



DRAGONFRAME

CMU ANIMATION

DOWNSHOOTER QUICKSTART USER GUIDE - 2020

Stephan Leeper/Central Michigan University

Dragonframe Quickstart Guide for Downshooters

Contents

- A. Setting Up Downshooters
- B. Creating a New Project in Dragonframe
- C. Set Up Cinematography Window
- D. Animating in Dragonframe
- E. Setting Aspect Ratio Mask & Exporting Movies
- F. Wrap Up Shoot & Reporting Technical Problems

A. Workflow for Setting Up Downshooters

Fill Out Log Sheet/Inspect Shoot space: Make a quick inspection of the shoot area to make sure the previous user has left things as they should be.

Turn on Power Strip and Place art on Copystand: Place your artwork at the center of the copystand table but don't secure it until you can set up your framing through the camera in Dragonframe.

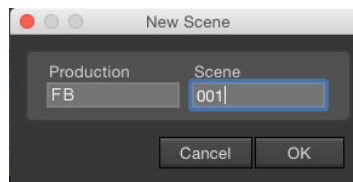
Turn on Camera if needed: Before starting make sure camera is secure on the copystand and the camera is set to Manual.

Turn on LED lights: Make sure the LED lights on either side of the Downshooter are turned on at the same setting. A lower setting with lights a a distance from the shooting area may reduce glare.

B. Creating a New Project in Dragonframe

Create New Scene: Open Dragonframe from the applications folder.

Choose *Create New Scene* and enter abbreviated assignment name in the Production/Scene boxes (DF limits you to 5 characters). Click on OK.



Browse to the *Desktop* and click *Save*.

Connect Camera: When *Dragonframe* opens, you should hear a ‘click’ from the camera and a live image of the copy table should appear. If not, click ‘Cmd R’.

Note: If the manual capture does not work try quitting Dragonframe, turn on the camera and try again.

C. Set Up Cinematography Window

Switch Windows: In the upper right-hand corner of *Dragonframe* notice that you are in ANIMATION mode. Open CINEMATOGRAPHY mode by clicking the camera icon.



Set up Live Preview: *Live Preview* is indicated by a red line outlining the viewing window and the red text LIVE VIEW next to the highlighted “L” on the toolbar at the bottom center of the window. If you do not see the text/outline simply click on the “L”.



With *Live Preview* on you should see your artwork/copy stand displayed in the window. The image will most likely over or under exposed so if the screen is completely black or white it’s not time to worry. . . yet. ☺ If this is the case you’ll need to skip one step ahead to **Adjust Camera Settings** before you can move to the next step.

Adjust Camera Height/Framing and Secure Artwork: Use the knob on the side of the column to adjust the camera height. Secure your artwork to table with tape once you are pleased with the framing in *Live Preview* window.

Adjust Camera Exposure: To the right of the screen is the Camera Settings panel. You will notice there are a number of tools to adjust the exposure, quality, color temperature, etc. of your final image.



1. **Exposure Wheels:** There are three wheels at the top of the panel that you can scroll to adjust the exposure. Let's look at them from the bottom up.



- **ISO:** The bottom wheel is to adjust the **ISO** (or film sensitivity). This should remain between 100 and 200 for the best clarity of image.
 - **Aperture/F-Stop:** The middle wheel for **Aperture** is therefore disabled. The aperture ring on the lens should be set between **F5** and **F11**.
 - **Shutter Speed:** The top wheel is to adjust your **Shutter Speed**. This is your most useful tool for setting a proper exposure.
2. **Calibrating Test Exposure:** The exposure you see through the Live View is NOT the same exposure that you will get in your captured image (which is the one that counts). These next steps will insure that your final exposure is exactly correct and that the *Live Preview* closely reflects the same exposure.
 1. With the **ISO** wheel set at 200 scroll the **Shutter Speed Wheel** until you achieve a good exposure through the *Live Preview*.
 2. Click on the *Test Shot* button.
 3. You are now looking at the test frame you just exposed instead of Live Preview (notice the red line is gone). Most likely the test frame is a different exposure. The test frame represents your actual exposure.
 4. Click on the camera icon at the bottom of the window to restore *Live Preview* (or press 3) and compare the *preview* with the actual *test exposure*.

