7. **To add video effects and transitions:** Click EFFECTS at the top of your screen. A large number of effects and transitions will be added in a panel to your right. Choose the effect you want to use and drag it onto the shot you want to effect. Choose a transition and drag it between two shots in your timeline.
8. **To slow down or speed up your footage,** right click on the shot and choose SPEED/DURATION.
9. If the program begins to lag, press the ENTER key. This will allow the program to render out pieces of the workspace, freeing up memory for you to work with.

STEP 5: Exporting your Project:

In order to share your completed project with others, you need to export your project to a completed MPEG file that can be played on another computer or burned to a DVD.

This is very different from just saving your project! A 'saved' Adobe Premiere project cannot be opened on another computer because that new computer will not have your original footage to work from.

SAVING your project simply asks Adobe to save all the editing markers you have made. **EXPORTING** asks it to assemble all your markers into a single finished video.

EXPORTING INSTRUCTIONS FOR SUBMISSION TO TEACHER:

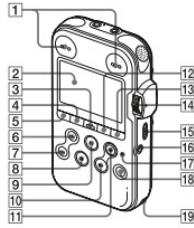
1. Click EDITING on the top banner to make sure you are in the editing mode.
2. Make sure that the entire project you want to export is in the TIMELINE.
3. Choose FILE then EXPORT then MEDIA.
4. Under FORMAT choose H.264
5. Under PRESET, choose MATCH SOURCE HIGH BITRATE.
6. Click the blue OUTPUT NAME to rename the file and choose your destination for that file. I would suggest exporting to the desktop. Your file name should include your group members names and an indication of which project you are working on. For example, *Carter Nixon Reagan Proj 2* would be a good choice for a file name.
7. Under VIDEO, scroll down to BITRATE SETTINGS. Under BITRATE ENCODING, choose VBR, 2 PASS. Set your TARGET BITRATE to 15 and your MAXIMUM BITRATE to 40.
8. Make sure that USE MAXIMUM RENDER QUALITY is checked.
9. Click EXPORT. The computer will now begin to assemble your project. This may take a while. Monitor your computer to make sure that the project finishes successfully.
10. Once the project is done finalizing, locate your project in the destination file (it's the desktop if you followed step 6) and double click on it. It should open in Windows Media Player or some other video playback software, not Adobe Premiere Pro. Watch it through once to make sure it finalized correctly. Pay special attention to the final credits, and make sure your video stops playing once the video is over.
11. If you feel your projects are complete, ask the instructor for a flash drive. Copy the finalized project to the flash drive and hand it to the instructor with any necessary paperwork.
12. BT students, please upload your footage to the Google drive class folder.

PLEASE REMEMBER TO ALWAYS LOG OUT OF GOOGLE!!!!
Choose HELP and then SIGN OUT.

SONY PCM-M10 DIGITAL AUDIO RECORDER

Index to parts and controls

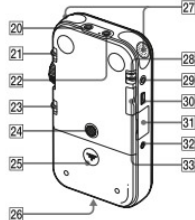
Front



- 1 Peak level L/R (-12 dB/OVER) indicators
- 2 Display window
- 3 DELETE button
- 4 MENU button
- 5 (folder) button
- 6 ►► FF/▲ (fast-forward/up) button
- 7 ◀◀ FR/▼ (fast-rewind/down) button
- 8 ■ STOP button
- 9 || PAUSE button/indicator
- 10 ► PLAY/ENTER button/indicator*
- 11 ● REC (record) button/indicator

- 12 ↺ (repeat) A-B button
- 13 DISPLAY button
- 14 REC LEVEL (recording level) dial
- 15 POWER/HOLD switch
- 16 REMOTE jack
- 17 ACCESS indicator
- 18 T-MARK (track mark) button
- 19 Strap hole

Rear

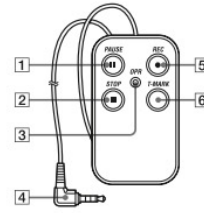


- 20 LINE IN (line input) jack
- 21 MIC SENS(ATT) (microphone sensitivity (attenuator)) HI/LOW (high/low) switch
- 22 (microphone) jack (Plug In Power compatible)*
- 23 REC LEVEL (recording level) MANUAL/AUTO switch
- 24 Hole for attaching the tripod (not supplied)
- 25 Battery compartment
- 26 Speaker (on the basement)
- 27 Built-in microphones (stereo)
- 28 DPC (SPEED CTRL) (speed control) ON/OFF switch
- 29 ◯/LINE OUT (headphone/line output) jack
- 30 ← USB connector
- 31 M2™/microSD memory card slot
- 32 DC IN 3V jack
- 33 VOLUME (volume) +/- button

- 23 REC LEVEL (recording level) MANUAL/AUTO switch
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- 30 ← USB connector
- 31 M2™/microSD memory card slot
- 32 DC IN 3V jack
- 33 VOLUME (volume) +/- button

* These buttons and jack have a tactile dot. Use it as a reference point for operations, or to identify each terminal.

