Drawing

Version 2.0 of Animation Pro now allows animators to draw directly onto the images within figures whilst animating!

TOPICS

Drawing on an Image in a Figure

It is possible to draw on any image item in a figure whilst animating.

1. Tap on a figure's orange anchor point to select it (the anchor point will start flashing and the figure's handles will be displayed):

2. Tap on the handle of the image item that you wish to draw upon (you may need to tap twice if the item is bendable):

The 'Image Options' popover will be displayed (as shown right):

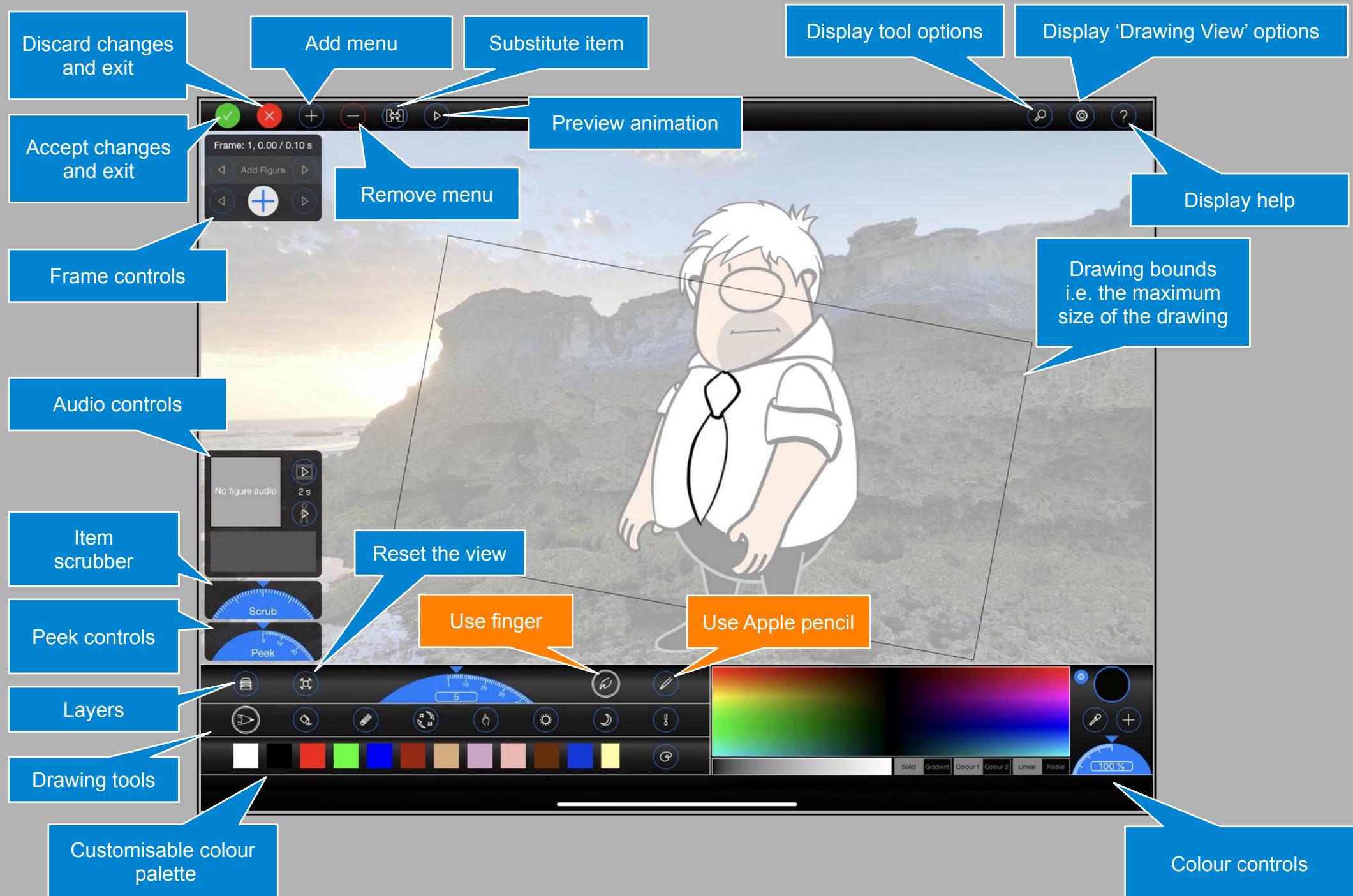The 'Image Options' popover will be displayed

3. Press the [pencil button] button at the top-right of the 'General' category of the 'Image Options' popover:

Animation Pro will present the 'Animation Drawing View' (see next pages for details):

Animation Drawing View Overview

Discard changes and exit

Accept changes and exit

Frame controls

Audio controls

Item scrubber

Peek controls

Layers

Drawing tools

Customisable colour palette

Add menu

Substitute item

Remove menu

Preview animation

Reset the view

Use finger

Use Apple pencil

Display tool options

Display 'Drawing View' options

Display help

Drawing bounds i.e. the maximum size of the drawing

Colour controls

Frame: 1, 0.00 / 0.10 s

Add Figure

No figure audio   2 s

Scrub

Peek

5

100 %

Solid Gradient Colour 1 Colour 2 Linear Radial

All About Drawings

1. Drawings vs. Images

Unlike standard images, Animation Pro drawings are composed of 5 separate layers that may be individually modified at any time. Drawings also contain important metadata that allow one drawing, for any given item, to be easily substituted with another drawing (for that item) without the need for image adjustments to fix alignment issues.

Now, it is possible to construct a figure with a drawing in it (for more information, please refer to the 'Creating Figures' topic in the Animation Pro help – see left). Any standard image in a figure, however, will be automatically converted to a drawing when you start to draw on it. In this case, the original image will occupy the middle layer of the new drawing, see top-right:

The image becomes the middle layer of the drawing
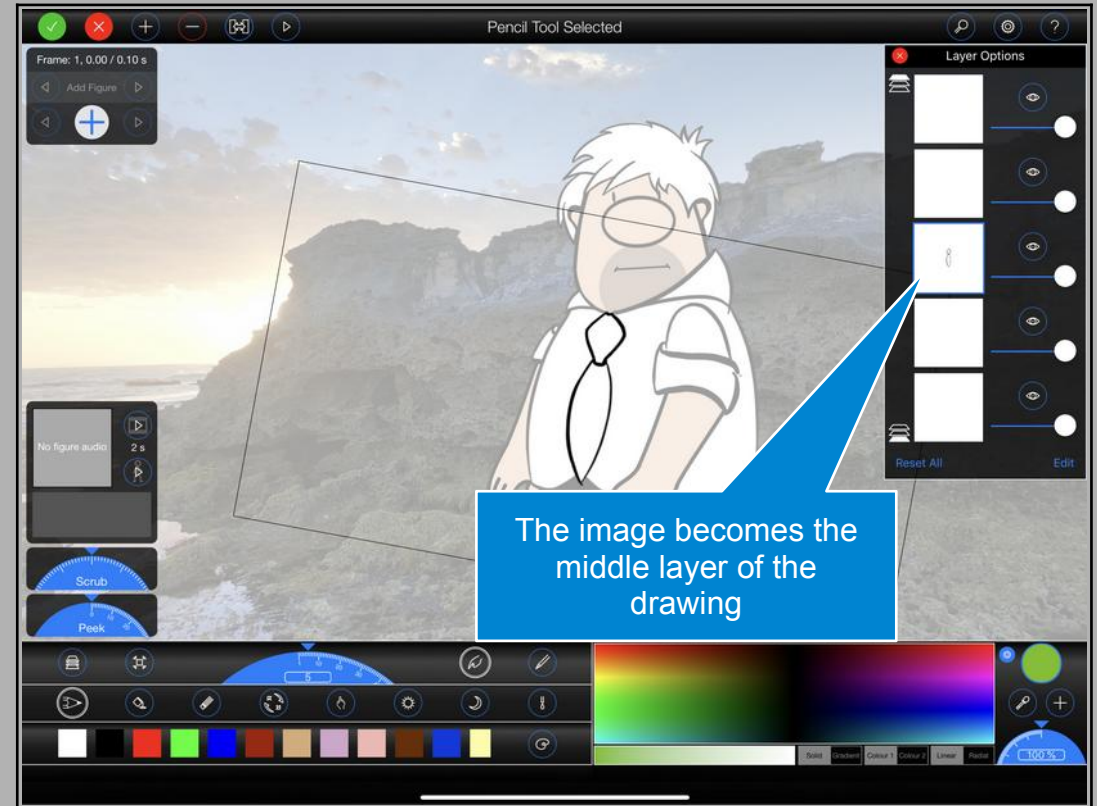
Within the 'File Manager', drawings may be distinguished from standard images by looking for the blue 'pencil icon' at the top-left of the thumbnails, see bottom-right:

This item is a drawing
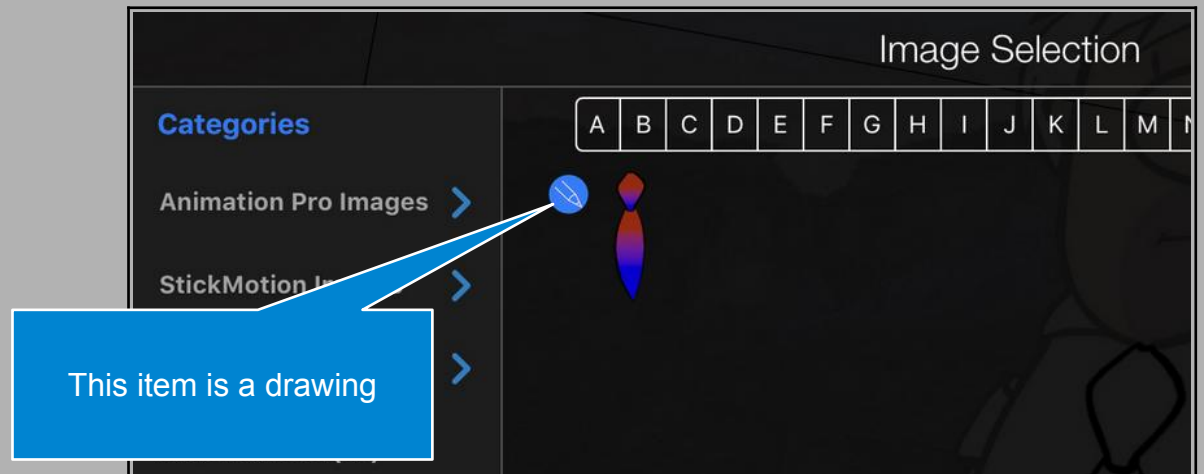
2. Drawings are not infinite in size

Drawings contain 5 separate layers, each of which is an image that needs to be loaded into your device's memory whenever a drawing is being modified. Now there's a pretty good chance that your iPad won't cope with 5 ∞-pixel images so Animation Pro, by default, will limit drawings to a 'Normal' size that is generally more than enough for individual items within a figure.

You can, however, choose to override this setting to give your drawings 4 times the number of pixels. This may produce better results when doing traditional animation or rotoscoping i.e. where a figure is only composed of one item that may take up the entire frame. To change the default size:

1. Open the 'Preferences' popover from the 'Projects' screen

2. Select the 'Drawing' category

3. Choose the desired size (Normal vs. Large)

Please note: Changes to the drawing size will only apply to drawings created **AFTER** the change is made i.e. existing drawings will retain their original size.

WARNING

Choosing the higher resolution may cause your device to run out of memory when modifying a drawing or creating an animation with multiple high resolution drawings in it. When this occurs, iOS may terminate Animation Pro without warning!
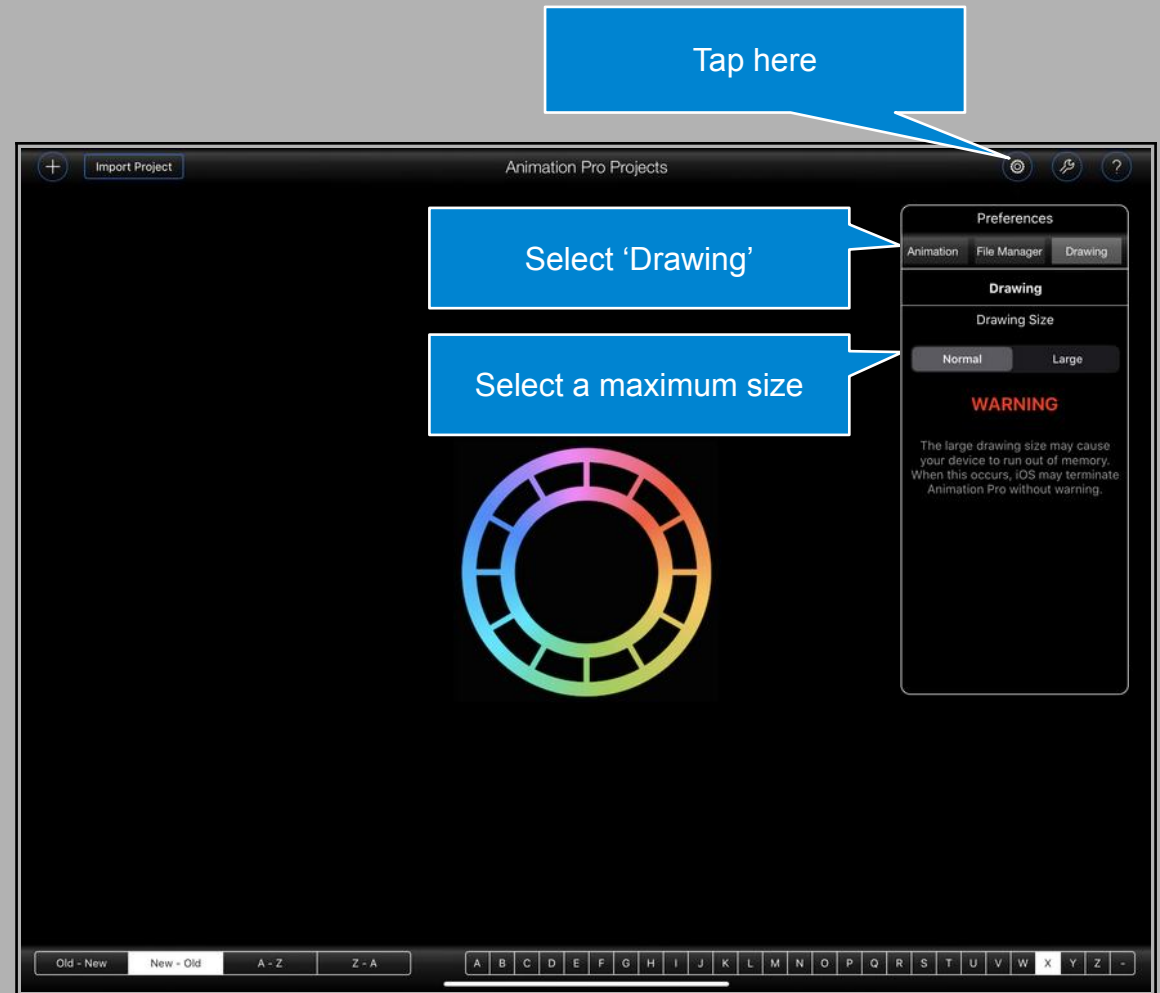
3. Drawings may appear bigger or smaller than they actually are

It is entirely possible that you will never see a drawing who's pixels are exactly the same size as the pixels on your device's screen as:

- Depending upon the device you are using, the animation frame, which is 2048x1152 pixels in size, may be scaled to fit the physical screen
- You may have expanded/contracted the frame using two-fingers (pinch-to-zoom)
- You may have adjusted the virtual camera to zoom in or out
- The figure, containing the item with the drawing, may have been scaled
- The item, containing the drawing, may have been scaled
- The image, representing the drawing in the item, may be been scaled via an 'image adjustment'

In the example shown right, the drawing bounds make it look like the drawing is quite small when it is, in fact, 1024x576 pixels in size.