5. Use the “Exposure Preview Offset” drop-down menu, just above the Test Shot button, to adjust the *Live Preview* until it closely resembles the *test exposure*. I usually start at +3 or +4 and work my way down.
- 3. Finalize Exposure:** Now that *Live Preview* closely resembles the *test exposure* you can fine-tune your final exposure.
1. Scroll the Shutter Speed in Live Preview until the exposure is exactly where you want it.
 2. Next take a *test exposure*. If this image is not exactly what you want make minor adjustments to the Shutter Speed and take another *test* until you are satisfied.
 3. The *test exposure* exactly represents your FINAL ANIMATION EXPOSURE so make sure that you are pleased with it instead of the *Live Preview*.

Adjust Image Quality: We’re almost there! All that left is a few image tweaks to ensure that you’re getting the highest quality capture for all your hard work animating.

Notice that just above the “Test Shot” button is a series of drop down menus.



The two that we’re concerned with are the *Image Quality* and *White Balance*:

1. **Set Image Quality:** This determines the pixel size of your captured images. *LARGE FINE JPG* should be over 4K. Good enough for most of the animation done on a copy stand.
2. **White Balance:** The copystand is equipped with LED lights. Depending on your light source color temperatures will vary. Choose the setting that gives you the truest image. Stay away from Auto White Balance.

Setting Focus: Make sure you are in *Live Preview* (you can reset by pressing 3 on keypad). For this step, you will need to turn the focus ring on the camera lens. The focus ring is right next to the *Aperture* ring. Here is the order to set focus:

1. With a detailed piece of art (or printed text) on the copystand, adjust focus ring to best of your ability.
2. Click on the eye/focus icon to the left of the camera icon at the bottom of the window and a small white rectangle will appear in the window over your image. Select and drag white rectangle to the area you want in focus. Choose an area with lots of texture/detail.
3. Dbl. click on the rectangle to magnify area and adjusting the focus ring on camera lens to sharpen image.

4. Click the eye/focus icon to return to regular *Preview*.
5. Take a test shot to check quality. Be sure your *Preview* window is expanded large enough to thoroughly inspect the over-all quality of your test image.

D. Animating in Dragonframe

Setting Up Animation Window: There are just a few more steps to ensure that your animation is the proper playback speed and aspect ratio.

1. **Switch to Animation Window:** Click on small Animate icon to open Animate window.



2. **Set Aspect Ratio:** Notice a series of icons at the lower left of the *Animation Preview* window. The icon on the right is your *Framing Mask*. Move the cursor into the *Animation Preview* window and an option box should appear. Use this box to set the *Framing Mask* aspect ratio. You can opt to leave thing at full frame (4:3) or change it to the more conventional wide screen (16:9) which is standard HD.

You can adjust *Framing Mask* opacity with the slider just to the right of the *Framing Mask* icon.

Note: Whatever Fame Mask you choose will be offered as a default option when you export your movie. If you change your export setting you will risk cropping your work.

3. **Set FPS (Frames Per Second):** On the lower right of the screen use the drop-down menu to select your playback rate.



Our animation standard is 24 FPS. Typically, I set 24 FPS and shoot in 2's (two exposures per drawing). Or you could set your playback rate at 12 FPS and only expose your drawings once.

Start Animating!! The best way to learn *Dragonframe* is to simply start animating and feel your way around the program. The basic operation in *Dragonframe* is extremely intuitive but if you have trouble you can go to www.dragonframe.com/tutorials for tips on using the program.

E. Setting Aspect Ratio Mask & Exporting Movies

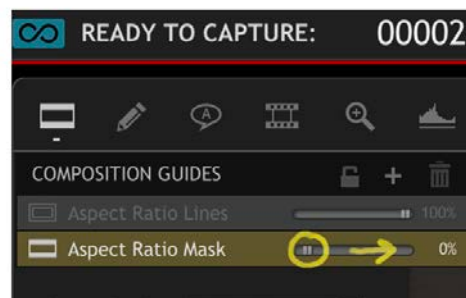
When exporting movies from *Dragonframe* you want the highest quality/resolution, with the most playable compression and the correct aspect ratio.

