Toon Boom Harmony 11.1
Play Guide

Legal Notices

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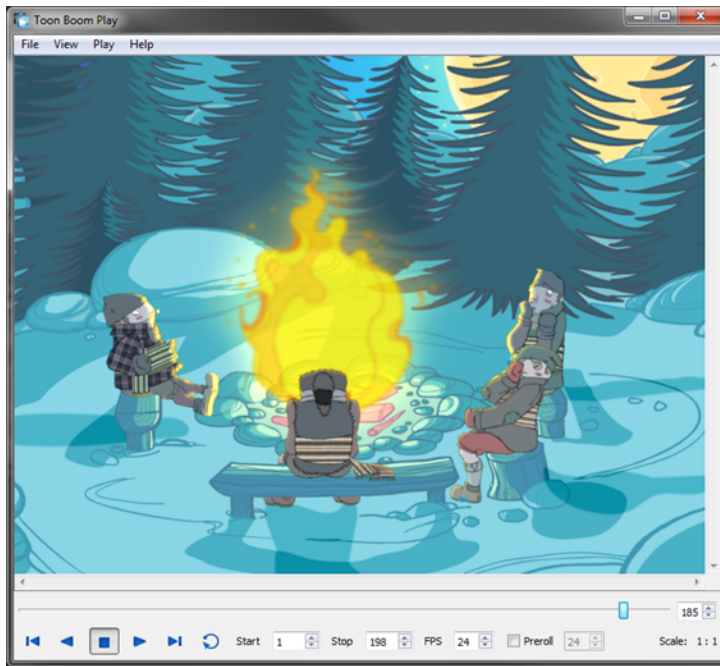
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Chapter 1: Using Toon Boom Play

The Toon Boom Play module is designed specifically for playing back and viewing your animated projects once they have been rendered out into image sequences.

This module opens directly from your program menu to load your final render and it is also used when playing back a scene with effects in Harmony.

Starting Toon Boom Play

Before using Toon Boom Play, you must start the program. You can run the software on Mac OS X or Windows/Linux operating systems. You can start Toon Boom Play from within Harmony to play back your scene, and see your effects and final images.

How to open Toon Boom Play

1. Do one of the following:
   ‣ In Harmony, select **Play > Render and Play**.
   ‣ In Harmony, in the Playback toolbar, click the Render and Play button.
   ‣ In Mac OS X, select **Applications > Toon Boom Harmony 11.1 > Play**.
   ‣ In Windows, select **Start > Programs > Toon Boom Harmony 11.1 > Play**.
   ‣ In Linux, select **Applications > Toon Boom Harmony 11.1 > Play**.

About Toon Boom Play

The Toon Boom Play interface is composed of two main components.
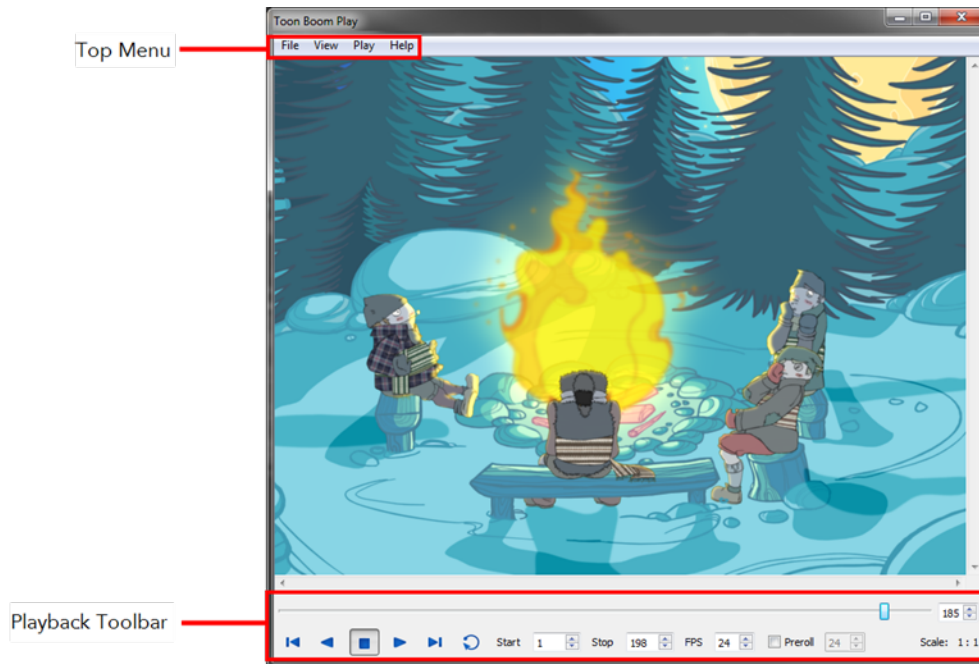
Top Menu

