

3D Animation Lab



***READ THIS MANUAL
OR THE DOG GETS IT!***

Table of Contents

| | |
|---|-----------|
| WELCOME TO THE 3D - EXPERIMENTAL EFFECTS LAB | 3 |
| LOG BOOK | 3 |
| SCHEDULING TIME..... | 3 |
| KEYS..... | 3 |
| NEED HELP? | 3 |
| LAB PERIPHERALS..... | 4 |
| MESSY MATERIALS | 4 |
| CLEANING SUPPLIES..... | 4 |
| SET CONSTRUCTION..... | 4 |
| TOOLS | 4 |
| LIGHTS | 4 |
| GRIP CART | 4 |
| ANIMATION TABLE | 4 |
| TRIPOD | 4 |
| CAMERA..... | 5 |
| LENSES | 5 |
| COMPUTER | 5 |
| VOLUME CONTROL BOX | 5 |
| GENERAL USE EXPECTATIONS..... | 5 |
| PERIPHERALS CONTINUED...GENERAL EXPECTATIONS..... | 5 |
| BASIC ANIMATION WITH DRAGON STOP MOTION..... | 6 |
| ABOUT DRAGON | 6 |
| BASIC STEPS FOR SHOOTING ANIMATION | 6 |
| DRAGON STOP MOTION CONTINUED... .. | 7 |
| KEY PAD FUNCTIONS - NAVIGATION LINE..... | 8 |
| ANIMATION NAVIGATION LINE (NAV-LINE) | 8 |
| NAVIGATION LINE EDITING | 9 |
| FRAME EDITING FROM THE NAV-LINE | 9 |
| EXPORTING TO QUICKTIME | 10 |
| EXPORTING OPTIONS..... | 10 |
| EXPORTING FROM DRAGON TO QUICKTIME | 10 |
| TROUBLESHOOTING GUIDE..... | 11 |

Welcome to the 3D - Experimental Effects Lab

Pop Quiz!

Question: What's the first thing you should do upon entering the lab?

Answer: Log in to the Log Book!!!

LOG BOOK

Every time you enter the lab please sign in and record the following information:

- your name
- materials used (puppets, clay, paper, etc....)
- equipment used (table, computer, lights, grip cart, camera, etc...)
- record any technical problems (so we can fix it)
- status of the lab: clean, messy, anything missing or broken?

This is the main form of communication between you and the staff who maintains and audits the space weekly. **Failure to sign in to the Log Book will result in loss of access.**

:::If there is an immediate issue please contact us via email at animation@evergreen.edu:::

SCHEDULING TIME

You and anyone working with you in the lab **must be proficient**. Regular scheduling should be done through Media Loan along with key checkout. It is your responsibility to confirm your reservation time, day and room by asking for a receipt. If you need a substantial amount of time fill out a Media Request Form, and/or contact animation staff for critical productions that can be booked over multiple days. You may lose your scheduled time if you are more than 15 minutes late, and whenever possible please cancel any time that you will not use. **Repeated lateness and no shows will result in a loss of privileges.**

KEYS

Checkout the electronic key (FOB) from Media Loan prior to your reservation and return it promptly afterwards. To open the door hold the key against the black square near the door until the latch opens and beeps. Do not use keys to gain access outside of your scheduled time, prop doors open, or share keys - all usage is tracked electronically. You are financially responsible for the room and its contents. **Lost or stolen keys must be reported immediately to both Media Loan and Animation staff.**

NEED HELP?

Do not attempt to unplug or re-wire anything, especially if you think you know what you are doing. Check the Troubleshooting Guide in this manual and see if you can find your answers there. Flip through the Log Book to see if anyone else has experienced the same problem and if a solution was found. If that fails contact one of the following offices:

>Multimedia Lab, Lib 1507
ext. 5455

>Stephanie Zorn, Lib 1507
ext. 6249, zorns@evergreen.edu

>Electronic Media Front Desk, Lib 1501
ext. 6270

>Media Loan, Lib 2502
ext. 6253

Lab Peripherals

MESSY MATERIALS

If you are using messy materials/clay you are required to discuss your project with animation staff and get approval **BEFORE** using the lab. Always cover the keyboard and keypad with Saran Wrap which are located in the cleaning supplies bin. Leftover clay should be recycled in the Design Lab.

CLEANING SUPPLIES

Cleaning supplies: paper towels, spray, broom and dust pan are located to the left of the door and you are always expected tidy up after yourself at the end of each session. If the lab is left messy you will lose access privileges.