In this case, the drawing has been constructed from an image of the figure's hair which was quite large in size. When added to the figure, the item was scaled down. In this case, the figure was also scaled down when added to the animation frame.
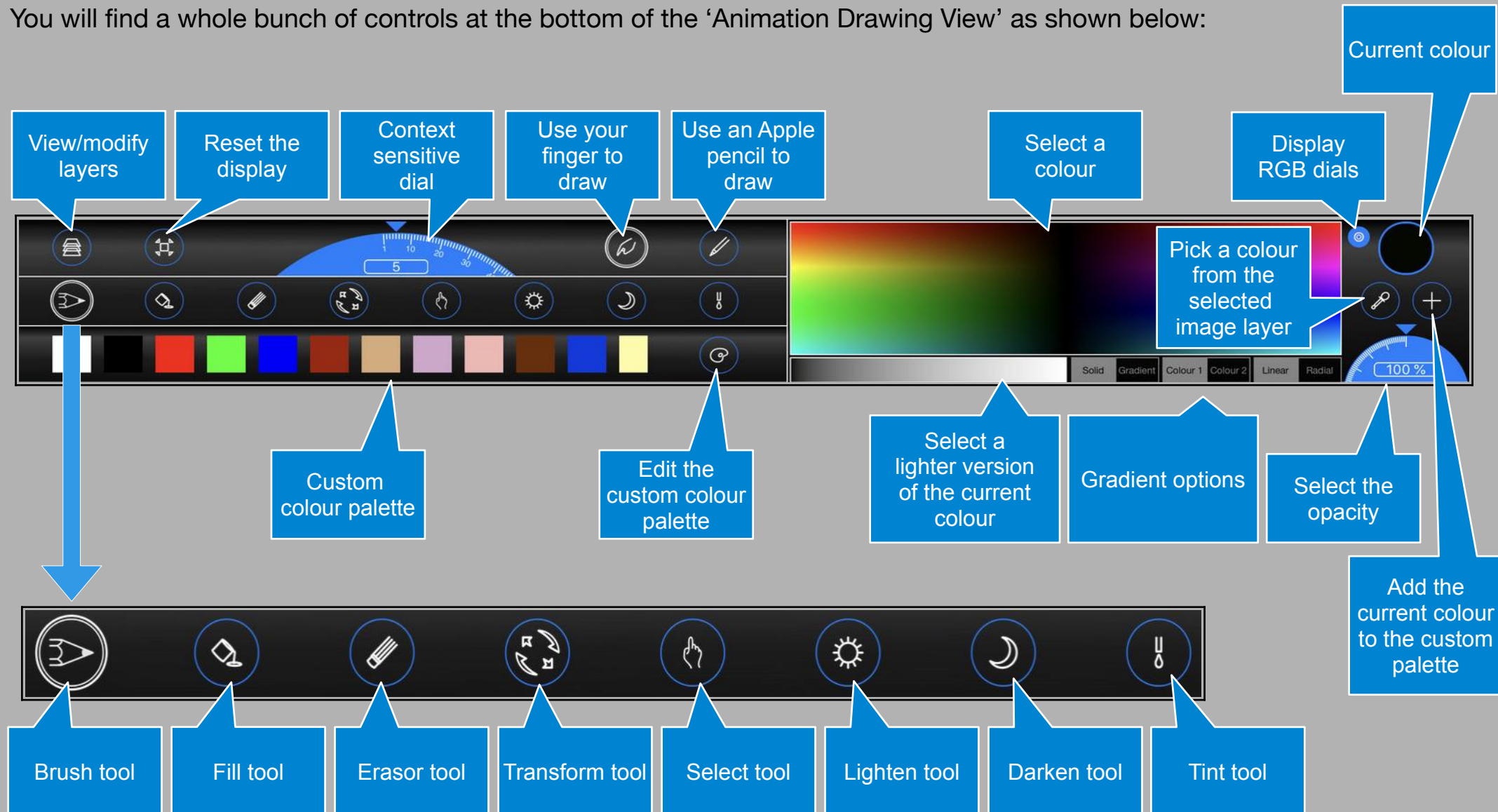
Please note:

In Animation Pro, all of this potential scaling does not affect the underlying resolution of the images/drawings in a figure. It simply adjusts the size at which they are displayed.
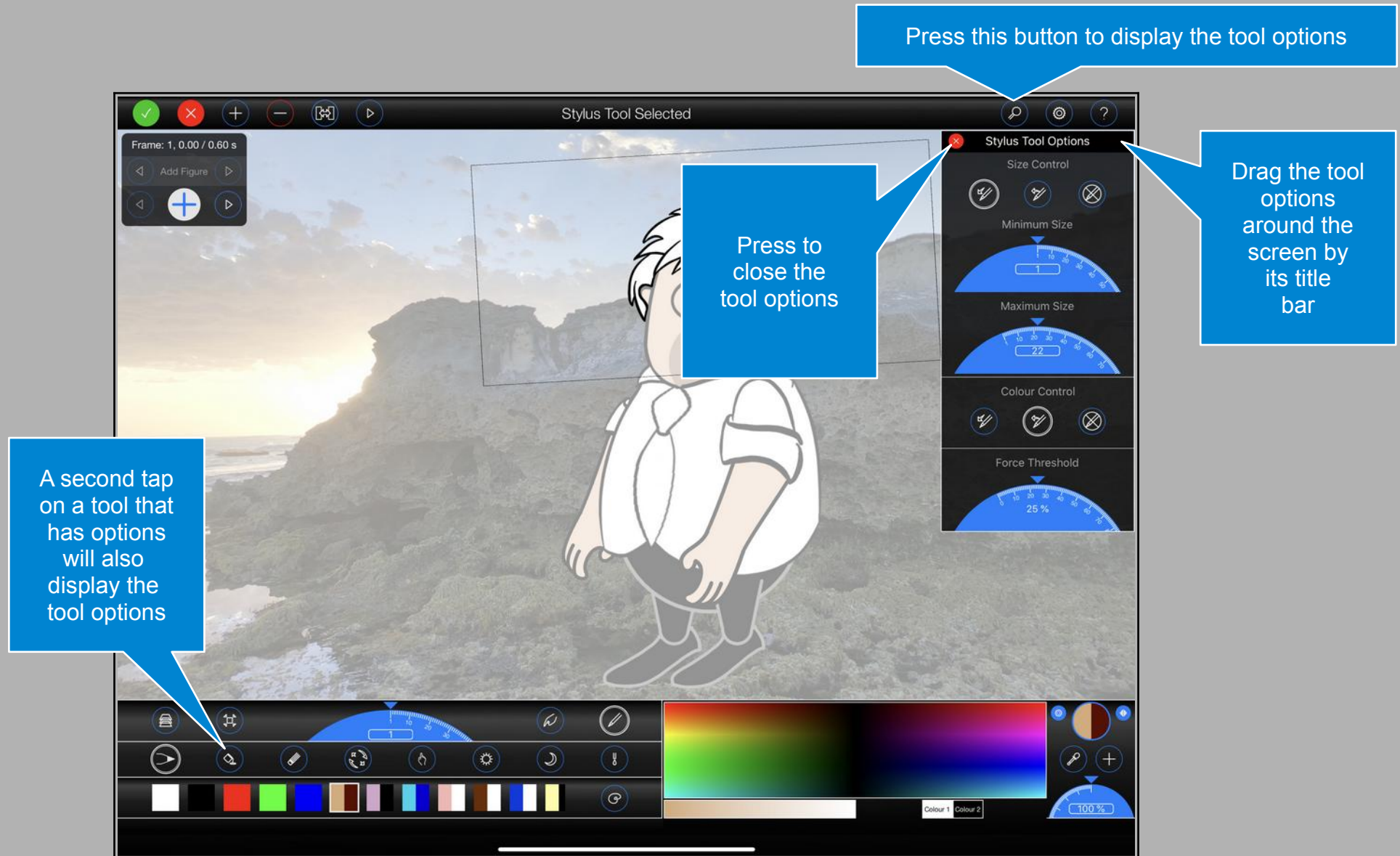

Drawing bounds i.e. the maximum size of the drawing

Drawing Tools, Palette and Colour Controls

You will find a whole bunch of controls at the bottom of the 'Animation Drawing View' as shown below:

Current colour

View/modify layers

Reset the display

Context sensitive dial

Use your finger to draw

Use an Apple pencil to draw

Select a colour

Display RGB dials

Pick a colour from the selected image layer

Custom colour palette

Edit the custom colour palette

Select a lighter version of the current colour

Gradient options

Select the opacity

Add the current colour to the custom palette

Solid Gradient Colour 1 Colour 2 Linear Radial

100 %

Brush tool

Fill tool

Erasor tool

Transform tool

Select tool

Lighten tool

Darken tool

Tint tool

Now all of these tools have been described in great, if not exceedingly boring, detail in both the 'Creating Images' and 'Creating Mouths' help topics (see left). So please check them out if your life is just a little bit too exciting (or you'd just like a little bit more information). But please note that a few of the tools have moved - their new locations will be outlined on the next page...

Tool Options

Most of the tools on the 'Animation Drawing View' have options that allow their behaviour to be customised. The 'Animation Drawing View' presents these options as a floating popover that may be dragged around the screen by its title bar. The contents of the popover will change based upon the tool you are using.

Press this button to display the tool options

Drag the tool options around the screen by its title bar

Press to close the tool options

A second tap on a tool that has options will also display the tool options

Adding Images, Text, Shapes and Effects

If you'd like to add images, text, shapes or effects to a drawing, please tap on the ⊕ button at the top of the screen:

Stylus Tool Selected

Add
Image

Text

Shape

Distortion

Blur

Solid   Gradient   Colour 1   Colour 2   Linear   Radial

100 %

Animation Drawing View Animation Controls

The 'Animation Drawing View' can display a number of additional 'Animation' controls. These can be turned on and off via the 'Options' menu as shown below:
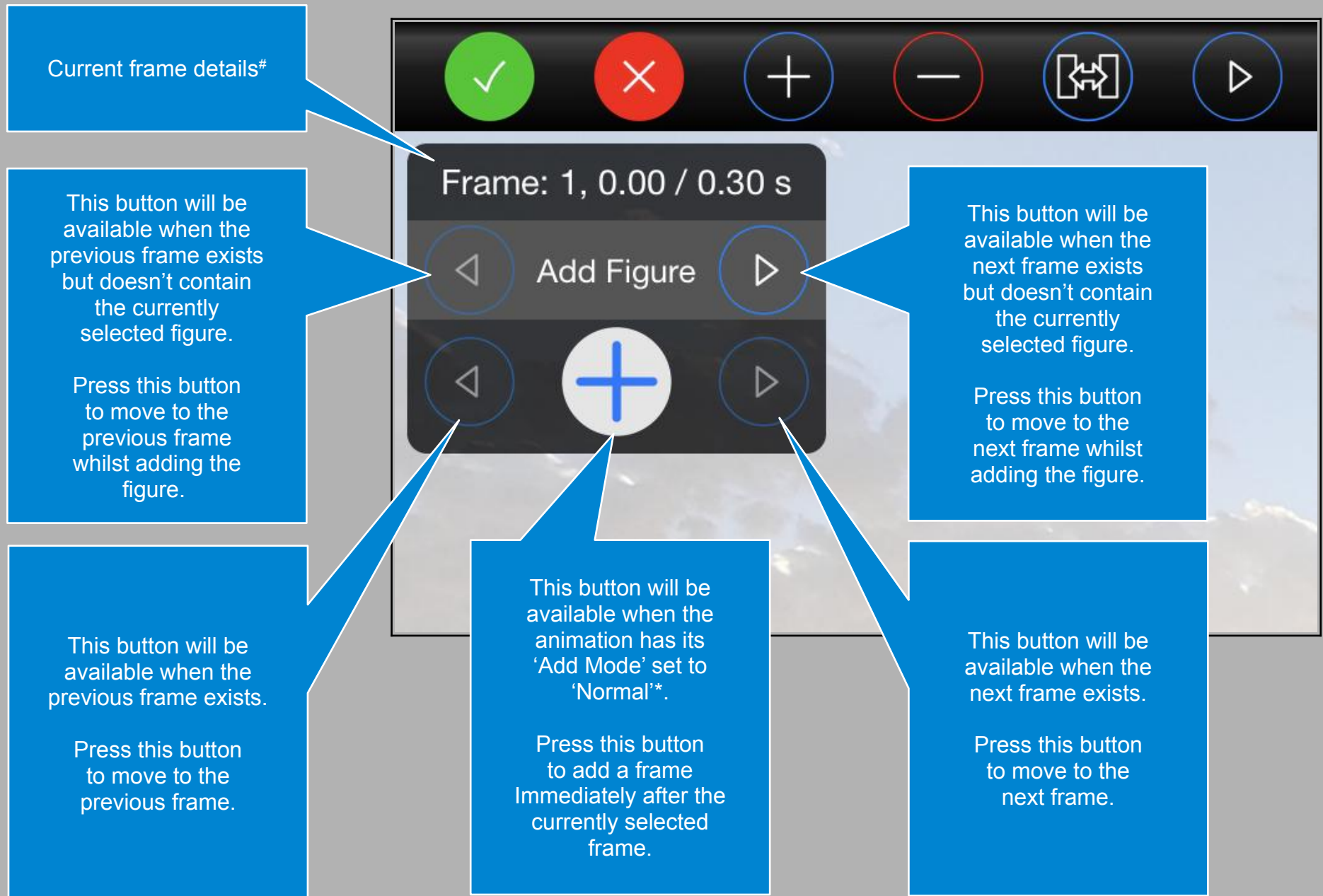

'Animation' controls
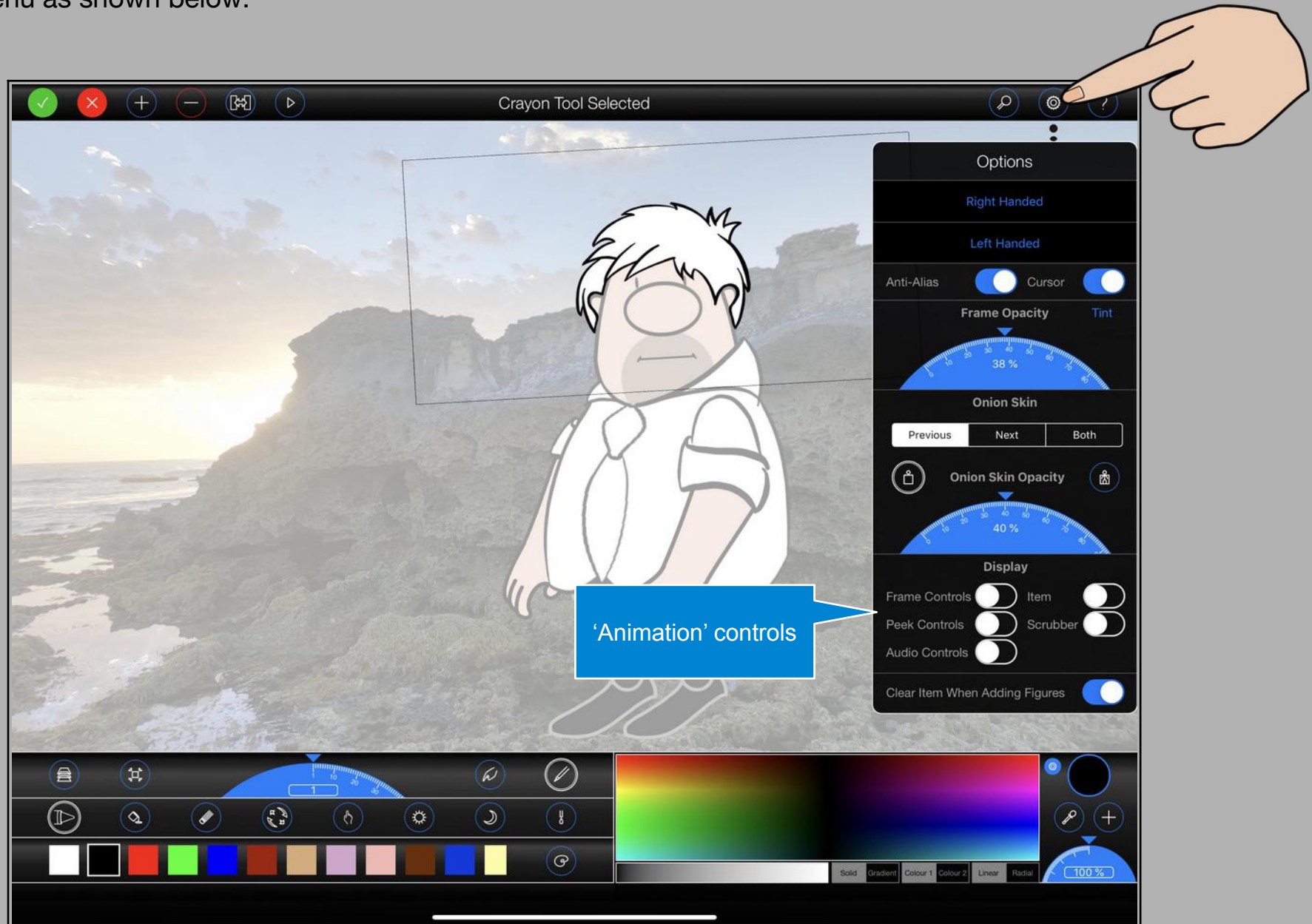
Frame Controls

The 'Frame Controls' allow you to add new frames, or move between frames/tweens, whilst continuing to draw on the currently selected item.