In the top menu are all the necessary commands for loading and previewing image sequences.

The top menu is divided as follows:

• Windows/Linux

- File
- View
- Play
- Help

• Mac OS X

- Mac OS X Play

- File

- View

- Play

- Help

For more information on the commands in these menus, seeToon Boom Play Commands on page 13.

Playback Toolbar
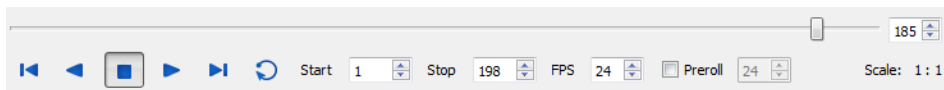
The Playback toolbar, located at the bottom of the player interface, lets you play an animation, loop playback, navigate through frames and change the playback speed.

For more information about the interface elements on this toolbar, see Toon Boom Play Playback Toolbar on page 11.

Loading an Image Sequence

Loading image sequences is a common Toon Boom Play operation.

How to load an image sequence from a folder

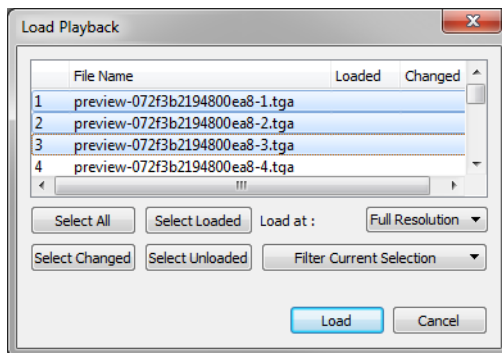1. From the top menu, select **File > Load from Folder**.
   The Find Directory dialog box opens.
2. Select the folder containing the image sequence to load.
3. Click **OK**.

   The Load Playback dialog box opens.

4. Click one of the following:
   ‣ **Select All**: To select all the files in the list.
   ‣ **Select Loaded:** To reload images that are already loaded in the player.
   ‣ **Select Changed:** To reload only the images that were modified since they were loaded.
   ‣ **Select Unloaded**: To load all the images in the list that are not currently loaded in the player.
   ‣ Select an option from the **Filter Current Selection** menu to select a series of frames from the ones selected. For example, to load one out of six frames instead of the whole sequence, select the **Keep 1 Frame Out of 6** option in the drop-down menu.
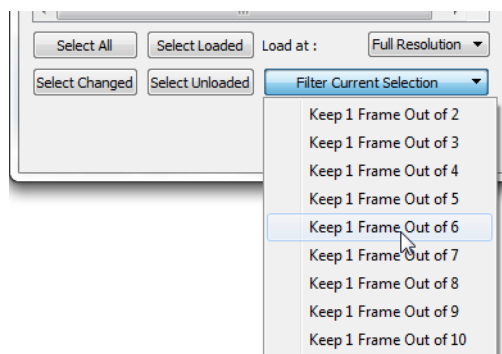
5. In the Load At menu, select the image resolution. To load images faster, or to fit them on your screen, load the images at a lower resolution.

6. Click **Load** to load the selected images.

7. Once the images are loaded, click the Play ▶ button to play back your image sequence.

How to load an image sequence from the database

1. From the top menu, select **File > Load from Database**.

   The Database selector dialog box opens.