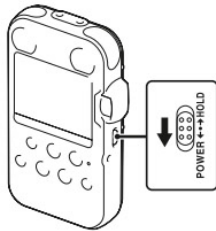
Remote commander (supplied)



- 1 || PAUSE button
- 2 ■ STOP button
- 3 OPR (Operation) indicator
- 4 Connecting plug
- 5 ● REC button
- 6 T-MARK (track mark) button

Step 3: Turning the PCM recorder On

Turning the power on



Slide the POWER/HOLD switch in the direction of "POWER" for more than 1 second. The PCM recorder is turned on, and an animation of "Accessing..." is displayed.

Turning the power off

Slide the POWER/HOLD switch in the direction of "POWER" for more than 2 seconds, and an animation of "See You!" is displayed.

⚠ Tips

- The PCM recorder is accessing memory while "Accessing..." appears on the display or the ACCESS indicator flashes. During this time, do not remove or insert batteries and do not disconnect a commercially-available applicable AC power adaptor, or the USB connecting cable. Doing so may damage the data.
- Even if you do not use the PCM recorder, the batteries are consumed slightly. When you are not going to use the PCM recorder for an extend period of time, it is recommended that you turn the power off and remove the batteries.
- When the PCM recorder remains turned on and in the stop mode for about 10 minutes or longer, the window display turns off automatically and the PCM recorder enters the sleep mode. You can operate the PCM recorder by pressing a button.

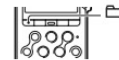
Recording

■ Note

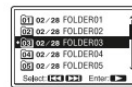
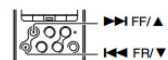
Before making a recording, turn on the power of the PCM recorder.

Selecting a folder

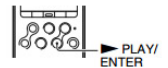
1 Press (folder) to display the folder selection window in the stop mode.



2 Press ►► FF/▲ or ◀◀ FR/▼ to select the folder in which you want to record tracks (FOLDER01-10). When you purchase the PCM recorder, there are 10 folders already available.



3 Press ► PLAY/ENTER.



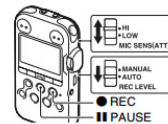
Starting recording (automatic recording)

1 Set the REC LEVEL switch to "AUTO," and press ● REC in the stop mode to enter the recording standby mode.

The ● REC indicator lights in red and the || PAUSE indicator flashes in orange (Recording Standby mode). When you select "AUTO," the recording level will be adjusted automatically.

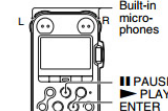
The REC LEVEL dial adjustment is enabled when you select "MANUAL."

You can change the microphone sensitivity with the MIC SENS(ATT) switch.



2 Turn the built-in microphones in the direction of the source to be recorded, and press || PAUSE, or ► PLAY/ENTER.

Recording starts. The new track will be recorded at the end in the selected folder.



CONTINUED...

SONY PCM-M10 DIGITAL AUDIO RECORDER (CONT'D)

To stop recording

Press **■** STOP.
The ACCESS indicator flashes in orange and the PCM recorder stops at the beginning of the current recording.



Note while accessing

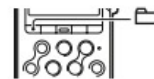
The PCM recorder is recording data and saving it in memory when the ACCESS indicator flashes in orange. While the PCM recorder is accessing data, do not remove the batteries, plug or unplug an AC power adaptor or connecting cables. Doing so may damage the data.

Other operations

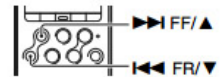
pause recording	Press PAUSE. During recording pause, "CAM" flashes in the display window.
release pause and resume recording	Press PAUSE again or press ▶ PLAY/ENTER. Recording resumes from that point. (To stop recording after pausing recording, press ■ STOP.)

To start playback

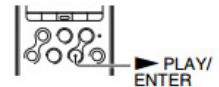
1 Press **📁** in the stop mode.



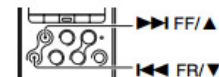
2 Press **▶▶** FF/▲ or **◀◀** FR/▼ to select the folder.



3 Press **▶** PLAY/ENTER.

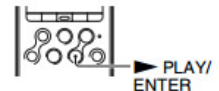


4 Press **▶▶** FF/▲ or **◀◀** FR/▼ to select the track you want to play.



5 Press **▶** PLAY/ENTER.

Playback will start soon, and the **▶** PLAY/ENTER indicator will light in green. (When "LED" is set to "OFF" in the menu (page 79), the indicator does not light.)

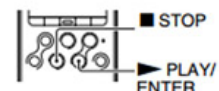


6 Press VOLUME +/- to adjust the volume.



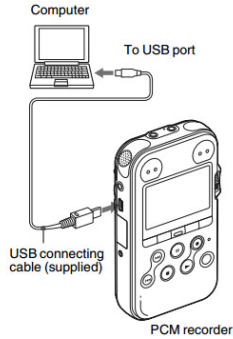
To stop playback

Press **■** STOP.
The PCM recorder stops at the current position. To resume playback from that point, press **▶** PLAY/ENTER.



SONY PCM-M10 DIGITAL AUDIO RECORDER (CONT'D)

Connecting the PCM recorder to your computer



To exchange tracks (files) between the PCM recorder and your computer, connect the PCM recorder to your computer.

- 1 Connect the USB connector of the PCM recorder with the USB port of your running computer with the supplied USB connecting cable inserted into the

connectors securely until each plug stops to the end.

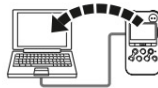
- 2 Make sure the PCM recorder has been recognized properly.
On the Windows screen; open "My Computer" and make sure that "PCM RECORDER" has been recognized.