To see the 'Frame Controls', turn on the 'Frame Controls' switch in the 'Options' menu:
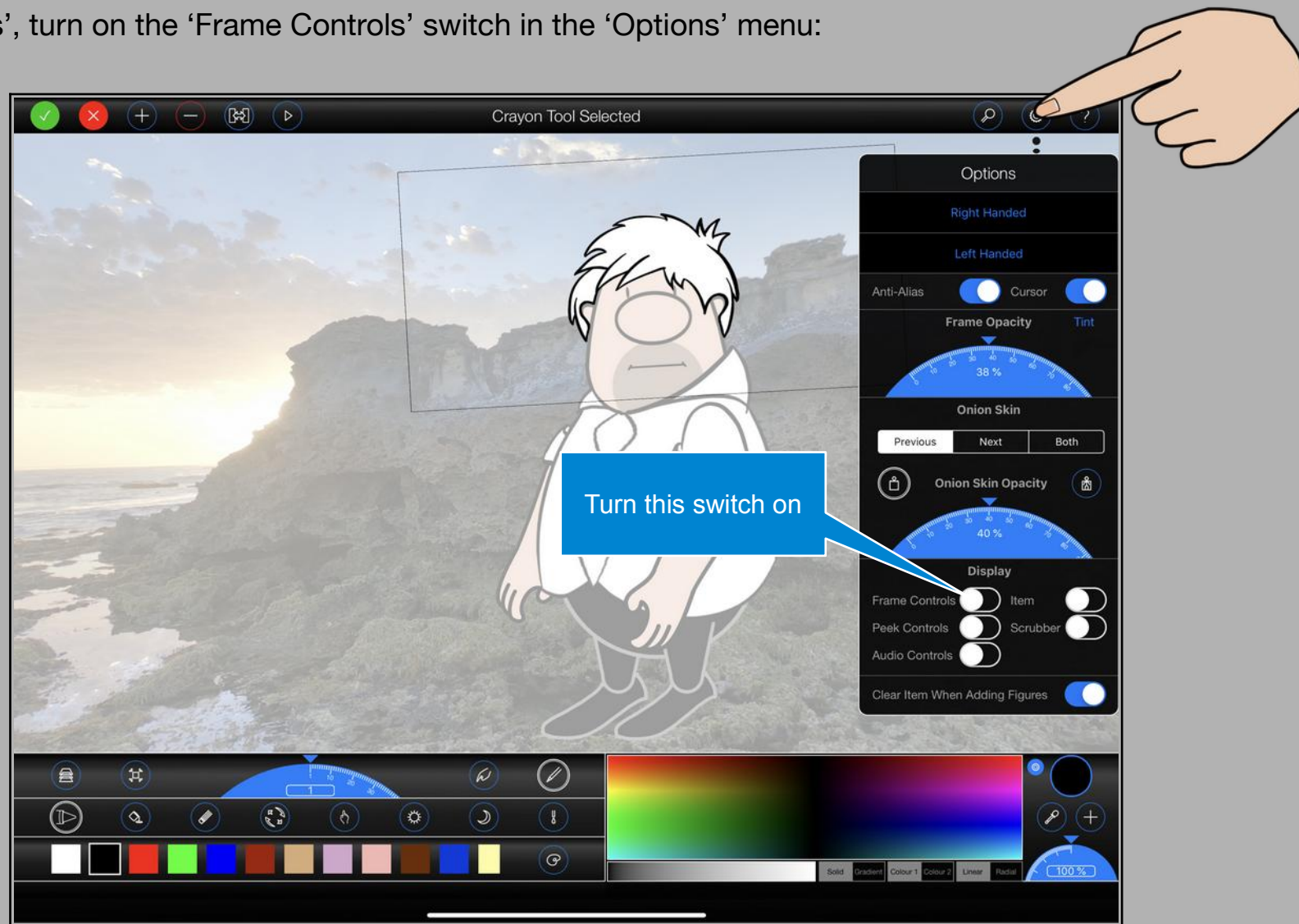
PLEASE NOTE: Frames and tweens will be automatically saved when you move from frame to frame (or tween to tween) or add new frames.

Current frame details#

This button will be available when the previous frame exists but doesn't contain the currently selected figure.

Press this button to move to the previous frame whilst adding the figure.

This button will be available when the next frame exists but doesn't contain the currently selected figure.

Press this button to move to the next frame whilst adding the figure.

Frame: 1, 0.00 / 0.30 s

Add Figure

This button will be available when the previous frame exists.

Press this button to move to the previous frame.

This button will be available when the animation has its 'Add Mode' set to 'Normal'*.

Press this button to add a frame Immediately after the currently selected frame.

This button will be available when the next frame exists.

Press this button to move to the next frame.

Times will be displayed where 'Display Times' has been selected from the 'Options' menu on the main animation screen.
* The 'Add Mode' (Normal vs. Overlay vs. Stop-Motion) is set from the 'Options' menu on the main animation screen.

Clearing Items When Adding Figures

The 'Frame Controls' on the 'Animation Drawing View' allow new frames to be added to the animation, or the currently selected figure to be added to the next or previous frame/tween in the animation (where it doesn't already exist in the next or previous frame/tween).

Whenever a figure is added, the currently selected item in that figure (i.e. the item you are drawing upon) can be either left intact or cleared. This behaviour may be configured using the 'Clear Item When Adding Figures' switch in the 'Options' popover, see right:

It is best to leave the item intact if you only intend to make slight changes to it as you add figures/frames.

Where you intend to create a completely new version of the drawing as you add the figure or frames, such as when you are rotoscoping, it will be best to clear the item when adding figures.

Crayon Tool Selected

Options

Right Handed

Left Handed

Anti-Alias   Cursor

Frame Opacity   Tint

38 %

Onion Skin

Previous   Next   Both

Onion Skin Opacity

0 %

Display

Frame Controls   Item
Peek Controls   Scrubber
Audio Controls

Clear Item When Adding Figures

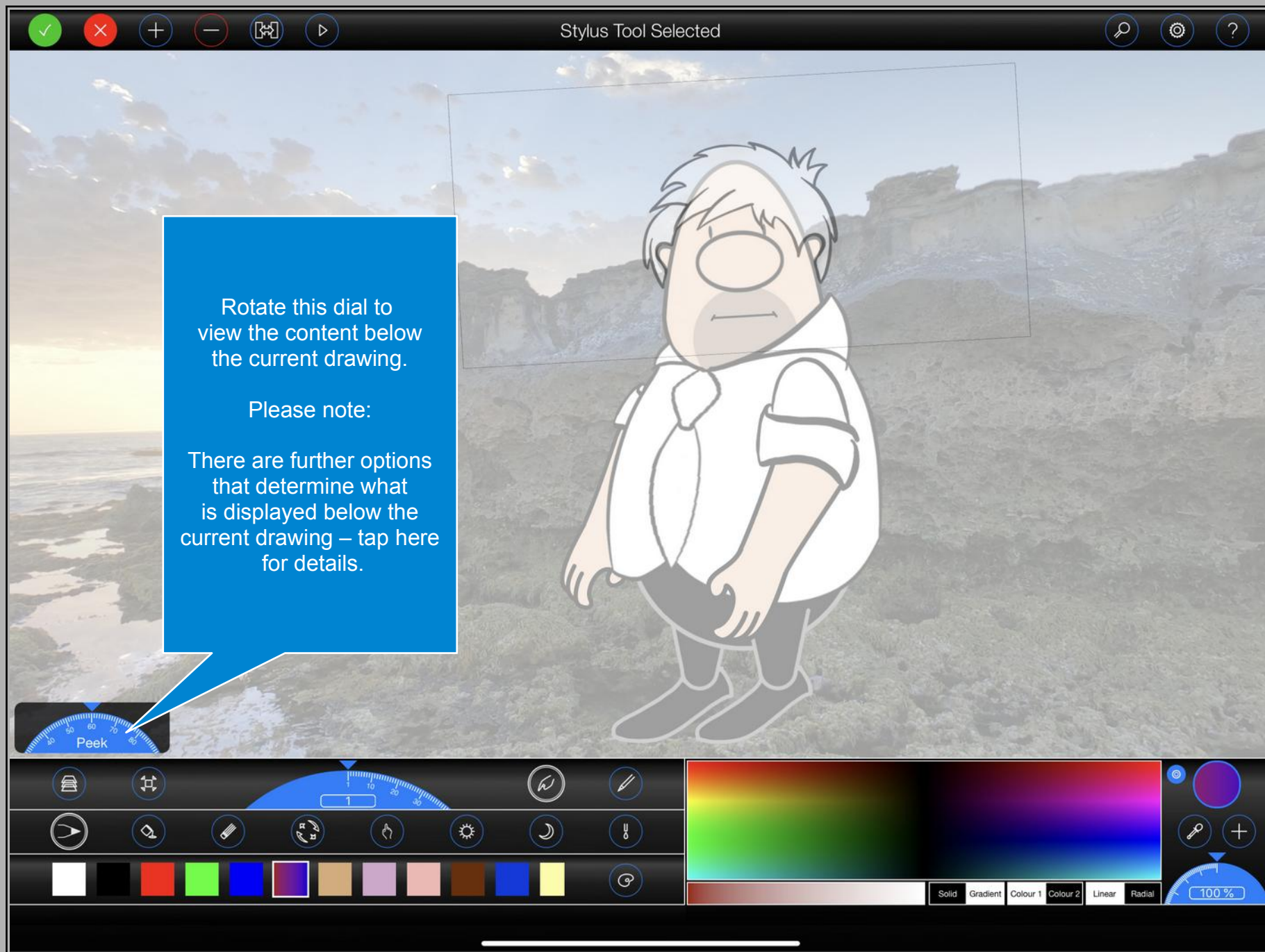Toggle this switch as required

Peek Controls

The 'Peek Controls' allow you to quickly view the content beneath the current drawing.

To see the 'Peek Controls', turn on the 'Peek Controls' switch in the 'Options' menu:


Turn this switch on

Rotate this dial to view the content below the current drawing.

Please note:

There are further options that determine what is displayed below the current drawing – tap here for details.

Peek

Solid Gradient Colour 1 Colour 2 Linear Radial

100 %
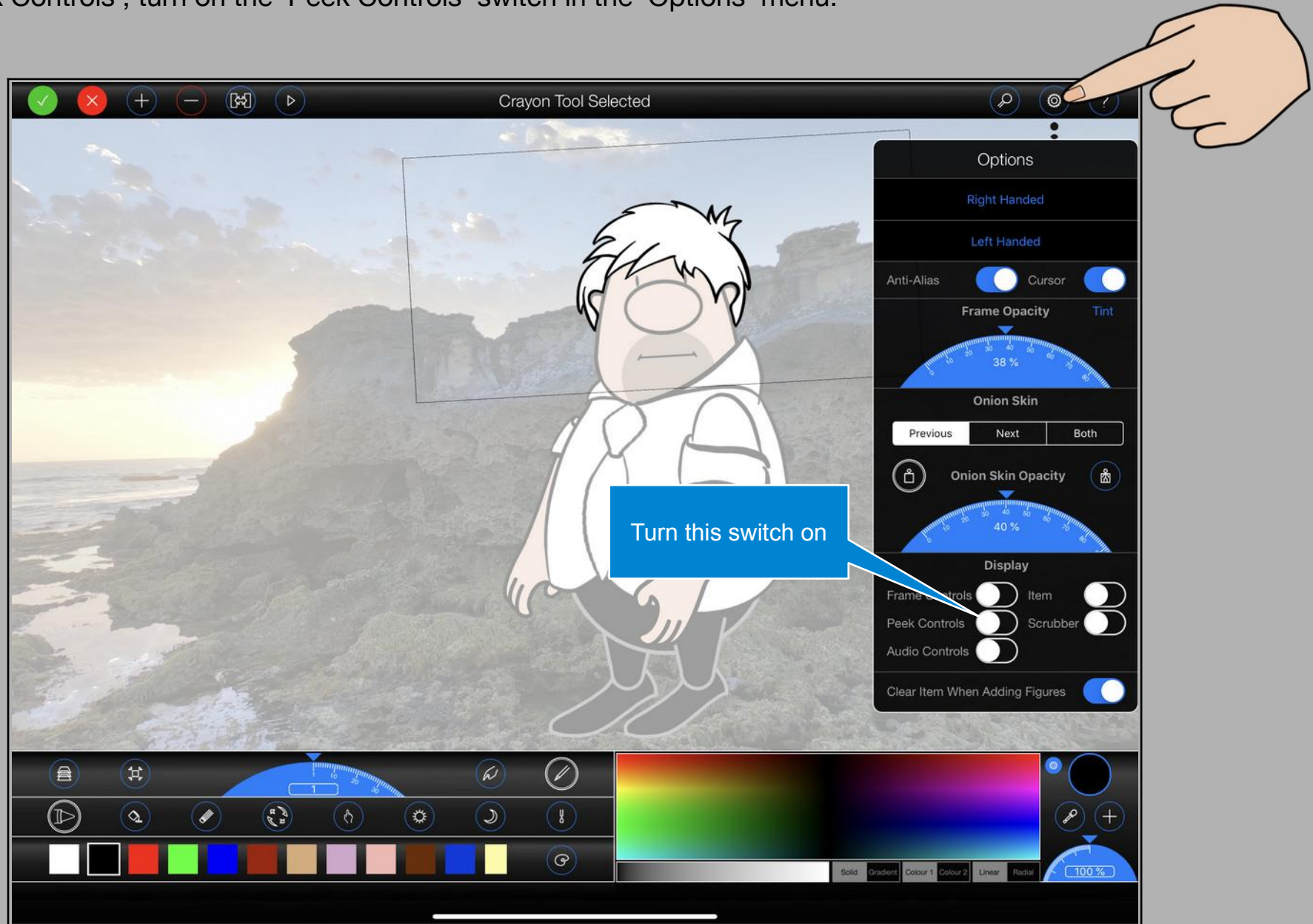
Scrubber

The 'Scrubber' allow you to quickly view up to +/- 15 different versions of the current item's contents from the previous/next frames in your animation.