2. Select the environment, the job, the scene and the element in which your frames are located.

3. You can select one or more of the frames you want to load.

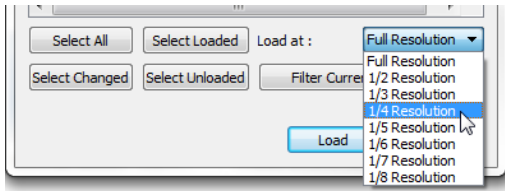4. Click **Open**.

   The Load Playback dialog box opens.

5. Click one of the following:

   ‣ **Select All**: To select all the files in the list.

   ‣ **Select Loaded:** To reload images that are already loaded in the player.

   ‣ **Select Changed:** To reload only the images that were modified since they were loaded.

   ‣ **Select Unloaded**: To load all the images in the list that are not currently loaded in the player.

   ‣ Select an option from the **Filter Current Selection** menu to select a series of frames from the ones selected. For example, to load one out of six frames instead of the whole sequence, select the **Keep 1 Frame Out of 6** option in the drop-down menu.

6. In the Load At menu, select the image resolution. To load images faster, or to fit them on your screen, load the images at a lower resolution.
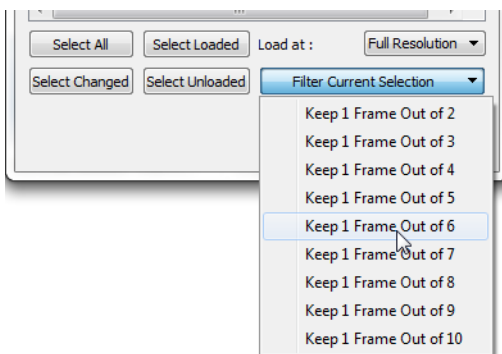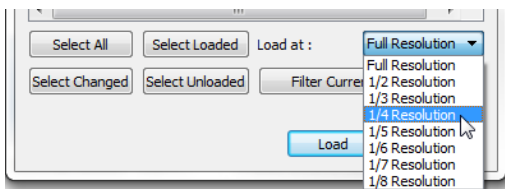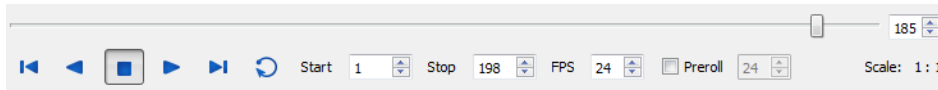
7. Click **Load** to load the selected images.
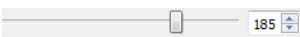
8. Once the images are loaded, click the Play ▶ button to play back your image sequence.
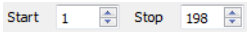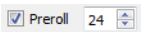
Toon Boom Play Playback Toolbar

Use the Playback toolbar (located at the bottom of the player interface) to play your animation, loop your playback, navigate through your frames and change the playback speed.

Playback Toolbar Interface

Interface Element	Name	Action
185	Frame slider	Scrolls backwards or forwards through the playback frames.
◄	First button	Sets your current frame to the first frame of the loaded image sequence.
◄	Play Backward button	Plays the animation from the current frame to the first frame.
■	Stop button	Stops playback.
►	Play Forward button	Plays the animation from the current frame to the last frame.
►|	Last button	Listen to your sound frame-by-frame. This command is only available when the application is launched from Harmony.
↻	Loop button	Repeats the scene when it reaches the last frame during playback.
◄))	Sound button	Includes the soundtrack during playback. This command is only available when the application is launched from Harmony.
◄S	Sound Scrubbing button	Listen to your sound frame-by-frame. This command is only available when the application is

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Interface Element	Name	Action
		launched from Harmony.
Start 1 Stop 198	Start Frame field	Enter a new value to control the starting frame of the playback range.
Start 1 Stop 198	Stop Frame field	Enter a new value to control the end frame of the playback range.
FPS 24	FPS field	Enter a new value (in frames per second) in this field to change the playback speed.
☑ Preroll 24	Preroll check box	Select the Preroll option and enter the number of blank frames in the Preroll field. These frames will be added at the start of the playback.
Scale: 1 : 3	Scale information	Displays the ratio of the playback size you are currently viewing in Toon Boom Play compared to the image's actual size.