Setting up your Aspect Ratio Mask: In the Dragonframe Animation Window role your cursor over the background to make Tool Menu Appear. Make sure you are in the COMPOSITION GUIDE tab. Then click on the dropdown menu next to Aspect Ratio and select your aspect ratio.

Dragonframe offers a number of preset aspect ratios. The two most commonly used are **Standard 4 : 3** and **HD 16 : 9**, (usually indicated in the “Technical Specs” on your assignment page).



Setting the Opacity of your Aspect Ratio Mask: The aspect ratio setting determines the size of your Aspect Ratio Mask which is laid over your scene and can ultimately affect your export settings. You can adjust the Aspect Ratio Mask opacity in the COMPOSITION GUIDE menu by sliding the percentage dial to the left. . .



Or you can use the slider at the lower left of the Animation Window.



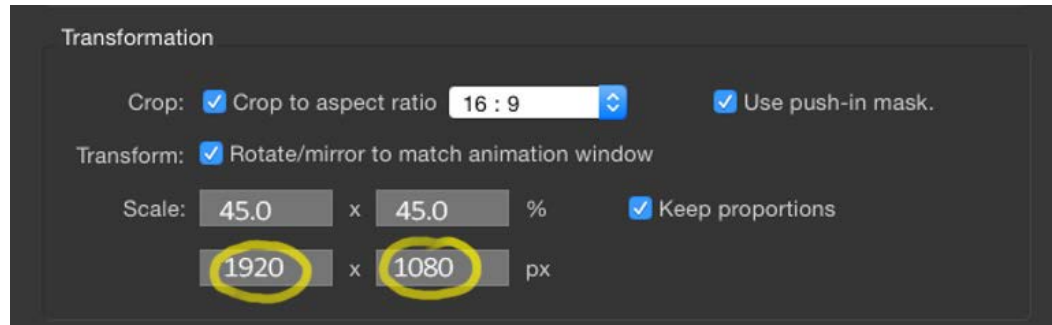
Exporting a Hi-Res/H264 Movie from Dragonframe: In the toolbar go to File/Export Movie. . and enter the following settings. Most should be there by default.

Source:

- High-resolution JPG/Tiff from the drop-down menu
- The frame rate setting will reflect the FPS playback from the Animation window. If you are pleased with your playback rate leave this alone.

Transformation:

- If you set up your Aspect Ratio Mask in the COMPOSITION GUIDE then make sure the “Crop to aspect ratio” box is checked. If not, uncheck the box and choose your aspect ratio.
- Make sure Rotate/mirror and Keep proportions are checked.
- Adjust pixel range to the desired px settings (1920 x 1080 for HD 16:9 and 1440 x 1080 for 4:3).



Output:

- mp4 (H.264/AAC) in the drop-down menu.
- Set the Quality slider towards Medium High
- Check “Open movie when finished”

Click on Export and browse to a folder on your hard drive.

F. Wrap Up Shoot & Reporting Technical Problems

Wrap up Work Station: Just because you're done animating doesn't mean you're ready to quit. 😊 A few simple steps will help to preserve the equipment and make shooting animation a great experience for the rest of us.

1. TURN OFF CAMERA STAND. Do this at the power strip. This will help preserve the cameras for future shoots.
2. Clean up entire area and put away extra materials. This includes any pre-production messes you may have elsewhere in the lab.
3. Record any problems into Log (equipment failure, bulb blown, camera errors, etc. . .)
4. Report software errors by submitting a helpdesk ticket. Follow the link for [instructions on how to submit a ticket](#) and remember to:
 - Copy a sponsoring faculty member on all lab related tickets.
 - Be as informative as possible in describing the problem by stating lab #, station # and specific nature of the problem.
 - When reporting computer errors attach a frame grab (⌘/shift/4) to help I.T. discern the problem.

Now you're done. . .