While the PCM recorder is connected to the computer, "Connecting" is displayed in the display window of the PCM recorder.

Notes

- If you connect more than two USB devices to your computer, normal operation will not be guaranteed.
- Use of this PCM recorder with a USB hub or a USB extension cable other than the supplied cable is not guaranteed.
- A malfunction may occur depending on the USB devices connected at the same time.
- Before connecting the PCM recorder to the computer, make sure that the batteries are inserted in the PCM recorder.
- It is recommended that you disconnect the PCM recorder from the computer when you are not using the PCM recorder connected to the computer.

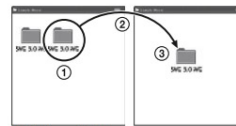
Copying Tracks from the PCM recorder to Your Computer



You can save tracks or folders by copying them from the PCM recorder to your computer.

- 1 Connect the PCM recorder to your computer (page 84).
- 2 Copy tracks or folders you want to copy to your computer.
Drag and drop the tracks or folders you want to copy from "PCM RECORDER" or "MEMORY CARD" to the local disc on your computer.

To copy a track or folder (Drag and drop)



- 1 Click and hold,
- 2 drag,
- 3 and then drop.

- 3 Disconnect the PCM recorder from your computer (page 91).

Note

If you remove a USB connecting cable while the PCM recorder is transferring data to your computer, data may be damaged. For how to disconnect the PCM recorder, see page 91.

Disconnecting the PCM Recorder from Your Computer

Follow the procedures below; otherwise, data may be damaged.

- 1 Make sure that the PCM recorder is in the stop mode.
- 2 Perform the following operation on your computer.
On the Windows screen, left-click the icon at the bottom of the desktop of the computer.



→ Left-click "Safely remove USB Mass Storage Device."

The icon can be different on different operating systems.

On the Macintosh screen, drag the "PCM recorder" on the desktop to "Trash" and drop it there.

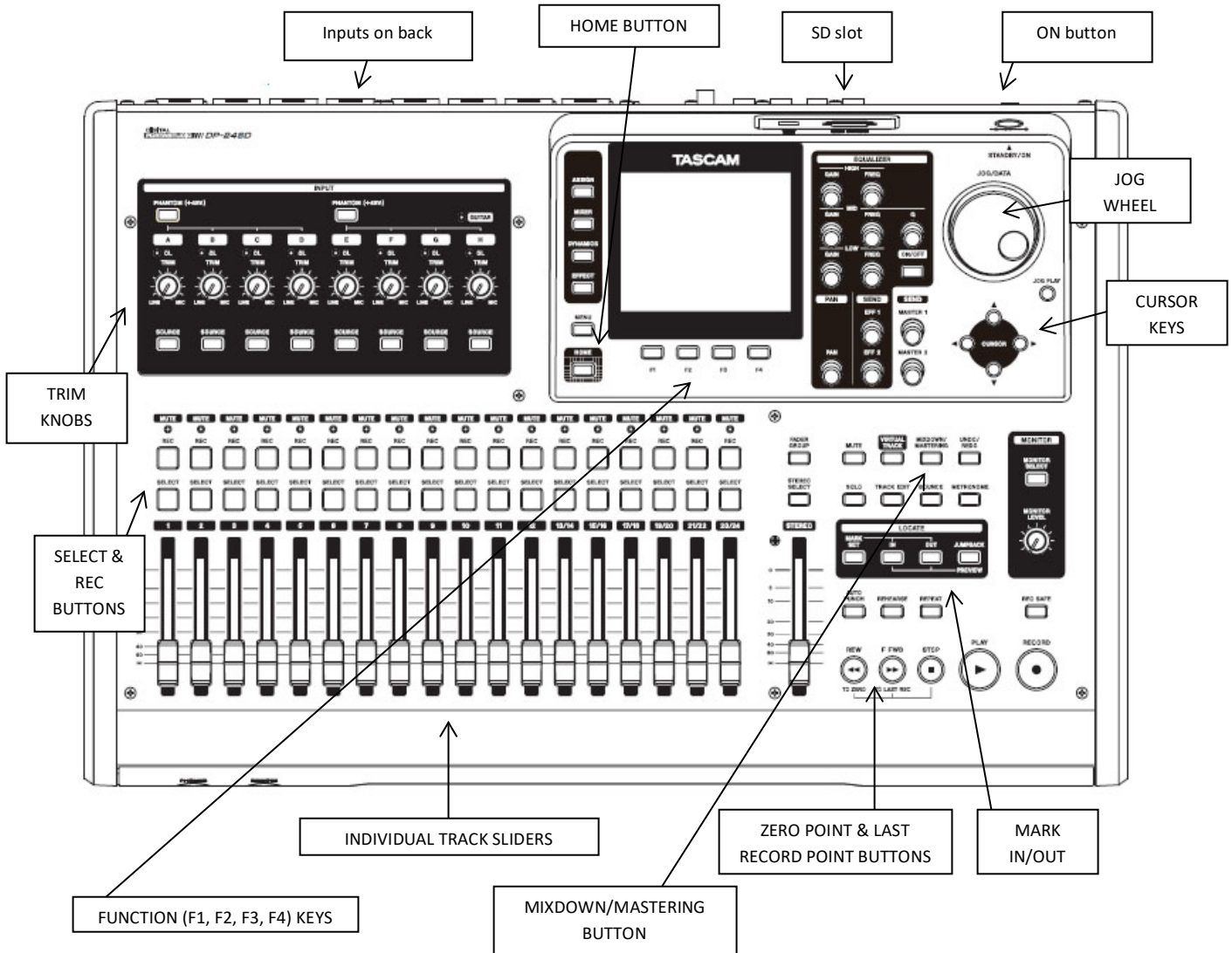
For details on disconnecting the PCM recorder from your computer, refer to the operating instructions supplied with your computer.