Toon Boom Play Commands

Mac OS X Play Commands

Note: This menu is only available for the Mac OS X version.

Command	Action	Access Methods
About	Opens the About window which displays information related to the application version.	On Mac OS X, this command is located in the Mac OS X Play menu. On Windows/Linux, select **Help > About**.
Quit Play	Exits the application.	On Mac OS X, select **(Mac OS X) Play > Quit Play**. On Windows/Linux, select **File > Quit Play**.

File Commands

Command	Action	Access Methods
Load from Folder	Opens the Load Playback dialog box where you can select one or more images to load in the player.	**File > Load from Folder**
Load From Database	If you are connected to the Database, this command opens the Database Selector window where you can select an image sequence to load in the player.	**File > Load from Database**
Reload Frames	Opens the Load Playback dialog box and indicates which frames are loaded. You can select the frames you want to reload. Use the	**File > Reload Frames**

Command	Action	Access Methods
	Reload command to load frames that are currently opened in the player and that were modified since they were loaded.	
Unload Frames	This command opens the Unload Playback dialog box and indicates which frames are loaded. You can select the frames you want to unload.	**File > Unload Frames**
Quit Play	Exits the application.	On Mac OS X, select **(Mac OS X) Play > Quit Play**. On Windows/Linux, select **File > Quit**.

View Commands

Command	Action	Access Methods
Zoom In	Zooms in on the loaded images to view them closer. In the lower-right corner of the interface, you can see the relative zoom level compared to the image's original res-olution.	**View > Zoom In** Press 2.
Zoom Out	Zooms out of the loaded images to view them smal-ler. In the lower-right corner of the interface, you can see the relative zoom level compared to the image's original res-olution.	**View > Zoom Out** Press 1.
Image	Displays the images in nor-mal mode with all their col-ours.	**View > Image**
Matte	Displays the image's matte	**View > Matte**

Command	Action	Access Methods
	(alpha channel). All transparent zones are displayed in black and all fully opaque zones are displayed in white. Zones that are semitransparent are displayed in grey.	
Loaded Files Properties	Opens the Loaded Files Properties dialog box. Displays the format, path and resolution information of each loaded image.	**View > Loaded Files Properties**

Play Commands

Command	Action	Access Methods
Enable Sound	Includes the soundtrack during playback. This command is only available when the application is launched from Harmony.	**Play > Enable Sound** Sound 🔊 button
Enable Sound Scrubbing	Listen to your sound frame-by-frame. This command is only available when the application is launched from Harmony.	**Play > Enable Sound Scrubbing** Sound Scrubbing 🔊s button
First Frame	Sets your current frame to the first frame of the loaded image sequence.	**Play >First Frame** First ◀❙ button
Go to Frame	Sets your current frame to any frame you input in the Go to Frame dialog box.	**Play > Go to Frame**
Last Frame	Sets your current frame to the last frame of the image sequence.	**Play > Last Frame** Last ❙▶❙ button
Next Frame	Sets the current frame to its following frame.	**Play > Next Frame**
Previous Frame	Sets the current frame to its previous frame.	**Play > Previous Frame**
Start Frame	Controls the starting	**Play > Start Frame**

Command	Action	Access Methods
	frame of the playback range. Opens the Set Start Frame dialog box.	In the Playback toolbar, enter values in the Start field.
Stop Frame	Controls the end frame of the playback range. Opens the Set Stop Frame dialog box.	**Play > Stop Frame** In the Playback toolbar, enter values in the Stop field.
Loop	Repeats the scene when it reaches the last frame during playback.	**Play > Loop** Loop ↺ button
Play Scene Backward	Plays the animation from the current frame to the first frame.	**Play > Play Scene Backward** Play Backward ◀ button
Play Scene Forward	Plays the animation from the current frame to the last frame.	**Play > Play Scene Forward** Play Forward ▶ button
Playback Speed	Changes the frame rate of the playback. Opens the Set Speed dialog box.	**Play > Playback Speed**
Stop	Stops playback.	**Play > Stop** Stop ■ button

Help

Command	Action	Access Methods
Help	Opens Toon Boom Online Help where you can find useful indexed and searchable information on the operation of the Toon Boom Play module.	**Help > Online Help**
About	Opens the About window which displays information related to the application version.	**Help > About** On Mac OS X, this command is located in the Mac OS X Play menu.