To see the 'Scrubber', turn on the 'Scrubber' switch in the 'Options' menu:

Turn this switch on
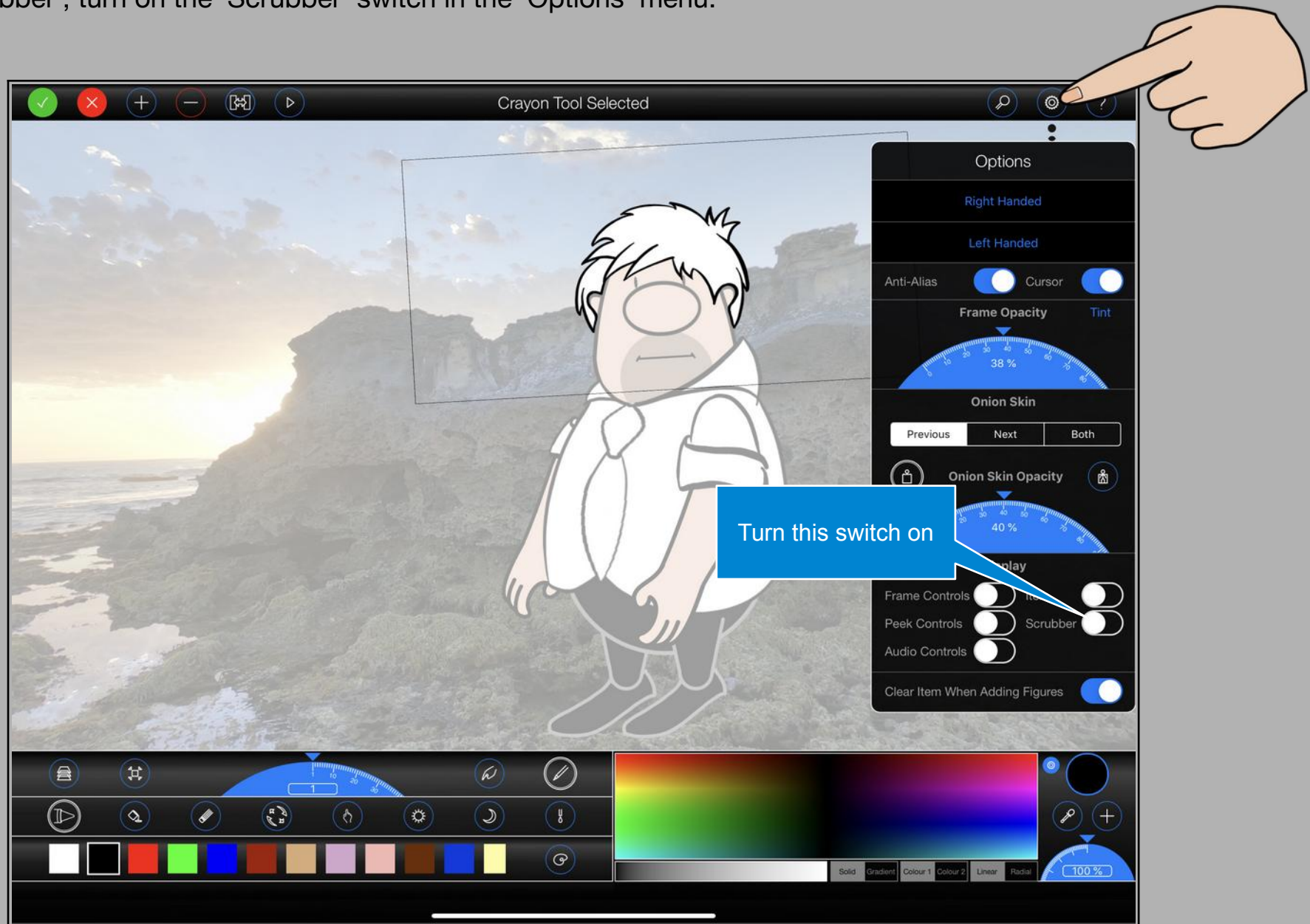
Audio Controls

The 'Audio Controls' are designed to make it easier to synchronise drawings with the audio in your animations, especially for the purpose of manual lip-synching.

To see the 'Audio Controls', turn on the 'Audio Controls' switch in the 'Options' menu:

The mouth shape that Animation Pro would use for the current frame/tween when automatically lip-synching.

This can be used as a guide for drawing your own mouth on the frame or tween.

Play 2 seconds of the animation audio from the current frame or tween

Play 2 seconds of the audio associated with the current figure from the current frame or tween

The part of the waveform associated with the current frame or tween will be highlighted

The waveform of the audio associated with the current figure across the frame and its tweens

The sample mouth and waveform will only be shown where audio has been associated with the figure and where that audio spans the current frame or tween. Please note that automatic lip-synching does not need to be enabled for the sample mouth to be shown – the mouths are intended to be a guide for drawing your own mouths.

Item Display

When drawing upon an item in a figure, Animation Pro overlays the drawing upon the frame so that it is not obscured by other items in the figure (or by other figures in the frame).

This means that the original item in the figure still exists beneath the drawing. In some cases, this may be useful. You may for example, wish to see the changes that you have made by taking a peek at the underlying item using the 'Peek Controls'.

In other cases, such as when you are rotoscoping, it is better NOT to see the original item beneath the drawing. To cater for both of these situations, Animation Pro allows the display of the underlying item to be turned on and off:

Toggle this switch to show or hide the underlying item in the figure

Frame Opacity

When drawing upon an item in a figure, Animation Pro overlays the drawing upon the frame so that it is not obscured by other items in the figure (or by other figures in the frame).

Didn't I just say this on the last page? Man, I'm turning into a goldfish!

Anyway, it is possible to make the drawing stand out even more by lowering the opacity of the underlying frame. This can be done using the 'Frame Opacity' dial in the 'Options' popover as shown right:
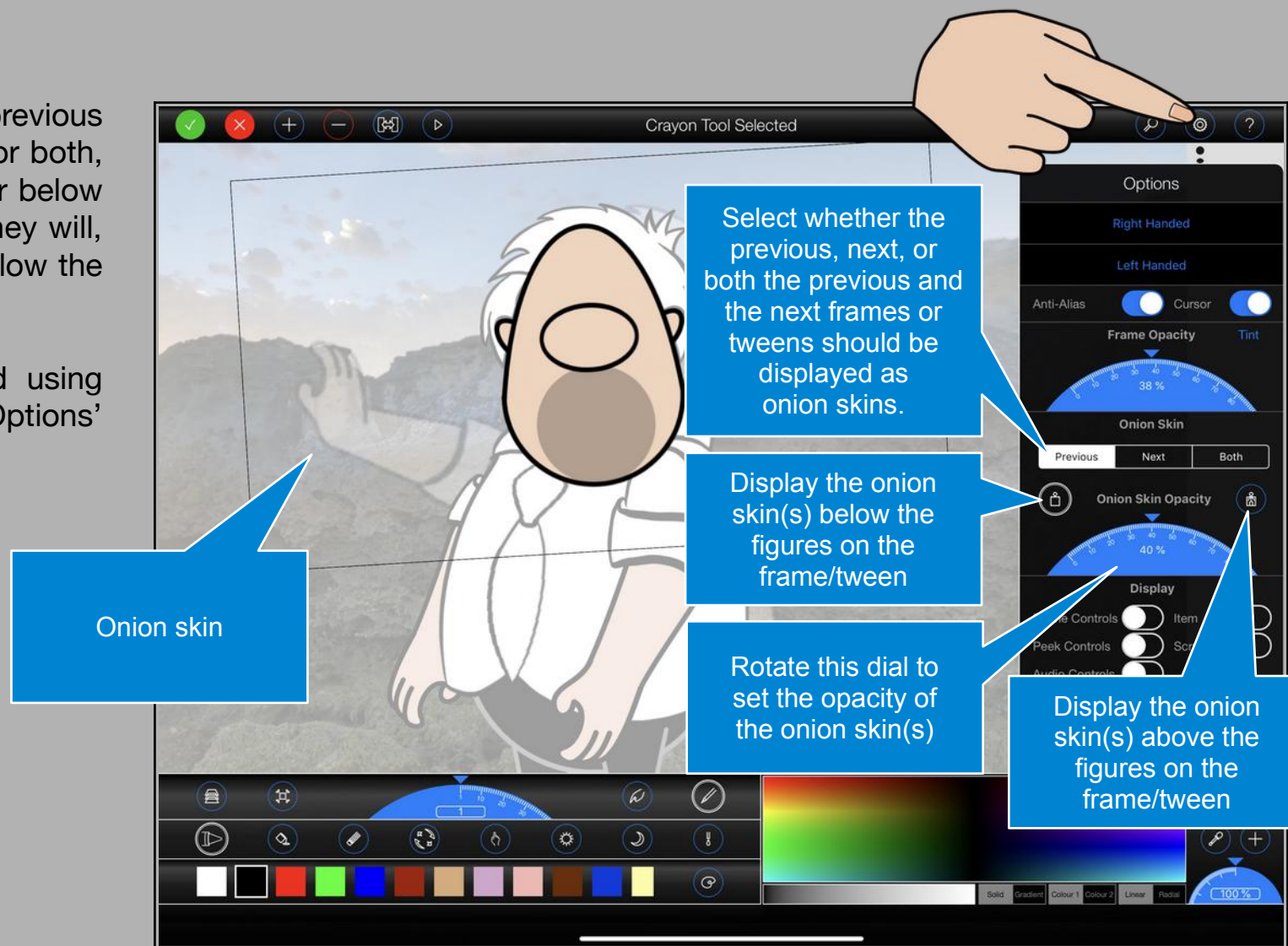

Rotate this dial to change the opacity of the underlying frame
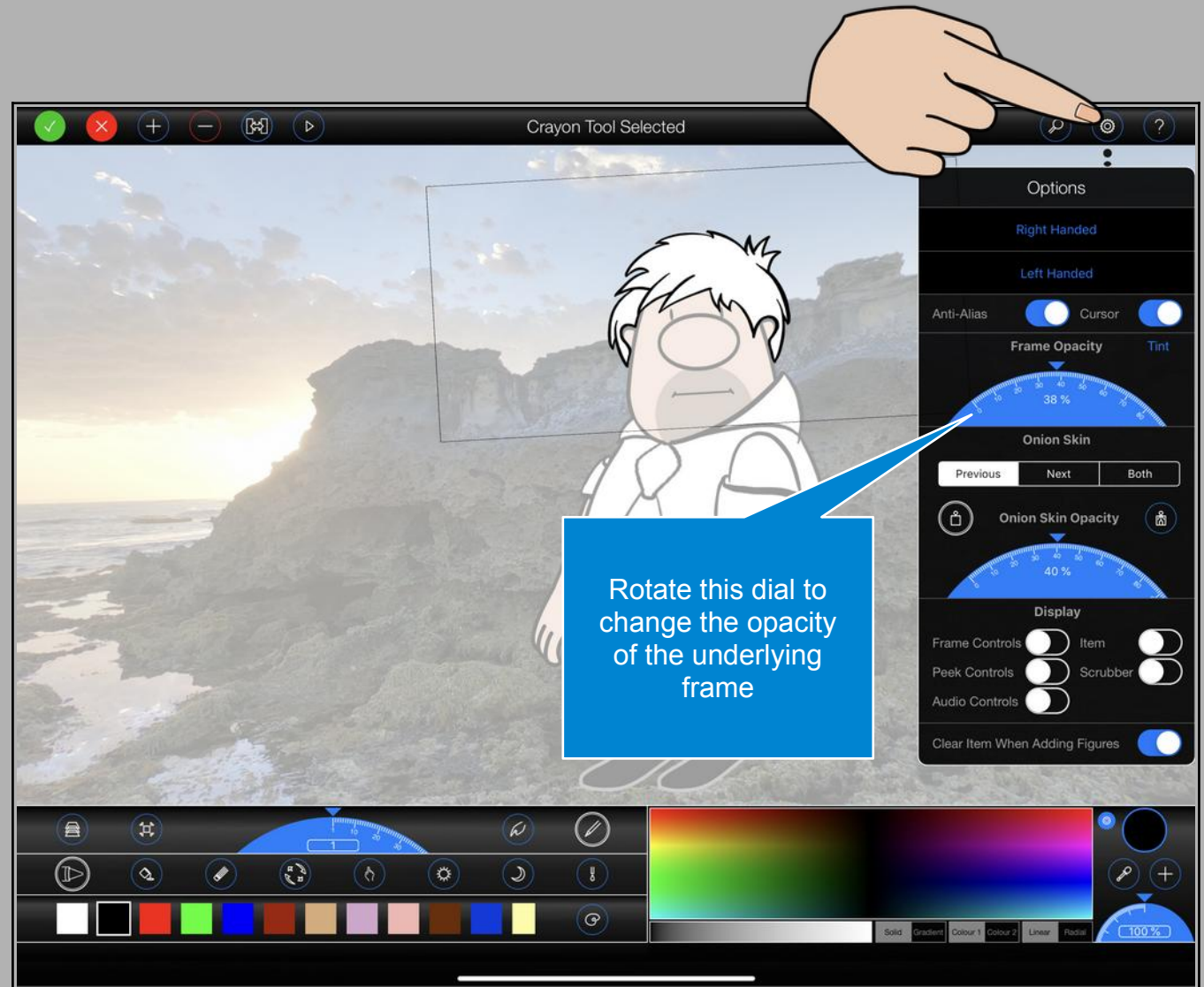
Frame Tint

Trying to draw a white line on a white frame can be like trying to spot a polar bear in a snow storm. So Animation Pro allows the frame to be temporarily tinted whilst drawing:

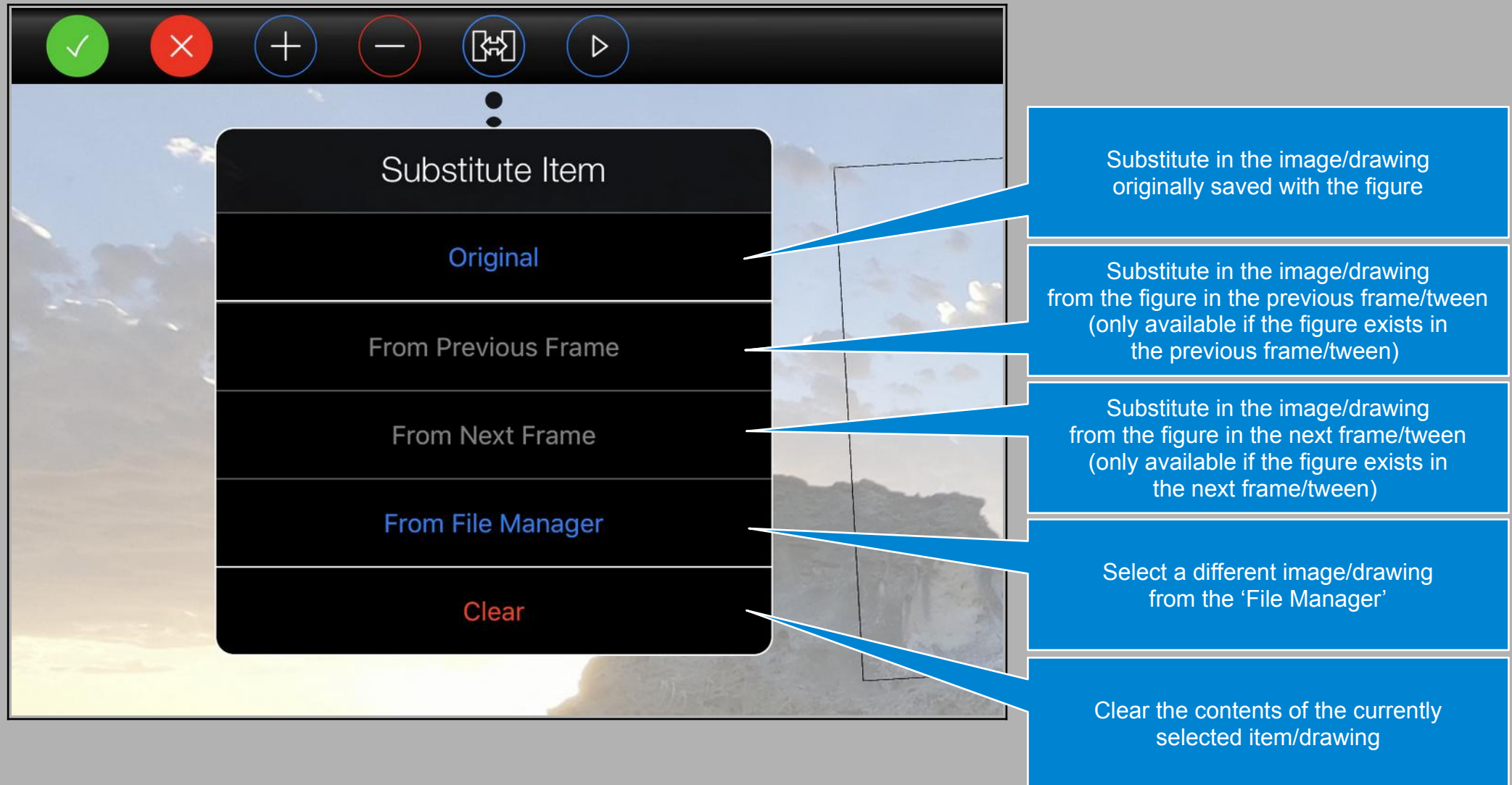Press this button

Select a colour
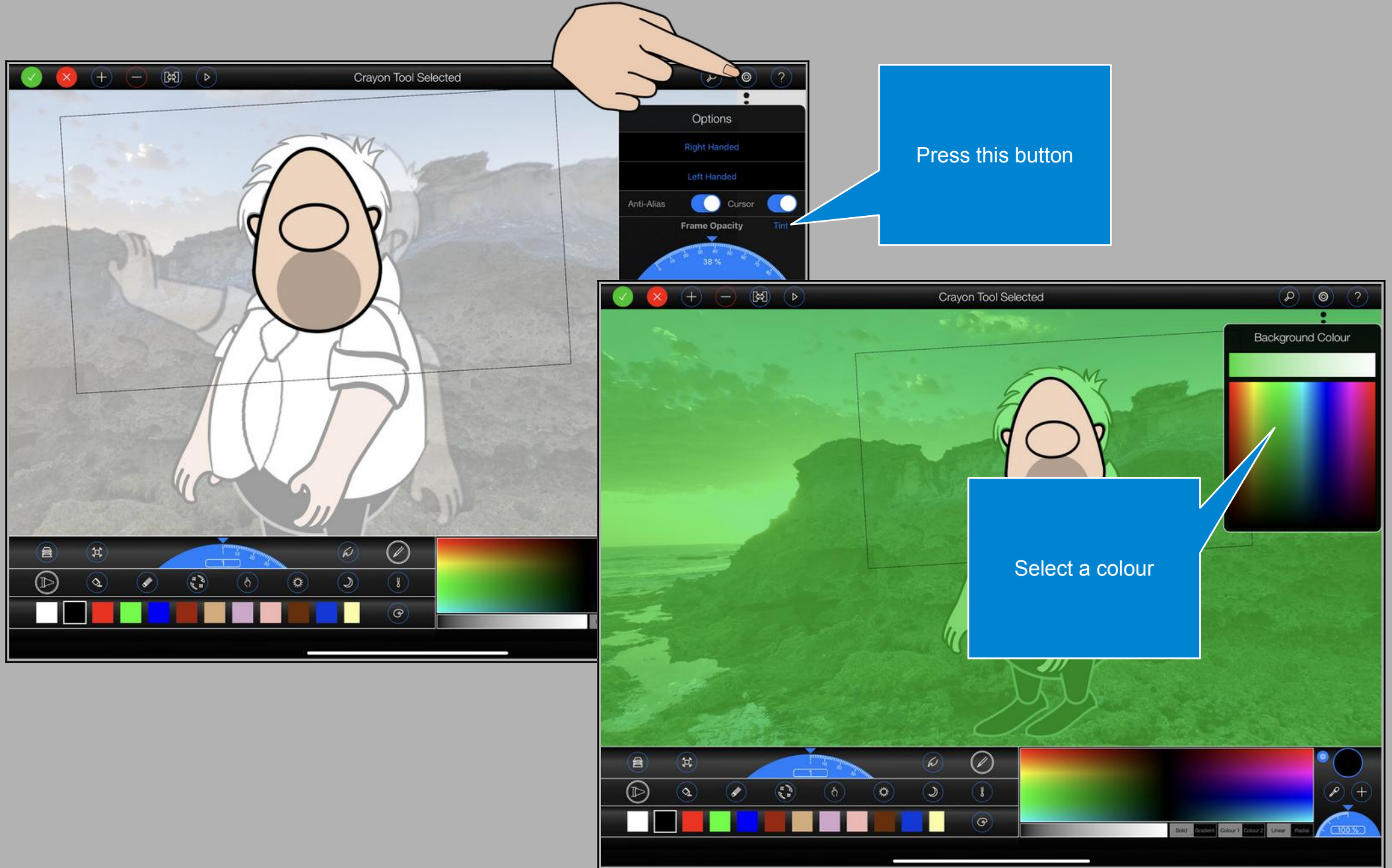
Onion Skins

Onion skins of the previous frame/tween, next frame/tween, or both, may be displayed either above or below the figures in your animation. They will, however, always be displayed below the drawing you are working on.

Onion skins may be configured using the 'Onion Skin' controls in the 'Options' popover as shown right:

Onion skin

Select whether the previous, next, or both the previous and the next frames or tweens should be displayed as onion skins.

Display the onion skin(s) below the figures on the frame/tween

Rotate this dial to set the opacity of the onion skin(s)

Display the onion skin(s) above the figures on the frame/tween

Substituting Items

Press the (⟷) button at the top of the screen to replace the contents of the item you are drawing upon.

Substitute Item

Original — Substitute in the image/drawing originally saved with the figure

From Previous Frame — Substitute in the image/drawing from the figure in the previous frame/tween (only available if the figure exists in the previous frame/tween)

From Next Frame — Substitute in the image/drawing from the figure in the next frame/tween (only available if the figure exists in the next frame/tween)

From File Manager — Select a different image/drawing from the 'File Manager'

Clear — Clear the contents of the currently selected item/drawing

PLEASE NOTE: Animation Pro will automatically save any changes you have made to a drawing (as an 'Item Substitute') whenever you make a substitution. You can thus reinstate the saved drawing by substituting it back in via the 'From File Manager' option in the 'Substitute Item' menu (shown above).

Traditional Animating

Whilst Animation Pro was originally designed for cut-out-style animation, the 'Animation Drawing View' now makes it possible to do traditional style animation whereby complete figures may be drawn from frame to frame. This can be achieved as follows:

**1.** On the 'Animation Screen', choose 'Image as a Figure' from the 'Add' menu:
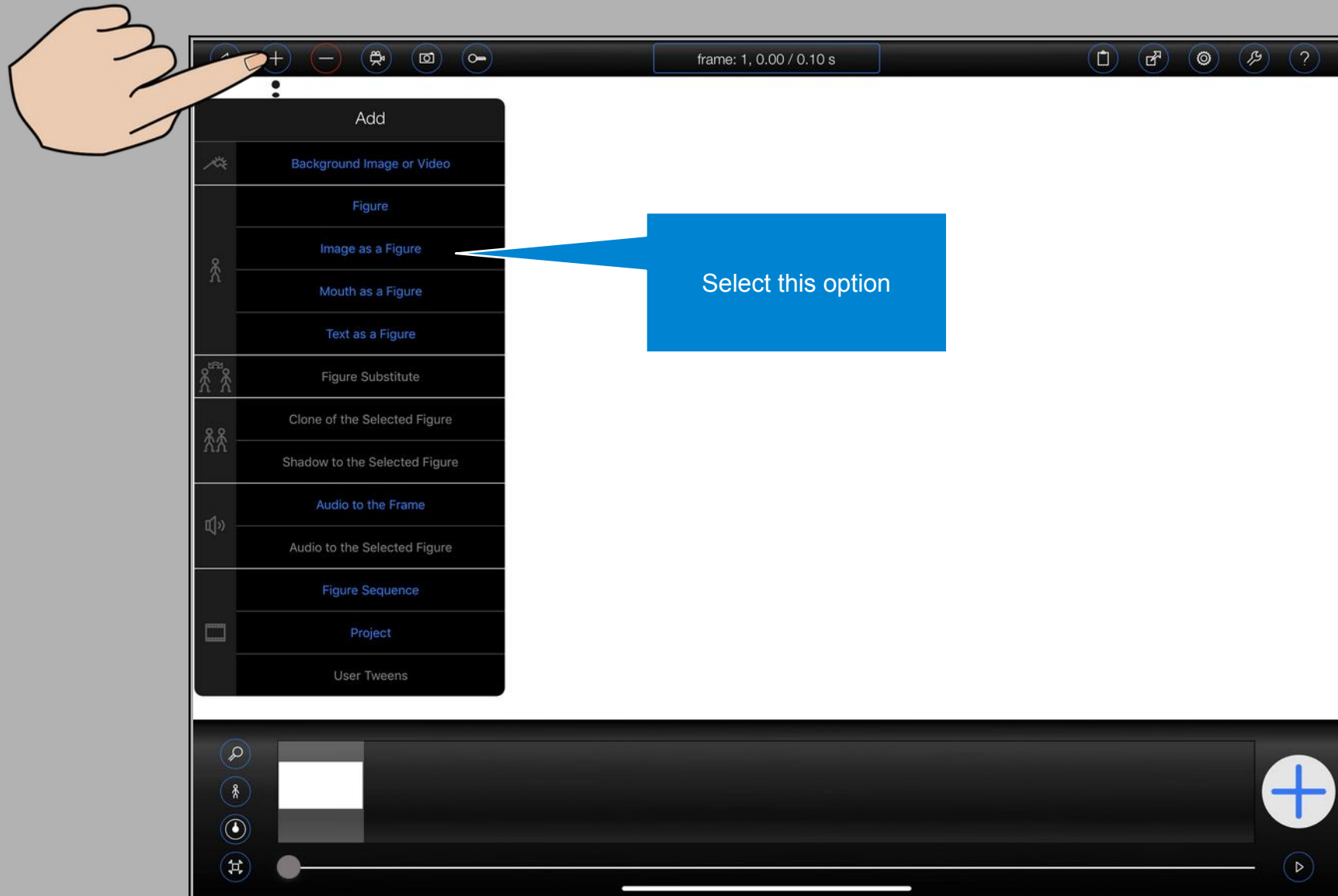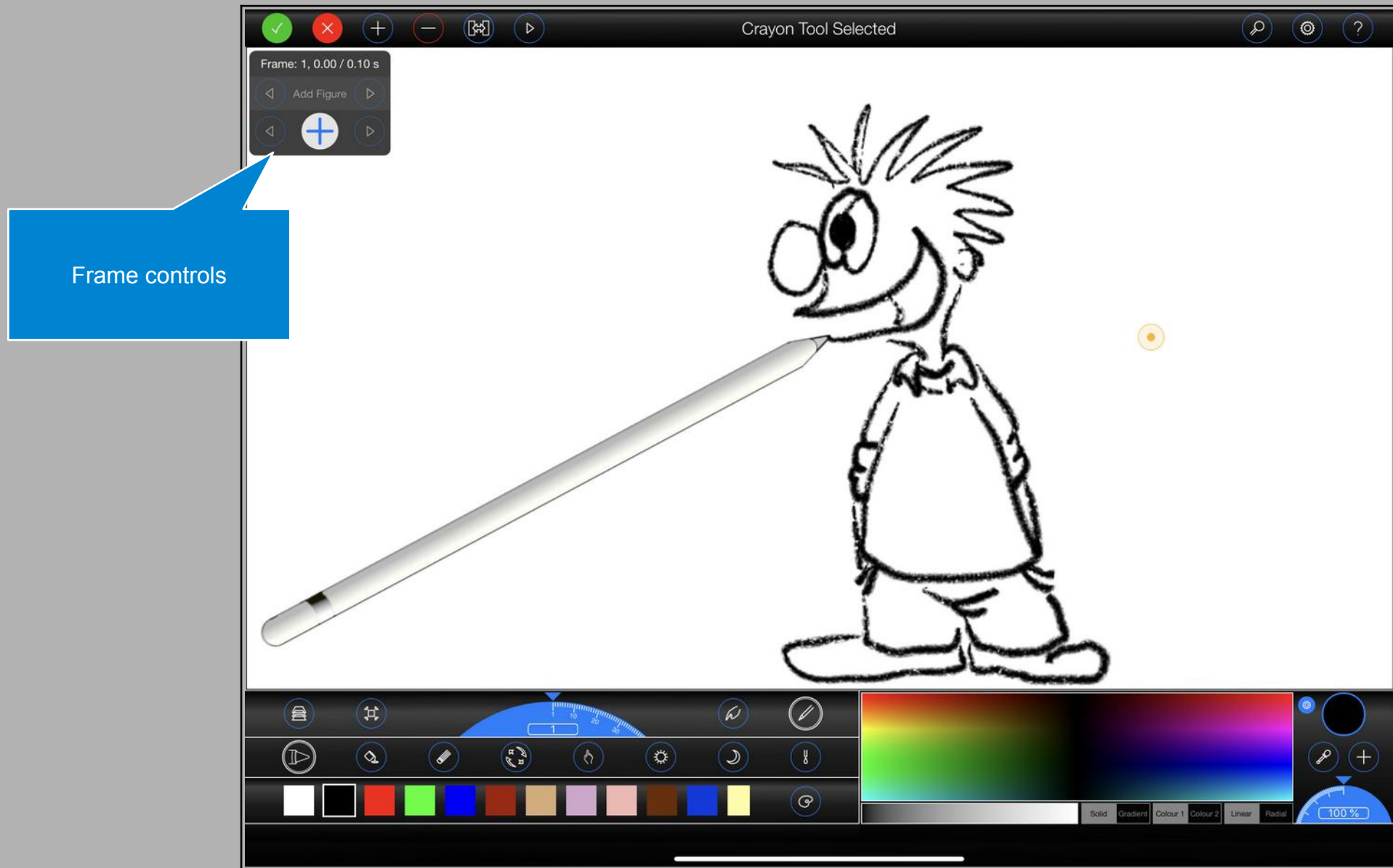
2. When the 'File Manager' is displayed, choose '● BLANK':
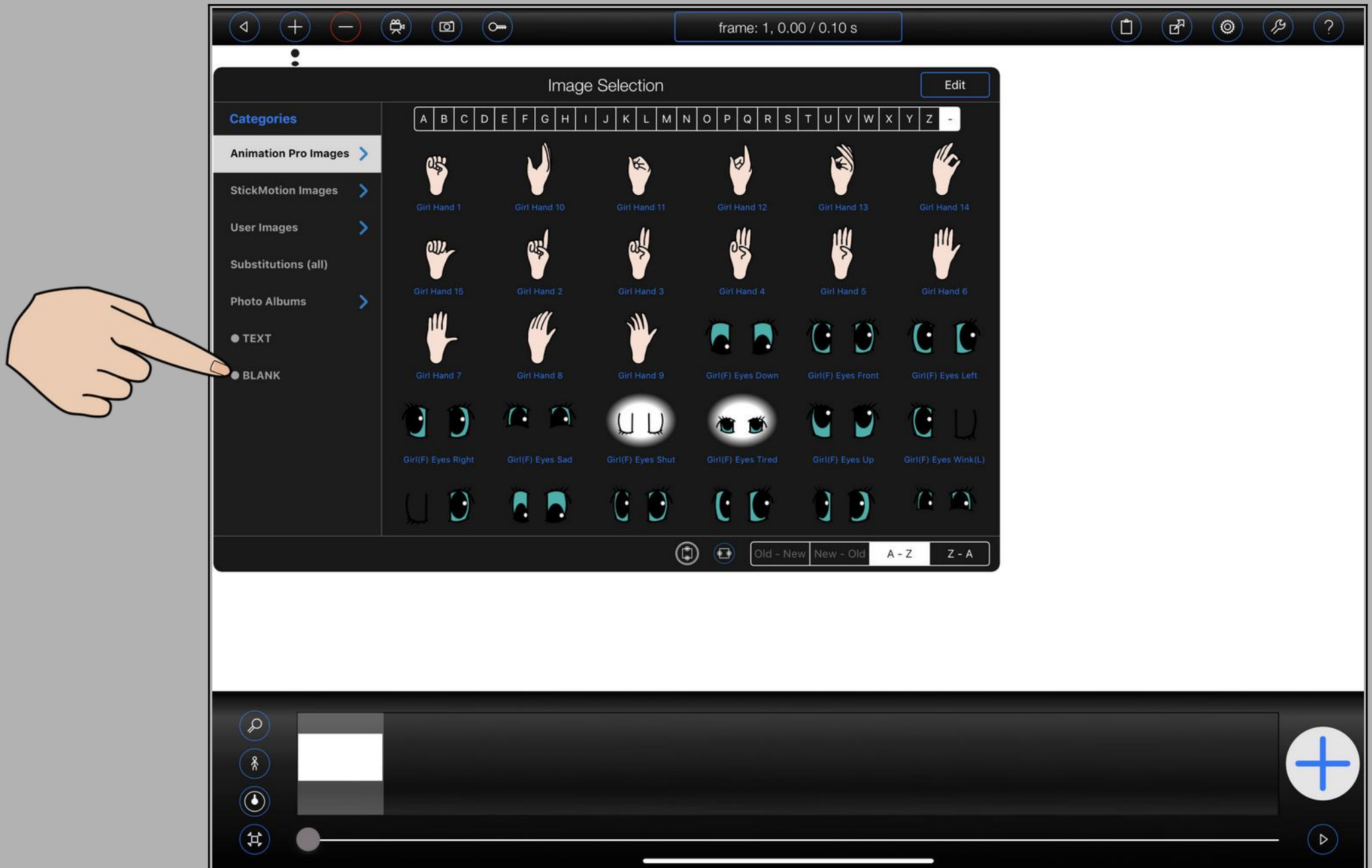
This will add a new figure into your animation containing a single blank (empty) image item:

A new figure is created containing a single blank image item
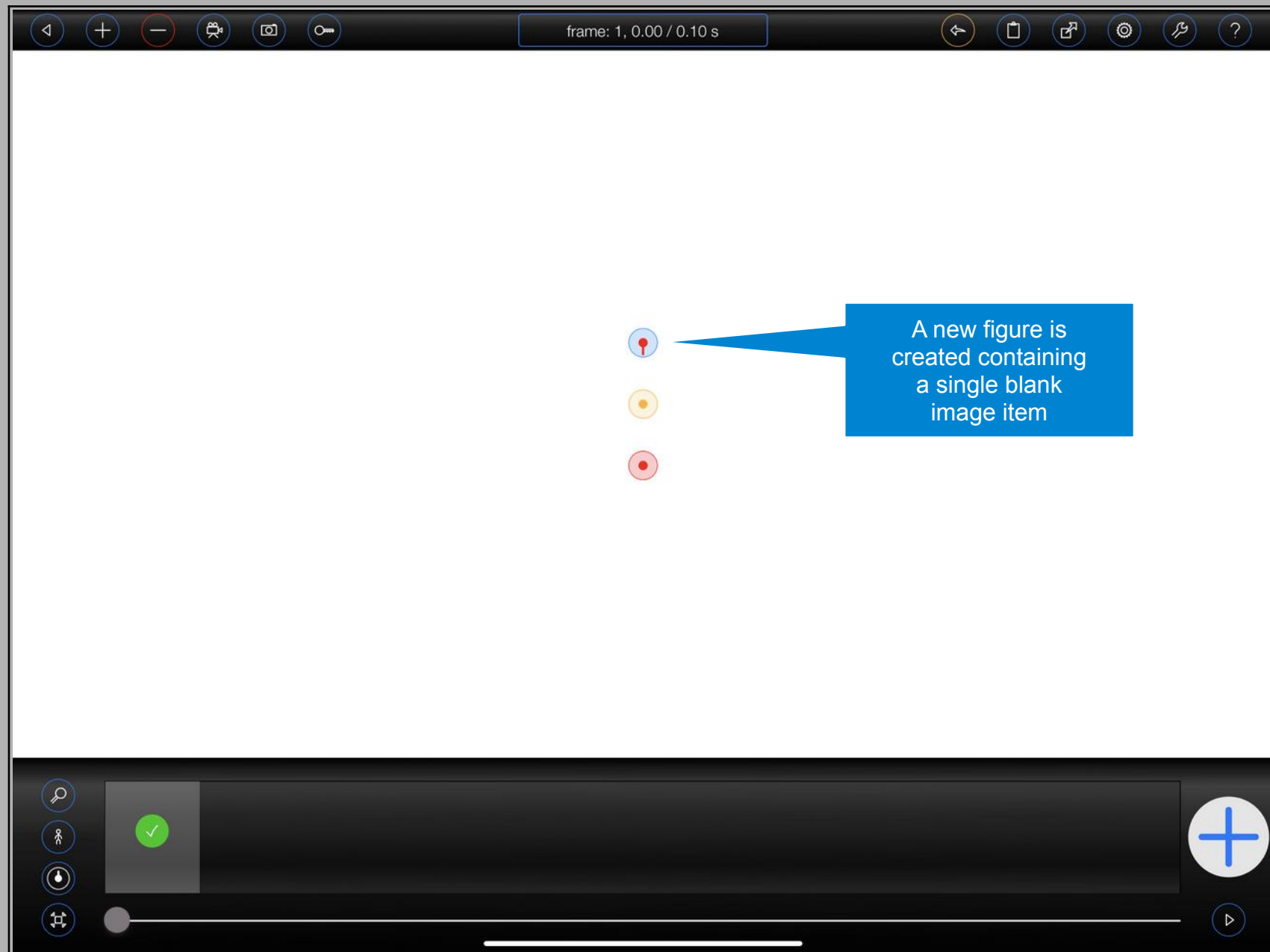
3. Tap on the handle in the figure and press the (button) button on the 'General' category of the 'Image Options' popover:
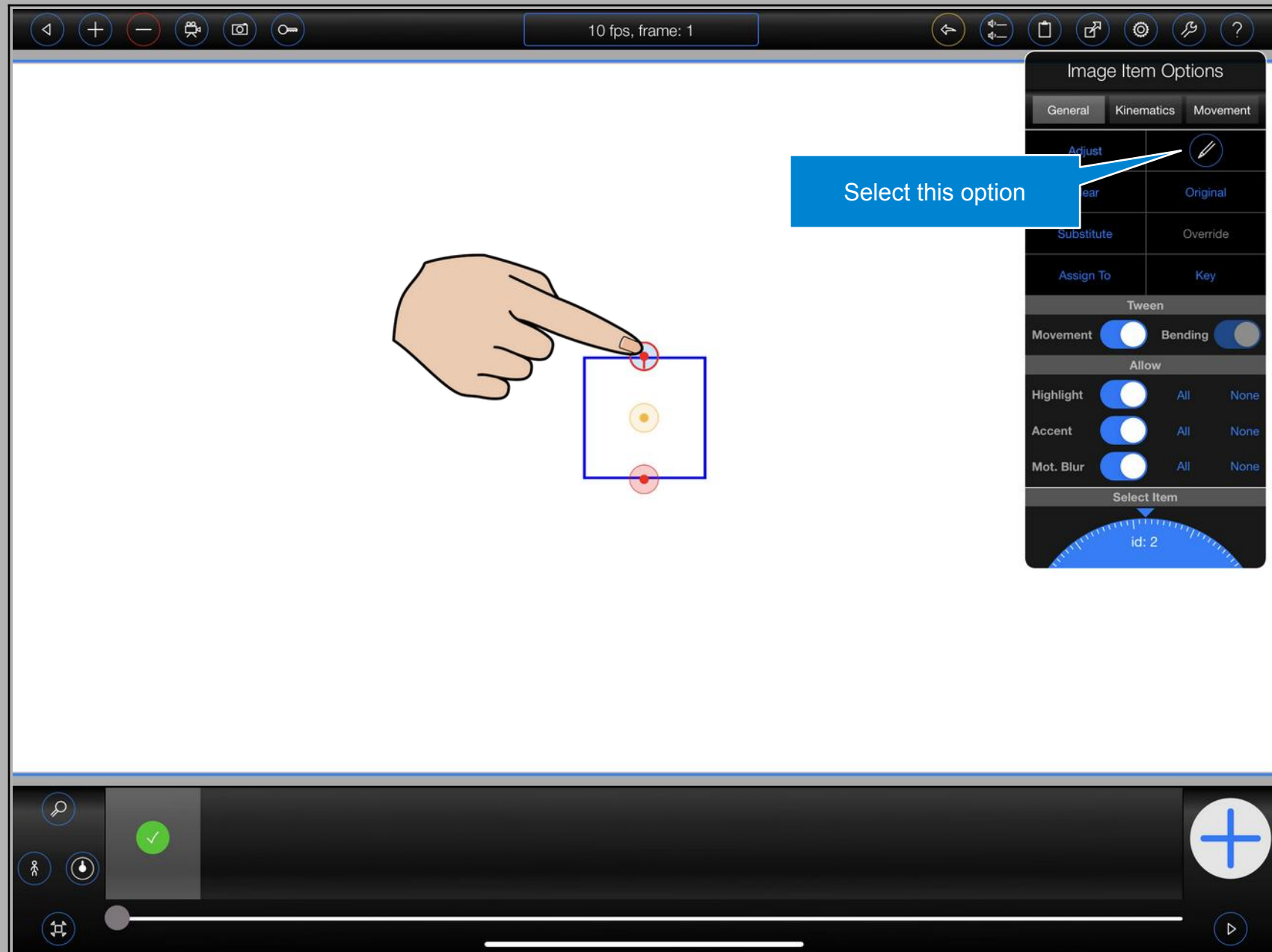
Now you can start drawing your figure:

And, by enabling the 'Frame Controls' from the 'Options' popover, you can continue to draw/update the current figure from frame to frame without having to leave the 'Animation Drawing View'!

Rotoscoping

Rotoscoping is an animation technique that involves tracing over the individual frames of a video to produce an animation with realistic movements. This can be done in Animation Pro as follows:

1. Add a background video to your animation by selecting 'Background Image or Video' from the 'Add' menu on the main animation screen:
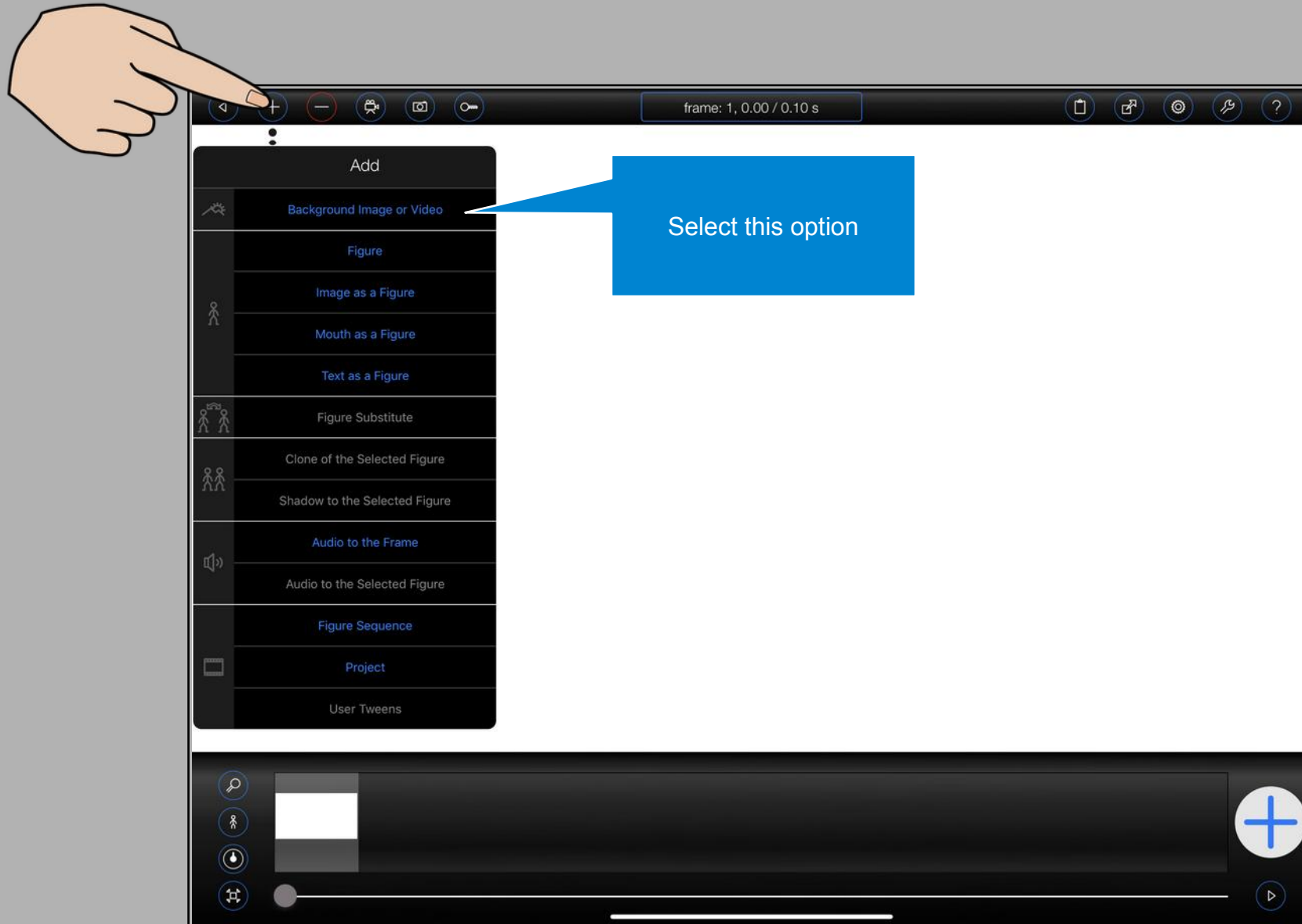
**2.** Locate a video in the 'File Manager' and tap on it:

Video files will be shown with blue perforations
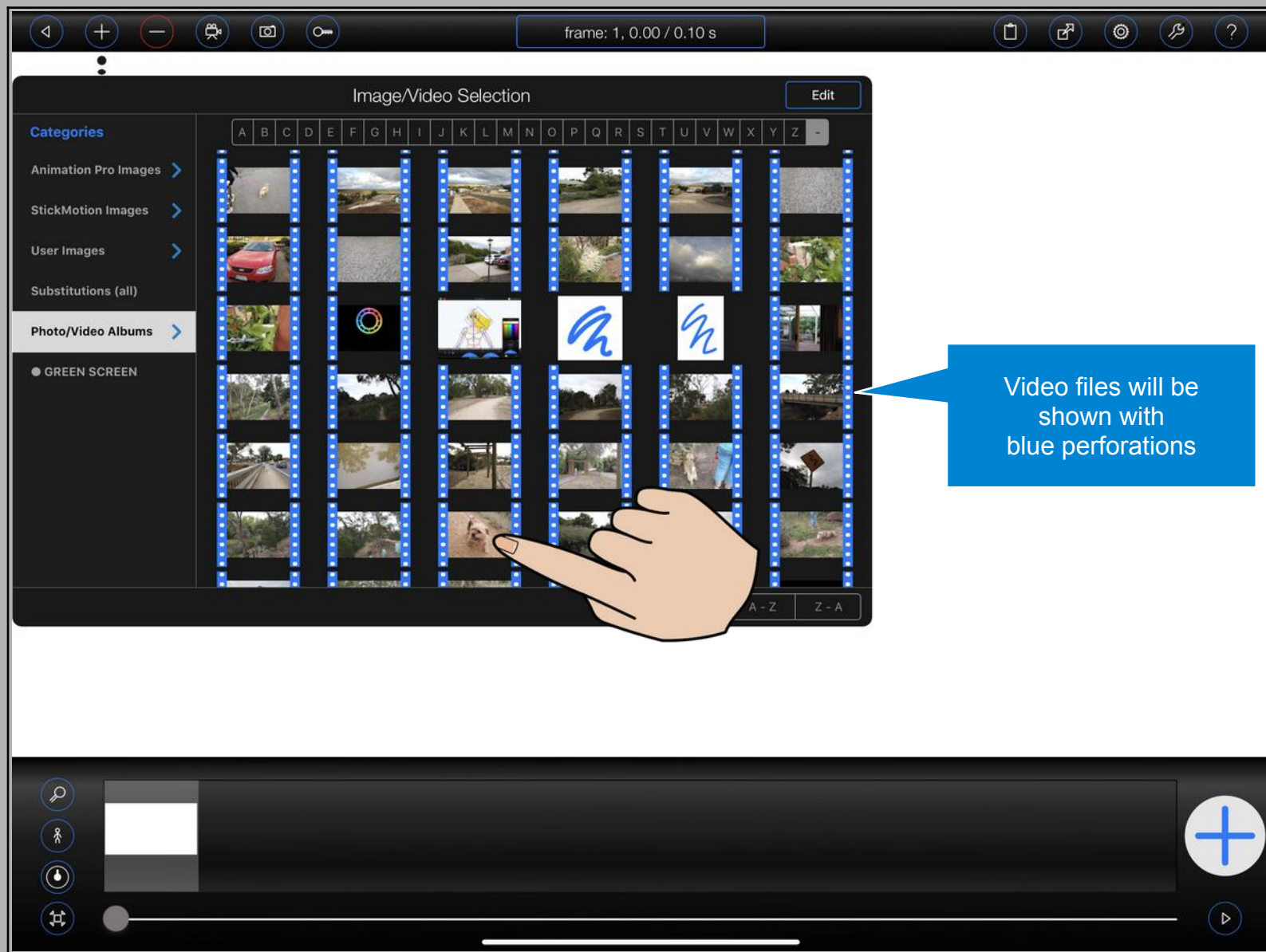
3. Select the range of frames that you'd like to insert into your animation as well as a frame rate:
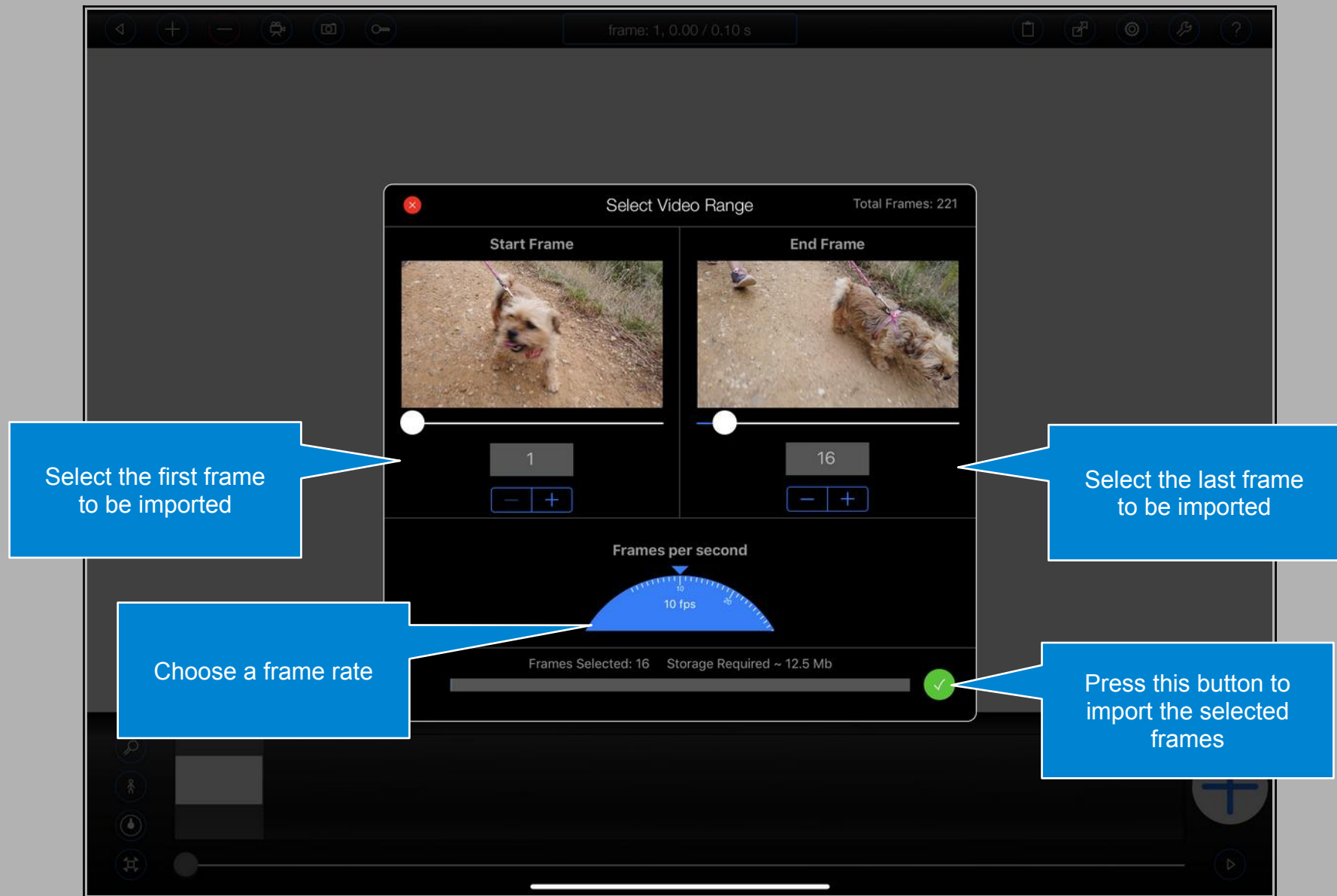

Usually you should choose the intended output frame rate of your animation as the frame rate. Choosing a lower value will make the video appear to play back faster (and vice-versa).
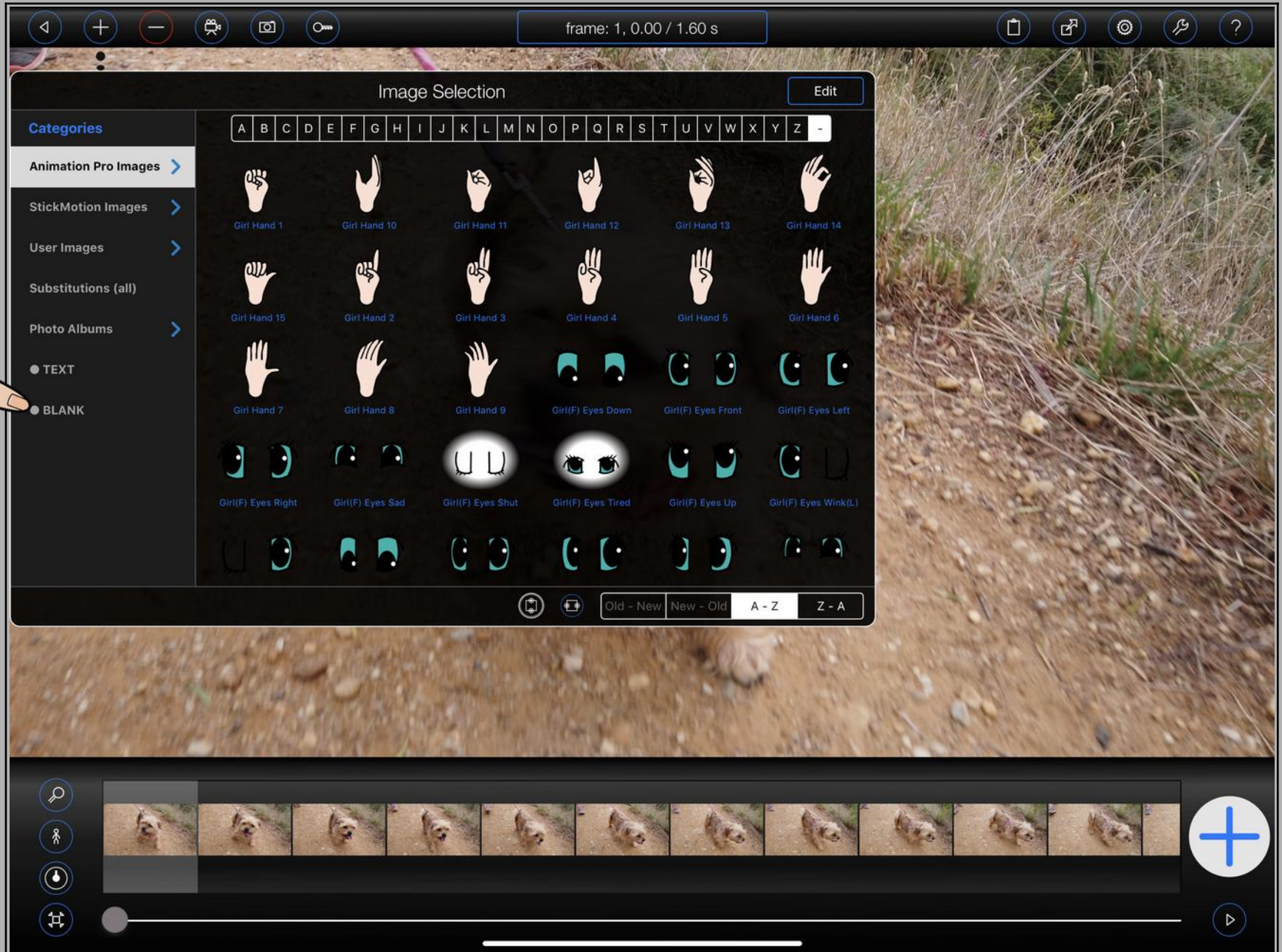
Inserting a background video will insert it into the timeline immediately after the currently selected frame, so you may need to swipe up, and delete, the first frame if you are creating a new animation:
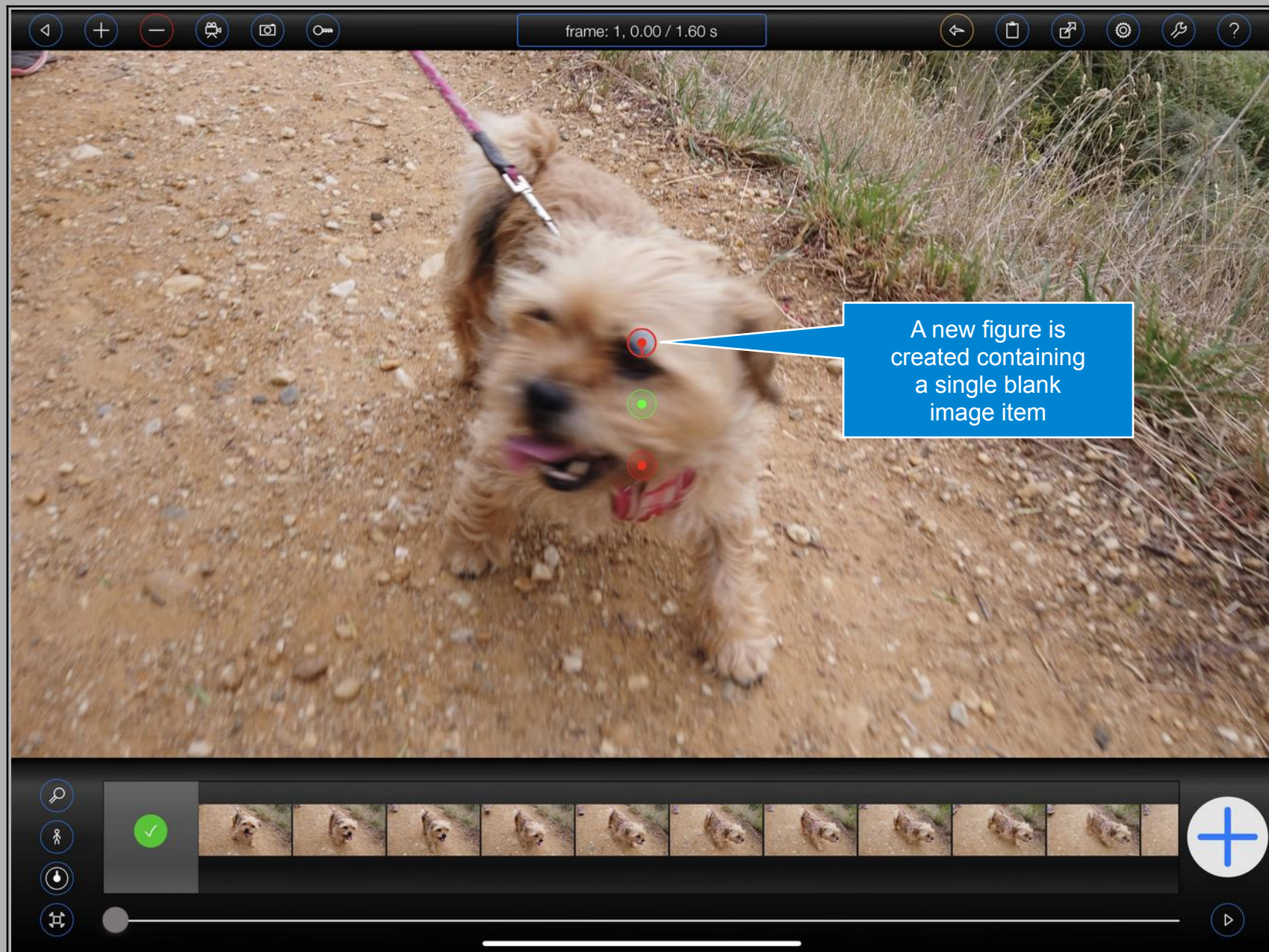