- 3 Make sure that the display window of the PCM recorder turns off.

- 4 Disconnect the PCM recorder from the USB port of the computer.

Tascam Digital Audio Studio

The Tascam DP-24SD Portable Digital Audio Studio is a digital audio recording device that will allow you to record from eight different channels and to mix to 24 channels. For the purposes of this class, the DP-24SD will be used for recording and mixing multiple voices into a single podcast recording. This section will give you instructions with that purpose in mind.



EQUIPMENT INCLUDED IN THIS SETUP:

Please take note of everything in this setup. When you are done, you are expected to break everything down and put it back on the cart. PLEASE BE VERY CAREFUL WITH THE POP GUARDS!

- Tascam DP-24SD Portable Digital Audio Studio
- Four mic stands with pop guards
- Four microphone cables
- Four Electro Voice microphones

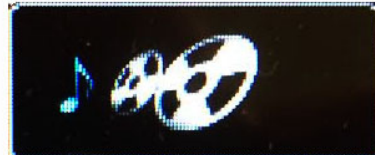
- Headphones with adaptor
- 4 GB SD card formatted for the Tascam

BASIC SETUP:

- Plug your microphone cords and mics into the inputs on the back of the DP-24SD. PLEASE BE VERY CAREFUL WITH THE POP GUARDS!
- Make sure that your Tascam formatted SD card is inserted into the slot. *The DP-SD24 requires SD cards that are formatted specifically for it, so our normal camera SD cards should not be used.*
- Turn on the machine by pressing and holding the ON button on the top right hand corner. Hold the button down until the display screen lights up.

GENERAL NOTES:

- Make sure your talent speaks loudly and clearly into the microphone. If they whisper and back off the mic, all the technology in the world won't save your project.
- Test each mic individually. If you don't isolate your mic, you run the risk of having very uneven levels!
- You can always edit things out and edit things down. Hit record and just talk, allowing your talent to settle in and get comfortable with the equipment. Professional podcasters will often start record without informing the talent. By the time they realize that the interview has started, they don't have time to get nervous!
- If you see this icon, it means that the DP-24SD is processing. Let it process and wait until the icon is gone before entering any new commands.



CREATING A NEW 'SONG':

The DP-24SD refers to projects as songs, so you will create your podcast by creating a new 'song.'

1. Press the MENU button. Use the JOG dial (or the cursor buttons) to highlight SONG, then press F4 to select.
2. Press the F4 button again to open a sub menu, then use the JOG dial to select CREATE.
3. Press F4 again to open the SONG CREATE option. The new song will be named something like SONG_0002.
4. Change the name of your song to the last name of someone in your group by using the cursor button to underline the character you want to change, then use the JOG dial to change the character.
5. When you are done renaming, press F2 to save the new name.
6. Press the HOME button to return to your home screen. Make sure that in the display window your newly created song is listed as the TITLE.

ASSIGNING TRACKS:

This machine has been set up so that each input (A-H) corresponds with the numbered slider (1-8) below. Unless someone has changed the settings, you should not have to assign the inputs to the sliders.

- If someone has changed the settings, press the ASSIGN button. Then press F1 to return to the default settings, then press ASSIGN again to exit. In the display window A-H should now correspond to 1-8.

ADJUSTING AND MONITORING THE INPUT LEVEL:

Each input is assigned to a slider which can be used to adjust the sound level. Balancing each input will ensure that the levels match; in other words, you won't have one person really loud while others are very soft.

- Set all TRIM KNOBS to MIC.
- Make sure your sliders are all the way down. Press REC for track 1. The rec button will flash. Have your talent speak into microphone 1 (input A) and adjust the slider for peak (green) levels. A little peak into the red isn't necessarily bad, but too much will overpower the audio track and ruin your recording.
- Press REC again to deselect the track. Leaving your newly set slider in place, move on to the next slider.
- Continue until all microphones are set.

RECORDING:

1. Press REC above all the active sliders that you will be recording from.
2. Press the big RECORD button.
3. Do your podcast. Do not press STOP if you mess up; stumbles can be edited out later. Keep recording until your project is complete.
4. If you want to start over, press stop, cue your recording to the beginning, and restart the recording. The machine will write over your previous recording with the new recording.
5. When you are finished recording, Press STOP.