Glossary

alpha channel	The image's channel carrying the transparency information. An image already has three channels: red, green and blue (RGB). The alpha channel is the fourth channel (RGBA). The matte, or the transparency information, is stored in this fourth channel. An image without an alpha channel is always opaque.
animatic	A movie with sound that is developed from the storyboard. The storyboard panel is exposed for the duration of the scene and at times, the characters are placed on a trajectory to indicate motion. The camera moves are also animated. The animatic is used to determine the rhythm of a project and provides a good overview of the project before beginning production.
animation	A simulation of movement created by displaying a series of pictures or frames.
anime	An animation style known for its sinister and dark feel; popular in Japan.
arc	Action rarely occurs in a straight-forward manner; rather it typically unfolds in what storytellers refer to as an arc. The purpose of a story arc is to move a character or a situation from one state or scenario to the next.
aspect ratio	The relationship between the width and height dimensions for any scene, frame or film format. Television ratio is 4:3 and widescreen ratio is 16:9.
auto-feed	An automated method of feeding drawings into a scanner in which multiple drawings are stacked into a sheet feeder. When the scanner is activated, the drawings are scanned consecutively, without further user intervention.
automatic lip-sync detection	Automatically mapping drawings in an element to the mouth chart generated for a sound. This can save time when lip-syncing a voice track.
axis	An imaginary line around which an object rotates. For 2D graphics, there are two axes: • X: Horizontal • Y: Vertical For 3D graphics, there are three axes: • X: Horizontal • Y: Vertical • Z: Depth
background	The part of a scene that is farthest to the rear. The background is the artwork, or decor, against which the animation takes place.
Bézier	A method of defining curved lines invented by French

	mathematician Pierre Bézier. A Bézier curve is a mathematical or parametric curve. Bézier curves use at least three points to define a curve.
	In Toon Boom, a function can be hooked to a Bézier curve and vary along with the curve value information. Bézier curves are also very useful in vector graphics. They are used to model smooth curves and can be scaled indefinitely.
bitmap	An image composed of pixels with a single resolution (size). If it is enlarged too much, it will lose definition and pixels will begin to appear. This is known as *pixelation*.
breakdown	In cut-out animation, breakdown is the action of breaking a character into pieces to create a puppet with articulations. To break down a character, the artist cuts part, such as hands and arms, from the character's model and pastes them in separate layers. Next, the joints are fixed and the pivots set.
	In traditional animation, a breakdown is an animation pose generally found between two key poses. The key poses are the main poses in an animation and the breakdowns are secondary poses, ones that help to describe the motion and the rotation curve.
camera shake	Camera shake occurs in a scene when the camera moves slightly and quickly in several directions. This gives the impression of an impact, vibration or, for example, bumps on the road.
caption	In a storyboard, a caption is a text field containing dialogue, effects, sound, or slugging information.
cel	In traditional animation, a cel, also known as a *celluloid*, is a transparent sheet on which the animation is inked and painted before being sent to the camera.The picture's outline is drawn on the front of the cel and then coloured along the back.
	In Toon Boom, a cel is an individual space encountered in an Xsheet's column, from which you can expose a drawing or a function`s coordinate.
character design	Each character in an animated film is drawn from multiple angles in poster-style format, called a *model sheet*, which serves as a reference for the animators.
clean up	After rough drawings have been tested and approved, all the noise in the image (excess lines, notes, etc) is removed to create final drawings which can be inked, painted and shot. The cleanup process refers to either tracing a clean line over a rough drawing to achieve the final version, or removing dirt and extra lines left by the scanning process.
CMYK	Cyan, Magenta, Yellow, Black. Refers to the process used by printers to define colour on the printed page.
colour card	A Colour Card is a solid colour card that is the same size as the camera. The Colour Card can be used to fill the background with a solid colour when there is no background image included.