SET CONSTRUCTION

Construction of sets is NOT allowed within the space, complete this before your scheduled time. **Sets and other materials are NOT to be stored in the lab.** Request a locker through Photo Services down the hall.

TOOLS

Basic tools are provided in the space and must **always be returned to their designated storage area** and treated with caution and care. Additional tools such as dremels, drills, and tool kits are available for checkout from animation staff. **Never remove any equipment from the room - ever.**

LIGHTS

Tiny and mini Molefay lights are provided in the room, and additional instruments can be checked out through Media Loan which must be returned at the end of your session. Plug lights into the Scene Master light board using the provided power strips for dimmer control. To prevent hurting yourself, others, and the equipment when using lights remember to:

- **Inspect the equipment before use; confirm that there are no broken pieces, frayed cables, loose parts, burn marks, missing ground pins**
- **Confirm the power switch is turned off before plugging it into an outlet/power source**
- **To prevent the bulb from exploding: do not touch bulbs with your bare hands, or shake/move the lights while they are hot, flick the power switch off/on continuously**
- **If a bulb explodes replace it with the extras provided in the room, clean up any broken glass and alert animation staff.**
- **Lights get REALLY HOT - use gaffer gloves, keep away materials that are flammable/meltable, and wait for equipment to cool down before putting it away**

GRIP CART

The grip cart is where most of the lights and stands are stored. Follow the pictures for putting away C-stands and **make sure to tighten (but not overtighten)** locks so they don't expand accidentally and crunch your fingers. Be gentle with the fabric flags and do not rip, stain, or keep too close to hot lights. Make sure to let lights cool down before putting them in their cubbies and note any missing pieces or broken items.

ANIMATION TABLE

The animation table is **not to be painted or modified in any significant way.** If you drill into the table you must remove all of your tie down screws. Be careful as the table top is not secured to the legs.

Peripherals continued...General Expectations

TRIPOD

The camera is mounted to the tripod with a bolt screw that should never be overtightened or removed from the tripod. Do not use excessive force when tightening screws. Lock everything down when not in use. Do not arrange the tripod so that it is easily tipped over, and weigh down the base with sandbags for extra stability and to maintain registration while shooting.

CAMERA

All the menu and camera settings are formatted for use with Dragon. **Do not attempt to adjust any settings!!!** You must turn the camera dial to ON when you need to use it and set the dial to OFF when you are done - **do not shut off power to the camera without properly turning the camera off first.** **Make sure to not pinch, stretch, or squish the camera cables** with the tripod, or other equipment. It is recommended that you disconnect the cables while setting up.

LENSES

The camera is installed with a 50mm prime lens and clear filter, you can also choose to checkout your own camera from Media Loan with a zoom lens. Additional lenses are also available through Animation Staff. The only function on the camera you will have to adjust is the focus. **NEVER EVER touch the lens with anything or attempt to clean it - get a Lab Aide to clean it for you.**

COMPUTER

Save all your files in a folder labeled with your name on the User Drive. Never save to the desktop or System Drive, they will be deleted when you log out. **Files can be deleted at any time to free up space and everything will be cleared out by 5pm Wednesday of Evaluation week.** When you are done with your session, backup files to a server, personal hard drive, or writeable media such as a data DVD. Do not work directly off of the server - only copy to or from it and then disconnect from the server while working.

VOLUME CONTROL BOX

On the desk is a silver box to select audio sources. Flip the switch to DV to hear sound routed through the DV deck; such as Final Cut Pro. Flip switch to Mac Audio if you need to hear sound routed through the computer; such as iTunes or Dragon Stop Motion. Use the volume control knob and the speaker control knobs to adjust volume level.

GENERAL USE EXPECTATIONS

>There are absolutely no food or drinks of any kind allowed in the labs. Leave them stored outside the door. Take care of yourself and remember to take a break once in a while.

>Please recycle your paper scraps in the corresponding bins. Garbage cans are located down the hall.

>Clean up after yourself -the labs are a shared space - not your personal den. You are expected to completely remove your trash, and tidy up at the end of your session. Cleaning supplies are provided next to the door. If you run out of time for cleaning up you are expected to come back later to clean.

>Do not delete other peoples' files or mess with any settings, postings, in the lab or on the computer.

>Do not unplug or remove anything from the space

>Be courteous and respectful to the lab aides and your fellow animators and abide by the campus code of conduct.