frame: 1, 0.00 / 1.70 s

Swipe up on the thumbnail and press this button

Delete
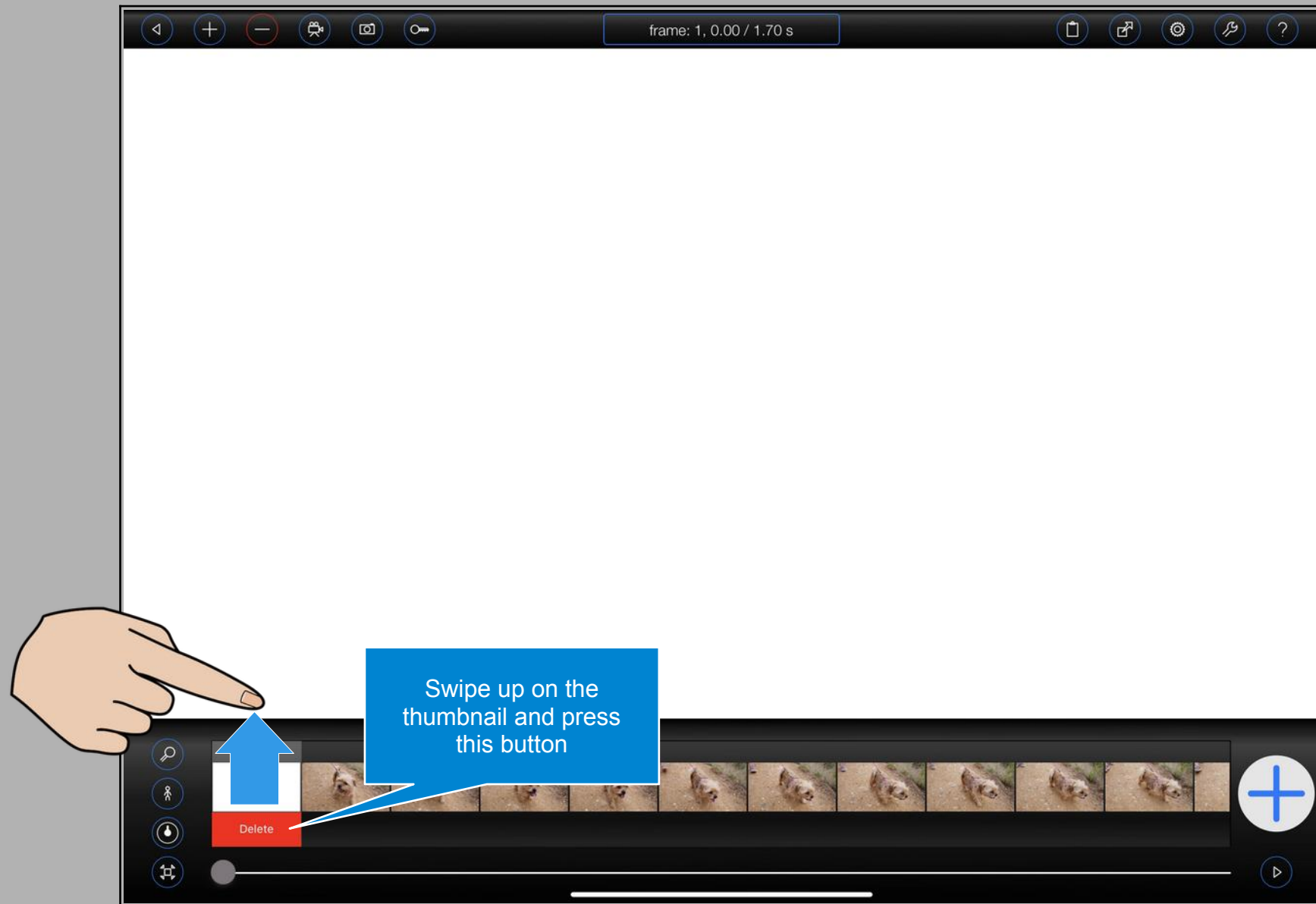
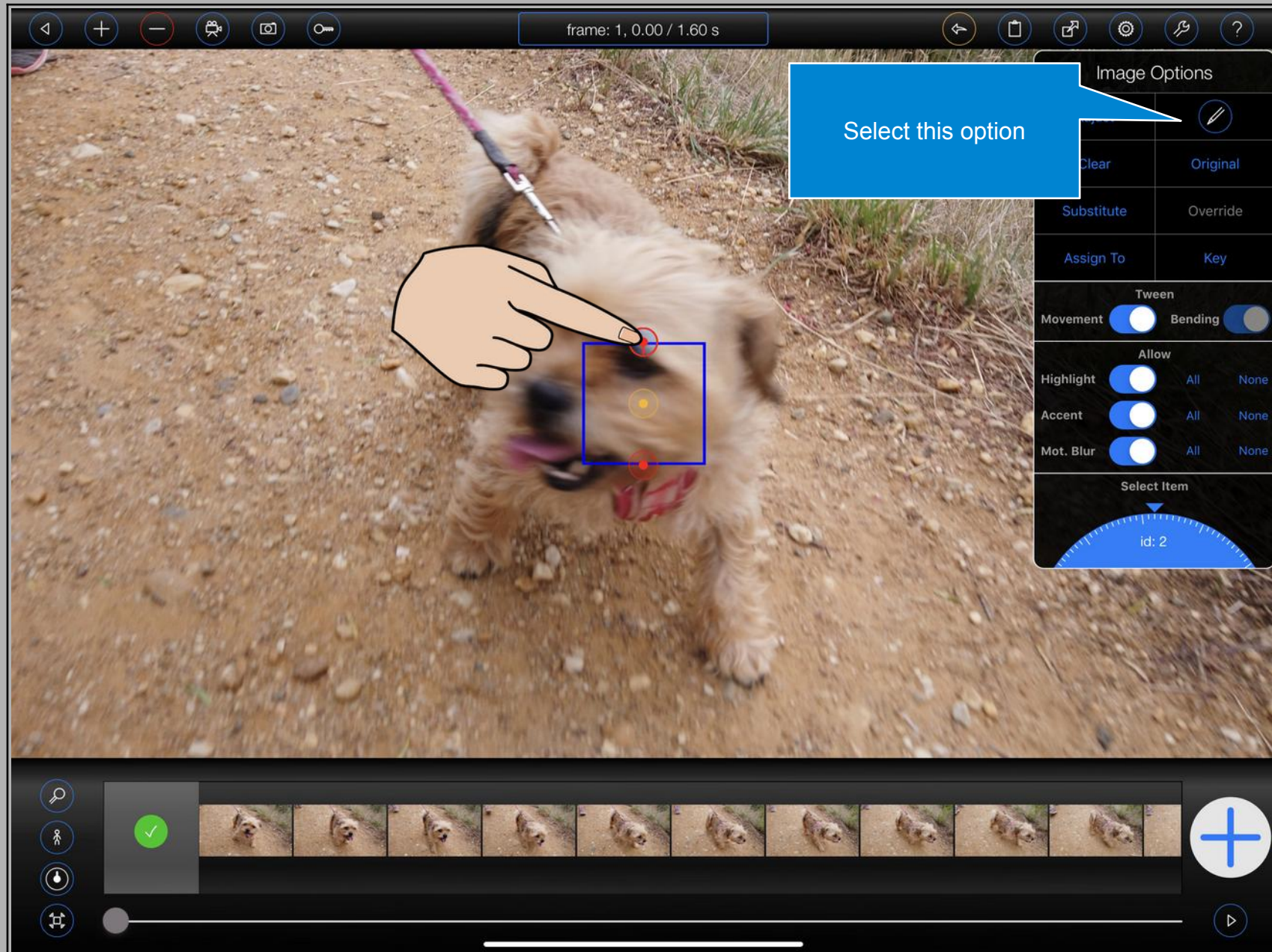**4.** Select 'Image as a Figure' from the 'Add' menu:
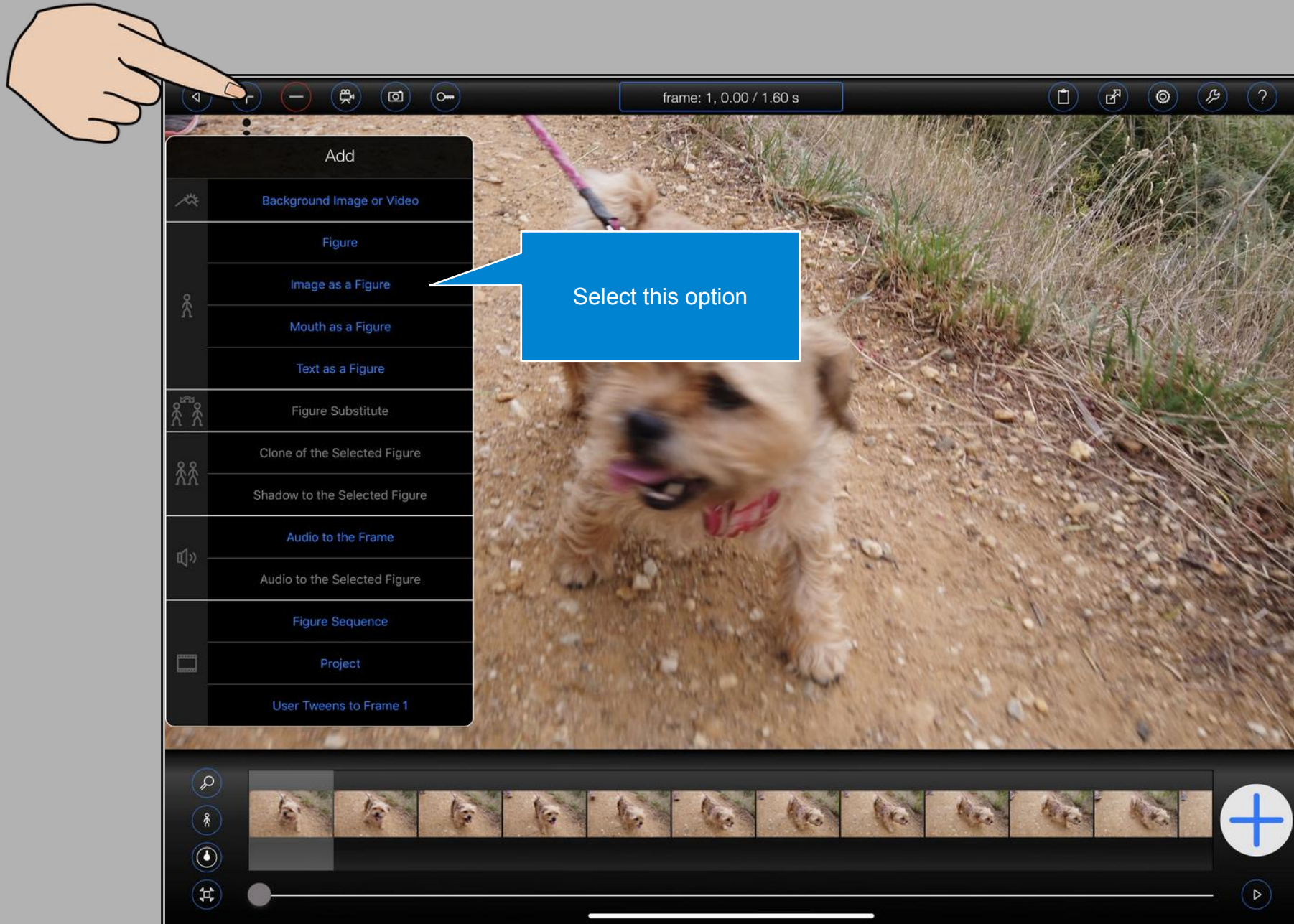
5. When the 'File Manager' is displayed, choose '• BLANK':

This will add a new figure into your animation containing a single blank (empty) image item:

A new figure is created containing a single blank image item

6. Tap on the handle in the figure and press the ✎ button on the 'Image Options' popover:
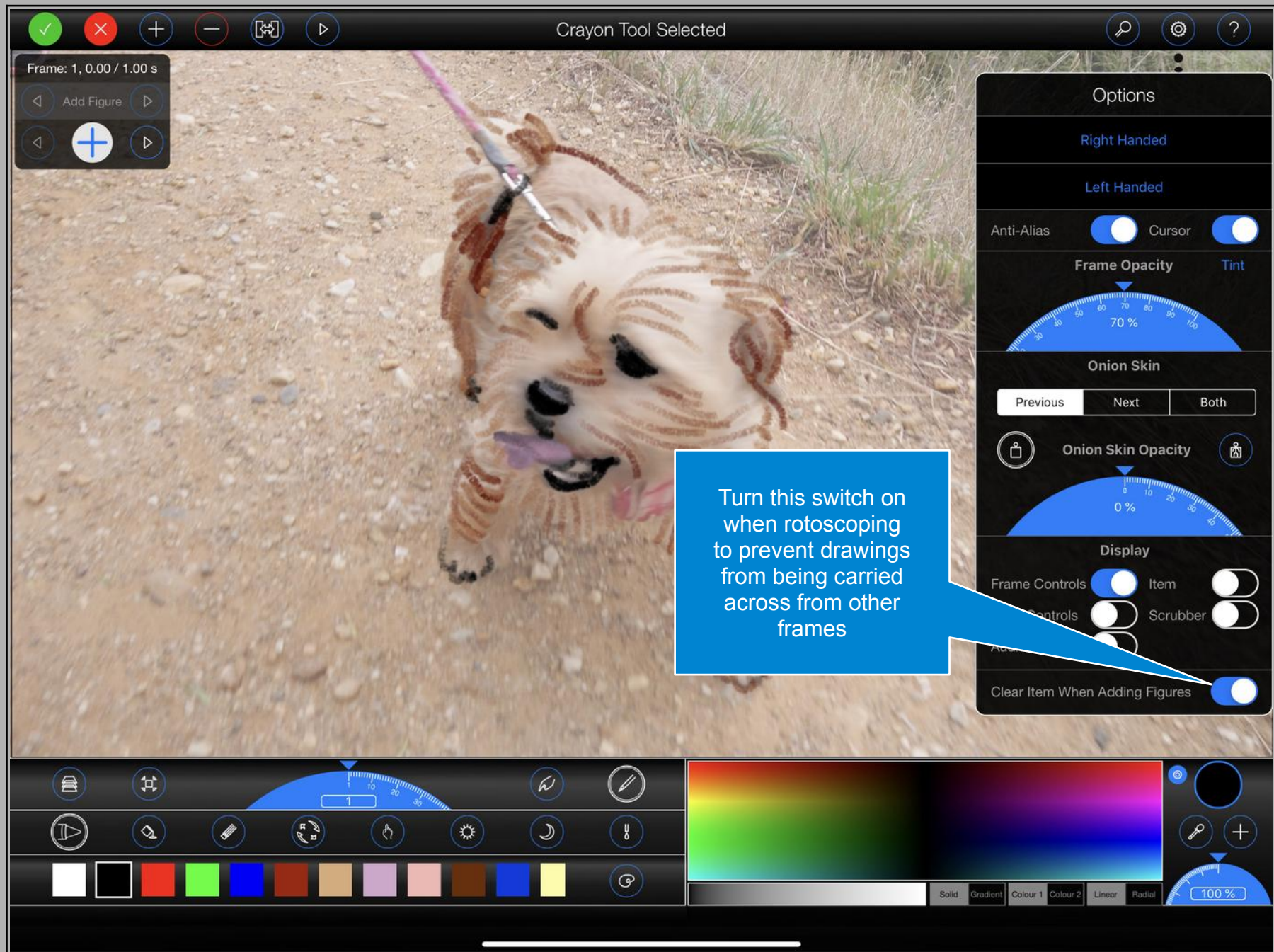
Now you can start tracing over elements in the frame:
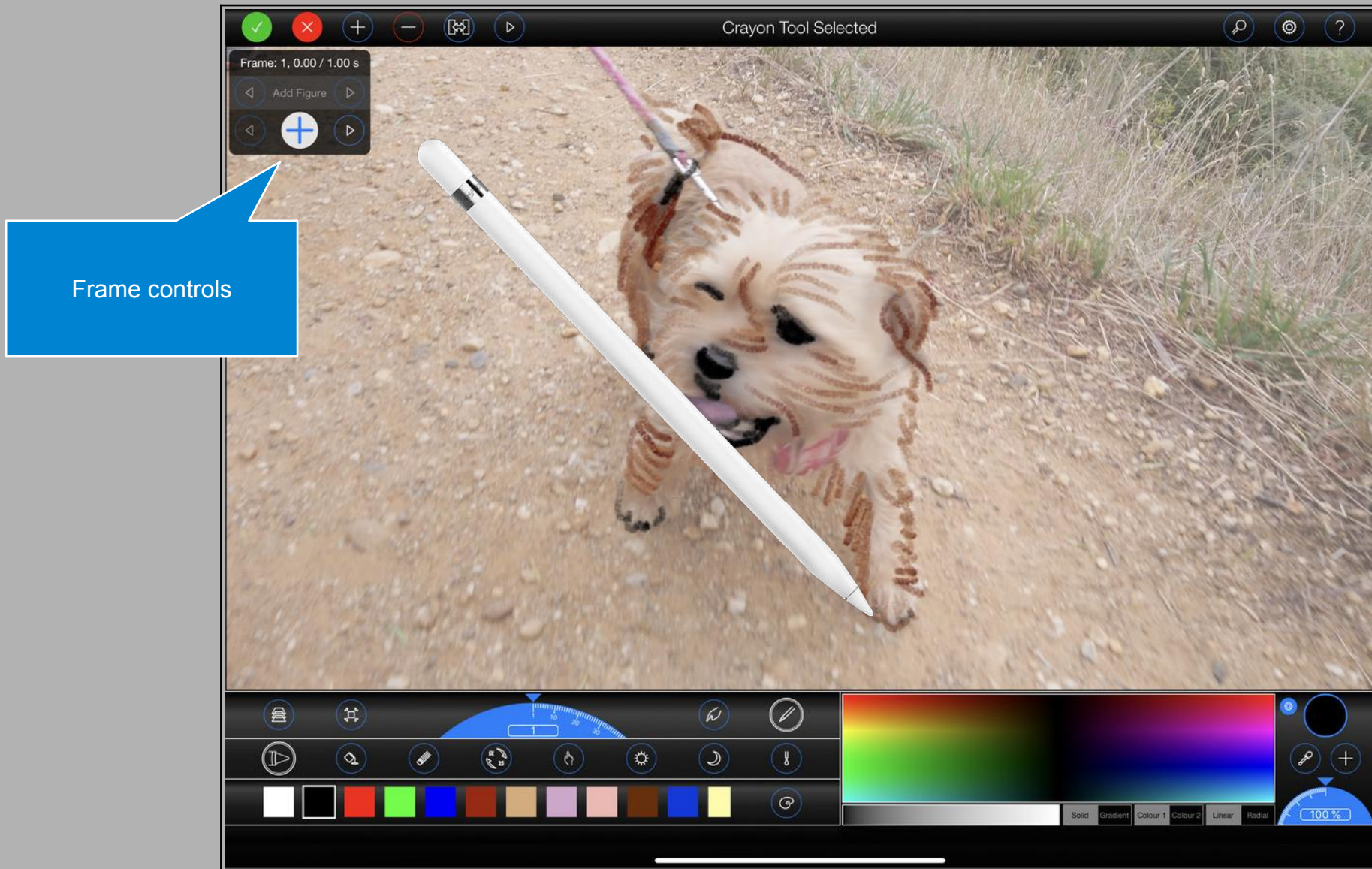
Frame controls

Remember to enable the 'Frame Controls' in the 'Options' popover so that you can easily move from frame to frame whilst continuing to draw.

When rotoscoping it is also best to turn on the 'Clear Item When Adding Figures' switch in the 'Options' popover:

Finally, if you wish to only see your drawings (and not the background images from the original video) in your animation, then return to the main animation screen and remove the background images by selecting 'Background from Multiple Frames' from the 'Remove' menu:

frame: 1, 0.00 / 1.60 s

Remove

Background

Background from Multiple Frames

Figure/Clone

All Figures/Clones

Figure/Clone from Multiple Frames

Audio from Frame

Audio from Figure/Clone

All Content from Frame

Current Frame

Multiple Frames

User Tweens

Select this option