colour model	In animation, a colour model is the official colour design that must be used to paint the animation. A model is the definitive character, prop, or location design that each artist must follow for the production.
colour wheel	A display of the colour spectrum in the form of a circle.
compositing	Compositing is the action of incorporating all of a scene's elements to create the final result prior to rendering. For example, the compositing artist will import all the animation sequences, background, overlays and underlays in the scene and position them correctly. The artist will then set the camera frame and animate it, if needed. Finally, the animator will create all the computer-generated effects for the project.
cross dissolve	An effect used to fade two scenes, one into the other.
cut	A direct transition between two scenes. When a cut is used, there are no transition effects inserted to pass from one scene to the next. The first scene ends and the second one starts immediately.
cut-out animation	The action of animating characters made of several pieces by moving them around frame by frame. Cut-out animation can either be computer generated or done traditionally using paper.
cycle	A group of images that together make up an action, such as walking. A cycle is an action repeated as a loop over a period of time. It can be a series of animated drawings or keyframes.
dialogue	The text spoken by a character in a movie or animation.
dope sheet	Used by animators, directors and other members of a crew to track the sequence and timing of images, dialogue, sound effects, sound tracks and camera moves. Also known as an *exposure sheet* or *Xsheet*.
doping	To assig a particular drawing to a range of frames.
DPI	Dots Per Inch is the standard measure of resolution for computerized printers. It is sometimes applied to screens, in which case it should more accurately be referred to as *pixels per inch*. Either way, the dot is the smallest discrete element making up the image.
ease/velocity	In animation, the ease, also known as *velocity*, is the acceleration and deceleration of a motion. It can be a motion created by a function curve, or a series of animated drawings. Other common terms for ease-in and ease-out are slow-in and slow-out.
ease-in	Gradual acceleration in the action. Another common term for ease-in is slow-in.
ease-out	Gradual deceleration in the action. Another common term for ease-out is slow-out.
establishing shot	A scene in which the viewer can see the whole area in which a sequence is happening. For example, if a child is playing on the ground in front of his house, the establishing shot would be a scene

	where the viewer can see the house, the ground, a part of the street and the buildings around the central point of action. This helps the viewer understand the story location and scene orientation.
exposure	In animation, an exposure is the number of cels on which a drawing appears in the scene. For a drawing to appear longer, the exposure must be extended over a greater number of cels.
exposure sheet (Xsheet)	The exposure sheet or Xsheet, is a sheet with several vertical columns and horizontal frames used to indicate a scene's timing. Each column represents a scene's layer. In each column, the drawing's numbers are indicated and repeated over the particular amount of frames they need to appear. The exposure sheet is used by animators, directors and other members of a crew to track the sequence and timing of images, dialogue, sound effects, sound tracks and camera moves. Also known as a *dope sheet*.
fade in/fade out	Fade in or fade out is a transition effect used to open or close a sequence. A fade in occurs when the first scene appears progressively, from complete transparency to its complete opacity. A fade out occurs when the last scene progressively disappears, going from complete opacity to complete transparency.
fast-in	Dramatic acceleration at the start of the action.
fast-out	Dramatic acceleration at the end of the action.
field	In animation, a field is a measurement unit used to calculate motion, registration and camera positioning. A standard animation scene will vary between 6 to 12 fields.
field chart	A guide containing all the field units that animation and layout artists use to determine a scene size or camera motion.
film-1.33	Use this resolution setting for the widescreen film format that conforms to the standard 4:3 pixel aspect ratio.
film-1.66	Use this resolution setting for the widescreen film format that conforms to the 16:9 pixel aspect ratio. (The pixels are wider than they are high).
flipping	In traditional animation, flipping is the action of going through the drawings of an animation sequence very quickly in order to see the animation in motion. Flipping can also be the action of creating a mirror transformation of an object.
follow-through	The follow-through is the secondary motion caused by the main action. For example, a character wearing a cloak is running. The main action is the body running. This will cause the cloak to follow the motion, although it will not move at the same time, but react a few frames later and follow the main motion curve.
forward kinematics	Forward kinematics is a feature used to animate principally 3D characters and cut-out puppets with hierarchy. It is used to animate