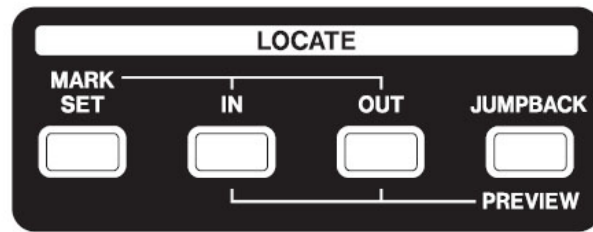
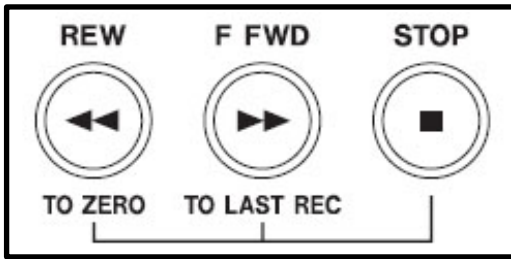
MIX DOWN/MASTERING:

The DP-24SD will record each separate microphone input into separate wave files. You can, if you want, take all those tracks into Audacity, resynch them, and then mix them down to one track. You can also do the mixing on the DP-24SD and have a single audio file to move over to the computer for editing. I suggest the latter.

It is possible to do all of your podcast editing on this one machine, however, I think it will be easier to add your music and intro and edit out any sections using a classroom computer and the Audacity program.

1. You must set an IN POINT and an OUT POINT. Make sure your file is at the very beginning (press REW TO ZERO) and hold down MARK SET, then press IN. Then fast forward to the end of your file (Press F FWD TO

LAST REC until you reach the end) and hold MARK SET and OUT. If you are not sure if you are at the start or end of your file, watch the time counter in the display screen.



2. Press the MIXDOWN/MASTERING button. Make sure MIXDOWN appears in the display screen.
3. Press the RECORD button. The machine will now play your entire file and record it as a single track. This will be done in real time.
4. When it is done, press STOP. Then press MIXDOWN/MASTERING to exit out of the mixer.
5. **EXTREMELY IMPORTANT: You should normalize your tracks!** The machine will enter the EQ and NORMalize screens. Press F4 to NORMALIZE your recording.
6. Press F2 to confirm NORMalization. When normalizing has finished, press F1 to exit.
7. Press MIXDOWN/MASTERING to exit to the HOME Screen.

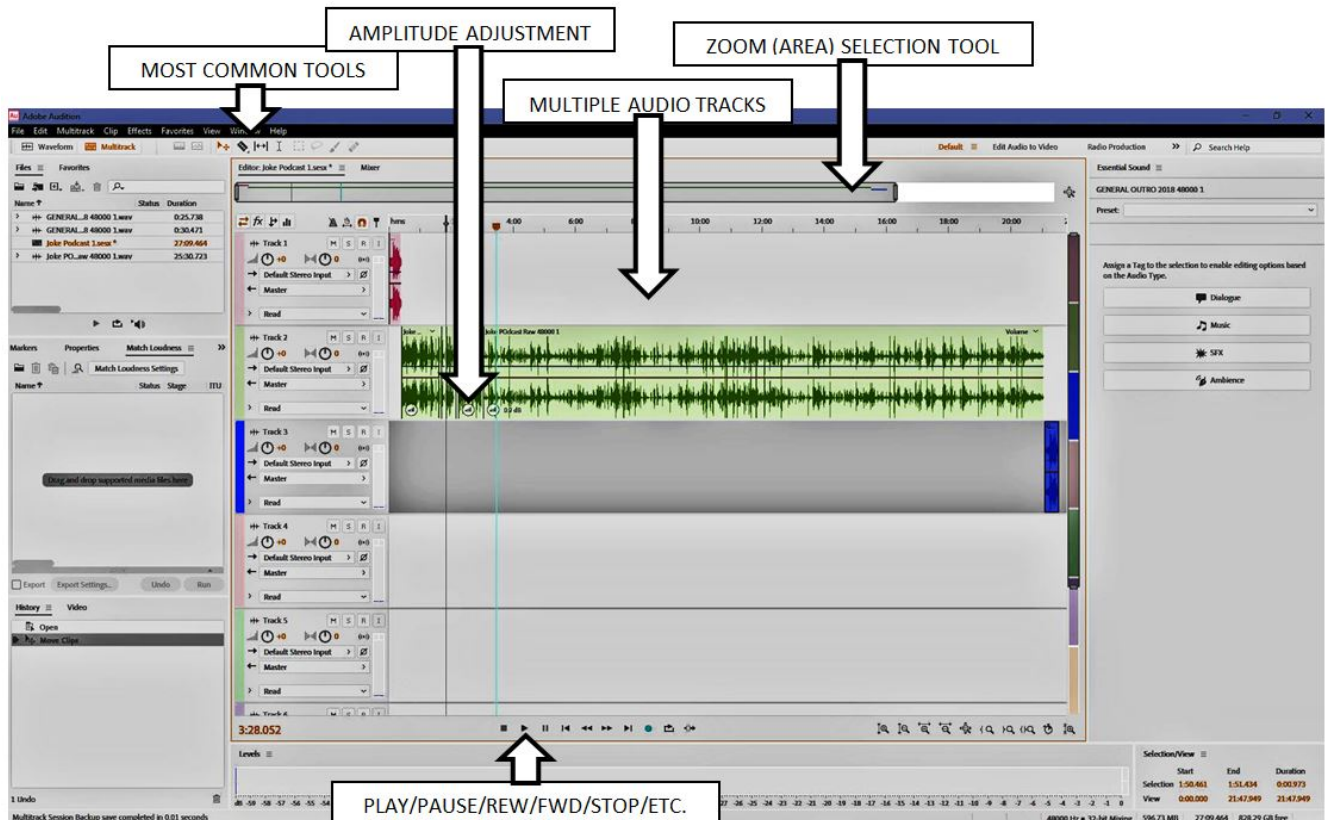
FINAL STEPS:

1. Power down the DP-24SD.
2. Break down the entire set and return everything to the cart.
3. Double check the inventory list to make sure everything is accounted for
 - Tascam DP-24SD Portable Digital Audio Studio
 - Four mic stands with pop guards
 - Four microphone cables
 - Three Electro Voice microphones
 - Headphones with adaptor
 - 4 GB SD card formatted for the Tascam
4. Remove the SD card and copy over your files to the computer where you will do your final edit.
5. RETURN THE SD CARD TO THE TASCAM RECORDER AND REINSERT IN THE SLOT!!!
6. Your final project will either be one master file with the name you chose (if you mixed down), or several numbered individual files (if you did not mix down). Click through the SD card to the MUSIC folder, and you will find a folder for your project inside. Your NORMALIZED file is the one without the Z.

Section 4: Audio Editing

Adobe Audition: Program Layout

1. Adobe Audition is located on the computer. To launch the program, first click the windows icon in the lower left hand corner of the screen. Then choose PROGRAMS and ADOBE AUDITION. When the program opens, choose VIEW and MULTI-TRACK EDITOR.



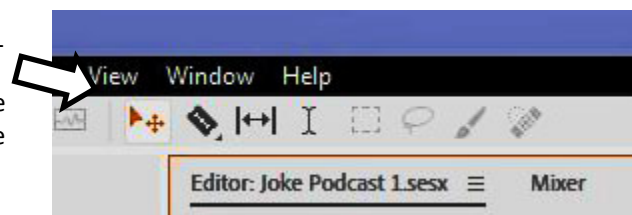
2. The layout of the program is pictured above. Make sure to save your work and keep track of your file name. I suggest including your last names as part of the file name. **IF YOUR SCREEN DOES NOT LOOK LIKE THIS, YOU DIDN'T CHOOSE MULTI-TRACK EDITOR!**

3. Once the multi-tracking screen is selected, you have two options for **GETTING YOUR FOOTAGE IN AUDITION.**

1) If you have the folders containing your audio files open on your computer, you can simply drag and drop the needed files. 2) The MEDIA BROWSER on the left hand side of the screen is a clearly laid out version of the computer's folders. Follow the path from USERS to your class, then drag and drop once you've located your files.

4. **Use the ZOOM (AREA) SELECTION TOOL** at the top of your mixer to zoom in or out of specific sections of your audio file. By grabbing and shifting the edges you can focus on a specific area of your project.

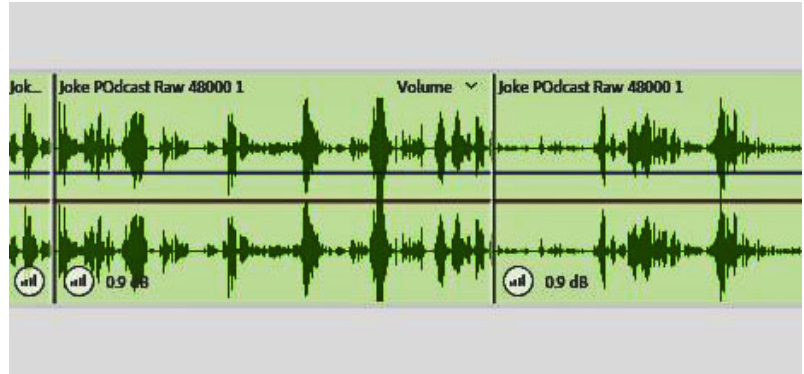
5. **MOST COMMON TOOLS:** there you will find a MOVE TOOL (Pointer/selection tool), a RAZOR TOOL (which cuts the file wherever you click it) a SLIP TOOL (which shifts your whole file without changing the edges, so AVOID THE SLIP TOOL) and the TIME SELECTION TOOL (which allows you to highlight parts of the timeline).



6. To repeat, the SLIP tool does some crazy stuff and can quickly mess up your project. **DON'T USE IT.**

7. **TO MAKE A CUT**, use the TIME SELECTION TOOL to highlight the area to be cut. The selection will be cut and a gap (or hole) will be left. **TO MAKE A CUT AND CLOSE THE GAP**, right click on the gap and choose RIPPLE DELETE and then TIME SELECTION IN ALL TRACKS. NOTE: If you are working in with a single waveform (not multitrack), you can just highlight and delete.

8. **AMPLITUDE** (Adjusting levels): If you need to adjust your levels, isolate the area to be worked on by using the razor tool. Then you can click inside that circle with the bar levels (pictured at right). CLICK and HOLD and SLIDE and you will see your levels change. *Be careful not to over modulate!*



9. **IF YOU ARE WORKING ON A PODCAST**, I would suggest that you import your podcast audio and make all necessary cuts, changes, and adjustments. Make sure that your levels are sufficiently high. Once it is complete, you can use the TIME SELECTION TOOL to highlight all your chopped clips, then RIGHT CLICK, choose GROUPS, and choose GROUP CLIPS. This will group the file together so you can add the intro and outro. You can always ungroup if you need to.