Basic Animation with Dragon Stop Motion

ABOUT DRAGON



Dragon Stop Motion is an animation capture application used and developed by professional animators. This program imports the high-resolution still images directly from the installed DSLR camera and stores them as sequence of images instead of as a single file. These instructions cover the basic shooting procedures specific to the labs here on campus. To learn more please refer to the Dragon Manual in the Help section of the application, or the Dragon website.

BASIC STEPS FOR SHOOTING ANIMATION

1. Log In to the Log Book and record what materials and equipment you are using.
2. Setup the lab for shooting:
 - With the camera off to the side setup lights, sets, puppets
 - Power up the computer
 - Setup the camera on a tripod and turn it ON
 - Turn off all other room lights



3. Launch Dragon Stop Motion from the Dock.
4. Select **New Scene** from the dialog box, or open a perviously created scene.
5. Name your production, 5 characters maximum, and save it into a folder labeled with your name in the User Drive.
6. If you do not see the live camera feed from the animation stand press **⌘ R** to refresh the live camera feed - a red outline will appear around the window signifying that live view is enabled.



7. Adjust the opacity of the aspect ratio mask by using the opacity slider. Adjust the orientation and turn on grids and guides with the Image Tool controls on the left-hand side of the window.



8. Set the frames per second for playback speed:

1's = 30fps / 2's = 15fps / 3's = 10fps

9. Arrange your materials on the table, adjust the framing by moving the tripod (**do not lift from the camera**) Check framing so that the background overfills the screen and make sure any content, and titles, fall within the boundaries of the Action/Title Safe reference guides.

10. Set the focus by first placing one of focus guides on the table at the same focal length as your subject. In Dragon click on the eye ball on the top right of the screen to enter the Cinematography window. Click the focus button. While watching the computer screen slowly turn the focus ring on the lens until



Dragon Stop Motion Continued...

everything is sharp. Click on the focus button again to zoom back out.

11. While still in the Cinematography window confirm the camera settings are:

- Picture Style - FAITHFUL
- Image Quality - MEDIUM FINE JPEG
- White Balance - TUNGSTEN (if you are using the supplied lights in the lab)
- ISO - 100

Set exposure to to your liking using the camera setting dials for f-stop and shutter speed . Click the test shot button to preview your settings. When you are done click on the animate button on the top right to return the animation window to begin shooting.

12. To begin capturing frames press the **Enter** key on the numeric keypad, this will take a moment to transfer the still image file from the camera to the computer. **Do not capture frames too quickly** - this will cause Dragon to crash and may corrupt your last captured frame.

13. **Activate the hi-res button on the remote** to set the playback source to preview the hi-res stills instead of the lo-res video assist images. To playback your captured frames press 0 on the numeric keypad, or use key **1** and **2** to step through frame by frame.



Most functions can be easily controlled with the numeric keypad shortcuts - get used to using it for faster work flow



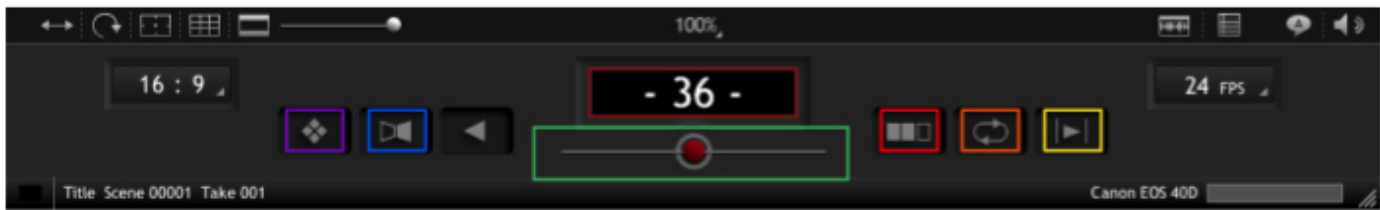
Key Pad Functions - Navigation Line

Remote Keypad Map



- ⏸ **MUTE** (/) Turns audio playback off.
- ⌫ **DELETE** (bs) Deletes the last frame shot.
- **BLACK** (7) Cuts to black at the end of playback.
- 🔄 **LOOP** (8) Loops the frame sequence.
- ✂ **CUT BACK** (9) Eliminates a selected group of recently shot frames.
- 📺 **AUTO-TOGGLE** (4) Toggles the Live View at an adjustable rate.
- 📺 **LIVE TOGGLE** (5) Toggles the Live View each time you press the key.
- ▶| **SHORT PLAY** (6) Plays a selected number of previously shot frames.
- ↔ **ONIONSKIN** (+, -) Dissolves the Live View over shot frames.
- ◀▶ **STEP** (1, 2) Steps frame-by-frame through the sequence.
- ▶ **LIVE** (3) Jumps to the Live View frame in the sequence.
- ▶ **PLAY** (0) Plays the sequence at full speed.
- ❖ **HIGH-RES** (.) Switches from video assist frames to high-res proxies.
- **SHOOT** (enter) Captures a frame.