10. **IF YOU ARE WORKING ON A PODCAST**, please make sure that the levels of your main body audio are comparable to the levels of the intro and the outro. If they are not, you'll have to do it over!

11. **FINALIZING THE AUDIO**: Once you have made all your edits, it is time to finalize your audio by outputting it to a single playable file. If you only do a FILE – SAVE, you will simply create a record of your changes in Adobe Audition; you will not create a completed sound file. Follow these steps:

Choose **FILE** to **EXPORT** to **MULTITRACK MIXDOWN** to **ENTIRE SESSION**.

Then under **FORMAT**, please choose **MP3** and click **OK**

IF YOU ARE WORKING ON A PODCAST, please post your project to the class Google drive and let the teacher know that it is available for review.

IF YOU ARE WORKING IN ADOBE PREMIERE, load the exported sound file into Premiere the same way you would a video file.

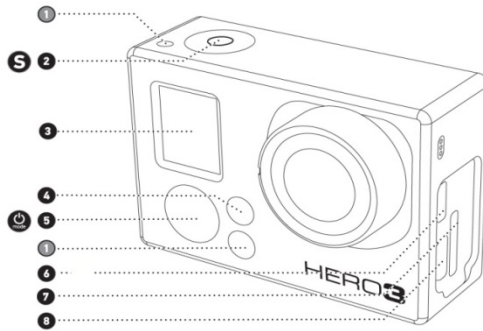
For further reference, feel free to consult

<https://helpx.adobe.com/audition/using/arranging-editing-multitrack-clips.html>

USING THE GOPRO

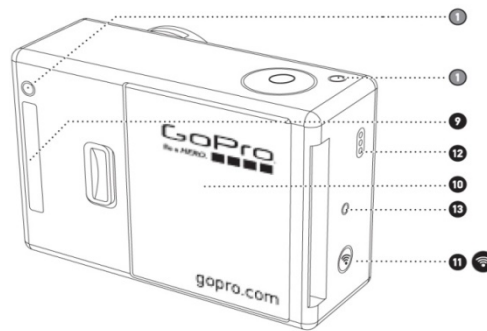
More detailed tips are available below the GoPro manual photo scans. For a PDF copy of the GoPro Manual, go to my weebly site: <http://mrwhinnem.weebly.com/>

HERO3 FEATURES



- 1. Status Indicator Lights (Red)
- 2. SHUTTER/SELECT Button **S**
- 3. LCD Status Screen
- 4. Wi-Fi Indicator Light (Blue)
- 5. POWER/MODE Button **⏻**
- 6. Micro HDMI Port (Cable not included)
- 7. microSD Card Slot (SD card not included)
- 8. mini-USB Port (Supports Composite A/V cable/3.5mm stereo mic adapter, not included)

HERO3 FEATURES



- 9. HERO Port
- 10. Battery Door
- 11. Wi-Fi ON/OFF Button **⊞**
- 12. Microphone
- 13. Audio Alert

USING YOUR HERO3: BASICS

CAMERA DEFAULT SETTINGS

The HERO3: Black Edition camera powers up with the following default settings:

	Video Resolution	1440p48fps
	Photo Resolution	12 Megapixels (MP)
	Photo Burst	30 photos in 1 second
	Time Lapse	0.5 seconds
	Wi-Fi	OFF

PRO TIP: Want to change your **VIDEO** and **PHOTO** settings? See **SETTINGS** menu to make changes.

USING YOUR HERO3: BASICS

POWERING ON AND OFF



To power ON:
Press and release **⏻**. The red **Status Indicator Lights** flash three times and the **Sound Indicator** emits three beeps.

To power OFF:
Press **⏻** for two seconds, then release. The red **Status Indicator Lights** flash several times and the **Sound Indicator** emits seven beeps.

PRO TIP: Want to turn your HERO3 into a "one-button" camera that automatically starts recording **PHOTOS** or **VIDEOS** once it turns **ON**? Set the camera to **ONE BUTTON** mode.
See **ONE BUTTON** mode for more information.

USING YOUR HERO3: CAMERA MODES

OVERVIEW

The HERO3 features several camera modes. To cycle through the modes, press **⏻**. The modes will appear in the following order:

	VIDEO	Record Video
	PHOTO	Capture single Photo
	PHOTO BURST	Capture Burst photos
	TIME LAPSE	Capture Time Lapse photos
	PLAYBACK	Appears only if the camera is plugged into a TV/HDTV. Playback allows you to play Photos and Videos on a TV/HDTV (via optional Micro HDMI cable or A/V composite cable).

PRO TIP: Use **PHOTO BURST** to capture fast moving subjects.

See **PLAYBACK** for more information.

USING YOUR HERO3: CAMERA MODES

VIDEO

To record **Video**, verify the camera is in **Video** mode. If the **Video** icon on your camera's LCD screen is not showing, press **⏻** repeatedly until it appears.

To start recording:
Press and release **S**. The camera will emit one beep and the red **Status Indicator Lights** will flash while recording.