The Animation tools (below) serve as a dashboard, indicating what playback modes are active, if the Onionskin slider is adjusted, and what frame you're on.



ANIMATION NAVIGATION LINE (NAV-LINE)

The Nav-Line is a visual representation of your frame sequence, allowing you to:

- See where you are in your scene as you step through frames
- Select frames for playback
- Cut or copy frames
- Delete frames
- Paste cut or copied frames
- Reshoot frames
- Play back very large scenes

The Nav-Line appears any time you move the mouse over the View pane, and disappears when you move it over the rest of your computer screen. The map that follows gives an overview of the different parts of the Nav-Line.

Navigation Line Editing

Animation Nav-Line Map



- A.** *Blue Memory Management Bar: Shows which frames are not stored in RAM or included in playback.*
- B.** *In point: Marks the beginning of a section for playback, frame editing, or memory management. Moving the in point moves the play head as well.*
- C.** *Play Head: Marks where playback will begin. Double-click the play head to move the Live dot to the play head's current location.*
- D.** *Live Dot: Marks where the next frame would be captured. Here, you'd capture the next frame at the end of the sequence. If you move the Live dot earlier, you will reshoot and replace the frames that follow.*
- E.** *Live: Shows that the play head, an in point or an out point is currently on the Live dot.*
- F.** *Frame Number: Indicates which frame the in point marks: in this case, frame 73.*
- G.** *Gray Memory Management Bar: Shows which frames are included in playback and stored in RAM. Click and drag the bar to adjust which frames to include.*
- H.** *Frame Number: Indicates which frame the play head marks: in this case, frame 413.*
- I.** *Out point: Marks the end of a section for playback, frame editing, or memory management. Moving the out point moves the play head as well.*

FRAME EDITING FROM THE NAV-LINE

1. Use the in and out points to define which frames you want to include in cutting, or copying:
2. Step through the frames, then press "I" to set the in point and "O" to set the out point, or move the in and out points on the Nav-Line.
3. Press ⌘ **X** or ⌘ **C** to cut or copy the frames. Pasting Frames with the Nav-Line. If you are pasting frames, position the play head to where you want to place them.
4. Press ⌘ **V** to paste. A dialogue box will appear with different pasting options:
5. Delete the selected frames by selecting **EDIT | DELETE** from the drop-down menu.

NOTE: Dragon moves any deleted files into the Backup folder, which is stored with the rest of your source files. If you make a mistake, press ⌘ **Z** to undo the delete.