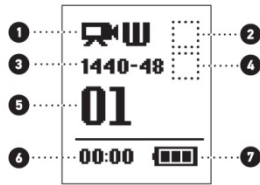
To stop recording:
Press and release **S**. The red **Status Indicator Lights** flash three times and the camera emits three beeps to indicate recording has stopped.

The HERO3 automatically stops recording when the memory card is full or the battery is out of power. Your video will be saved before the camera powers **OFF**.

See **VIDEO** mode for instructions on how to change resolution settings.

CAMERA LCD STATUS SCREEN

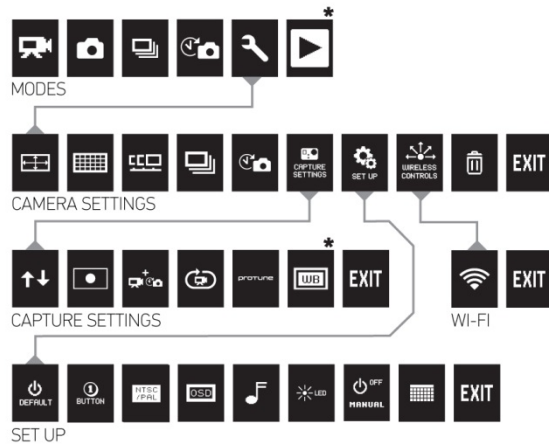
The LCD screen displays the following information about HERO3 modes and settings:



- 1. Camera Modes/FOV (Field of View)
- 2. Capture Setting Modes (not shown)
- 3. Resolution/FPS (Frames Per Second)
- 4. Time Interval Settings: (not shown)
- 5. Counter
- 6. Time/Storage/Files
- 7. Battery Life

Note: The icons displayed above will vary depending on what mode your camera is in.

CAMERA USER INTERFACE FLOW CHART



*Note: White Balance only appears in your camera display if Protune™ mode is turned ON. Playback only appears if Playback is activated.

USING YOUR HERO3: CAMERA MODES

SETTINGS

The **Settings** menu allows you to adjust a variety of camera settings including:

- Video Resolution
- Photo Resolution
- Time Lapse
- Photo Burst
- Continuous Photo

• and more

▶ See **SETTINGS** menu to make changes, learn how to navigate menu options and read more details on each setting.

CAMERA SETTINGS

SETTINGS

To enter the **Settings** menu:

1. Verify the camera is in the **Settings** menu. If the **Setting** icon on your camera's LCD screen is not showing, press repeatedly until it appears.
2. Press to enter menu.
3. Use to cycle through the various **Settings** options.
4. Press to select desired option.
5. To exit, hold down for two seconds or cycle through to **EXIT** and press .

PRO TIP: If at any time you wish to exit from the **SETTINGS** menu, press and hold for two seconds.

USING YOUR HERO3: CAMERA MODES

TIME LAPSE

Time Lapse mode captures a series of photos at **0.5, 1, 2, 5, 10, 30** or **60** second intervals. When using the **0.5** seconds setting, an SD card with a Speed Class 10 Rating is required.

To capture a **Time Lapse** series, verify the camera is in **Time Lapse** mode. If the **Time Lapse** icon is not showing on your camera's LCD screen, press repeatedly until it appears.

To take Time Lapse:
Press and release . The camera initiates countdown and the red **Status Indicator Lights** flash each time a **Photo** is taken.

To stop Time Lapse:
Press and release . The red **Status Indicator Lights** flash three times and the camera emits three beeps to indicate that **Time Lapse** has stopped.

▶ See **TIME LAPSE** for instructions on how to change the interval settings.

GUIDELINES FOR CLASS CRITIQUES

The following guidelines are used for Intro to Film and Advanced Film classes only. Broadcast Technology uses a small group, written format for critiquing.

Responding to your fellow students' productions goes a long way toward establishing the kind of cooperative, helpful environment where people can feel comfortable sharing work, gathering feedback, and growing as artists and technicians. It is also one of the easiest and most helpful ways to earn points in this class.

You will have several opportunities to critique each other's work during the semester. During each critique session, you will be expected to do the following things:

- 1) Present your project to the class and field their comments. (max 4 pts)
- 2) Offer both positive and constructive feedback on other students' projects. (max 6 pts) *

* You have the opportunity to gather up to three points each time you are called upon. Good feedback will earn three points, poor feedback will earn less (possibly zero) points.

Good feedback offers specific information on the project presented. For example:

"Your music really set a great tone for the piece. It had a spooky feel to it, and added a lot of tension to the shots."

"Your zoom shot was not that smooth. We did a similar shot and had trouble with the tripod, and we fixed it by having one person hold the camera steady while another worked the zoom. You might want to try that next time."

"I never would have thought to place the camera inside the window and shoot the conversation in shallow focus with the spider web stretched across the foreground. That was a fantastic idea and I wish we'd thought of it first."

Poor feedback offers generalities and does not directly relate to the work being presented. For example:

"I really liked the music."

"Your shots were shaky."

"I liked your ideas. All your ideas were good."

IN ALL CASES, WE ARE HERE TO HONOR AND RESPECT OTHER STUDENTS AND THEIR WORK. ALWAYS GIVE YOUR FELLOW STUDENTS YOUR BEST ATTENTION AND SHARPEST RESPONSES! THEY DESERVE IT!