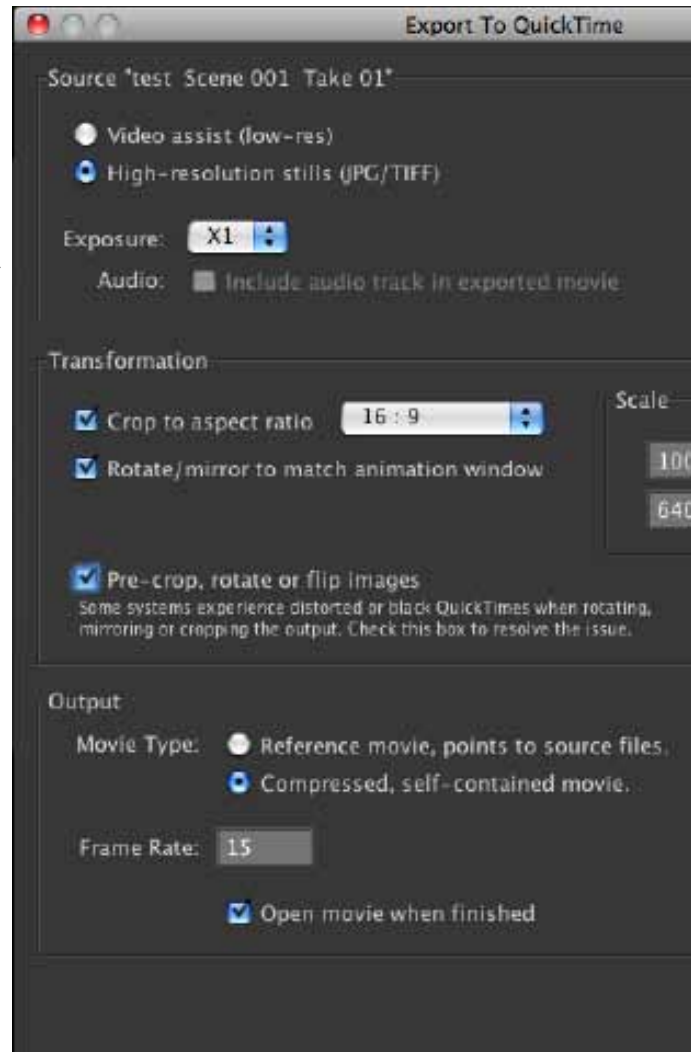
Exporting to Quicktime

EXPORTING OPTIONS

You can export a Quicktime movie directly from Dragon or use another image editing program such as Photoshop, Lightroom, Quicktime Pro 7, or After Effects to process images into a sequence.

EXPORTING FROM DRAGON TO QUICKTIME

1. Go to **File** ⇒ **Export** ⇒ **Quicktime**.
2. Match the export settings to this screen shot. Adjust the aspect ratio and frame rate according to your project settings and click **OK**. →
3. Name the file and choose to save it in your folder on the User Drive.
4. In the Quicktime dialog box that appears click on the **Settings** button. In the Compression Type drop down meny select **Apple ProRes 422 (LT)** and click OK.
5. Back in the main Quicktime dialog box click on the **Size** button.
 - For 16:9 widescreen projects choose **1920x1080 HD** and click **OK**.
6. Back in the dialog **uncheck** the box **Prepare for Internet Streaming** and click **OK**.
7. Preview your animation in Quicktime to confirm if the the export was successful.



Troubleshooting Guide

Believe it or not, most technical issues in the lab are the result of "operator error". For remedying technical obstacles a good rule of thumb is try and start with the simplest possible answer, or start over.

Although you will not find all of the answers here, you can help us refine and expand this guide! Please write down any problems you had while working in the lab in the Log Book or email us, animation@evergreen.edu. Thank you!

The computer monitors are on but say they are receiving no signal...

Did you turn on all the power strips? Did you turn on the computer? Wake up the computer.

When I launched Dragon I couldn't get an image...

Did you refresh the live view by pressing ⌘ R? Did you turn on the camera, is there power to the camera? Is the aperture all the way closed? Under the Capture Source menu is the camera selected under Video Source and Capture Source instead of the DV deck?

Dragon crashed...

This is one reason to save your work often. Sometimes capturing frames really fast in Dragon makes it crash. Please report any issues in detail in the log book or email us, animation@evergreen.edu. Quit, save, log out, or restart the computer if you have issues.

The computer the fan is making a loud noise and the computer crashed...

Sometimes when the computer displays go to sleep they lose communication with the computer and this causes it to get "angry". Hold down the computer power button until it shuts off. Turn off both display power switches and restart the computer. Wait a minute and then turn them back on and log in as usual. You will have lost any unsaved changes.

When I exported my animation from Dragon there were black frames...

If you captured frames too quickly in Dragon it can cause your quickly captured content to turn into black frames. To remove these you will have to go back into your Dragon project and use the Nav Line to delete these frames, and re-export a Quicktime movie.

When I play my animation through in Dragon it looks fine, but when I export to Quicktime the image is too dark/ bright...

When you are shooting you are seeing the lo-res video assist image played back. Exporting to Quicktime uses the hi-res stills that have their exposure set through the Cinematography window. If you did not check your exposure settings in the Cinematography window before shooting you will not be able to change them. The only option is to either re-shoot, or re-export using the lo-res video images as your source for Quicktime.

The bulb burned out...

Disconnect the power cord from the outlet. Wait for the light to cool down to room temperature, put on the provided gaffer gloves and remove the bad bulb. Throw the bulb out in the garbage in an empty bulb box. If there is glass everywhere clean it up as best as possible with the dust pan and label any areas with remaining shards so that others don't get cut. Email animation staff animation@evergreen.edu. Extra bulbs are stored on the shelf if you need them and write a note in the log book.

The tripod column won't turn...

The tripod we have is from the stone ages. It is common for the height extension to break and animation staff will have to take it apart. In a jam checkout another still camera head tripod from Media Loan.