	a puppet from one of parent parts, such as a shoulder, and make the rest of the arm move with it as a single piece.
frame	A frame is a single photographic image in a movie. In traditional animation, the North American standard generally contains 24 frames per second, while in Europe the standard is 25 frames per second.
frame rate	This is the measurement of the frequency (rate) at which an imaging device produces unique consecutive images, called frames. The term applies equally to computer graphics, video cameras, film cameras, and motion capture systems. Frame rate is most often expressed in frames per second (FPS) and in progressive-scan monitors as hertz (Hz). The frame rate is the speed at which the frames are played. They are generally calculated by frame per second. For example, a scene could be played back at 12, 24, 25, 30 or 60 frames per second or any other number
functions	A function is a computer generated motion, trajectory or path that elements, other trajectories and effects parameters can be attached to. The function can be controlled by adding keyframes and control points on the function curve.
gamut	The range of colours that a particular device can represent.
HDTV	High Definition Television delivers a higher quality image than standard television does because it has a greater number of lines of resolution. To take advantage of the superior quality and make full use of your resolution setting, your output device must be compatible with HDTV technology.
hold	This is a frame in the animation in which the character maintains its position without moving. A hold can be created between any two keyframes.
HSV	Hue, Saturation, Value. A method of defining colours in terms of hue (tint), saturation (shade) and value (tone or luminance).
in-between	The drawings that exist between the key poses. These are drawn to create fluid transitions between poses.
ink and paint	The ink and paint process is the action of painting the empty zones and colouring the lines on the final animation drawings, while following a colour model.
interpolation	In animation, the interpolation is the computer generated motion created between two keyframes. You have the choice to create interpolation, or not, between your keyframes.
jump cut	A jump cut is a jerky cut between two scenes. Typically, a jump cut is not visually pleasing. It is generally caused by one scene ending, and a second one starting, with similar a image. The lack of difference causes the eye to see a little jump between the two scenes.

key pose	Important positions in the action defining the starting and ending points of any smooth transition. Keys, or key poses, are the main drawings in an animation sequence describing the motion. For example, if an arm is waving, the keys will be of the arm at one extremity of the wave motion and the other extremity. By flipping those drawings, the animator can see the skeleton of the motion without having all of the drawings.
keyboard shortcuts	One or more keyboard keys which, when used, cause an operation to be performed. Keyboard shortcuts are used throughout the Toon Boom software and form an integral part of the workflow. It is, in most cases, possible to customize the shortcuts in the Preferences dialog of the software.

The shortcuts are written as follows in the Toon Boom user documentation: Each key in a sequence is shown inside square brackets as in: [Ctrl]+[A]. The brackets "[ ]" separate the key from the plus sign (+). Neither the brackets, nor the plus sign are part of the sequence. To use a shortcut, press the key and the character simultaneously. |
keyframe	Important positions in the action defining the starting and ending points of any action. A keyframe is a computer generated position at a specific moment (frame) on a given trajectory.
layer	In animation, a layer is an individual column, level or character. A scene's layers are superposed to form the final image.
layout	The layout process is the communication step between the storyboard and the animation. The layout and posing process is the action of putting the storyboard on model, that is drawing the character following the design in the model pack, so that the animator can start his work. The layout artist will draw the background, create the camera and field guide matching the scene and the camera motion. Lastly, he will draw on model the main action poses.
layout and posing	The action of putting on model, that is, at the right scale, the storyboard for the animator to start his work.
library	A library is a storage area containing templates and assets that can be reused in any project or scenes.
light table	The Light Table feature allows you to see the other layers in transparency while you are working on a particular one in the Drawing view.
line of action	Direction that the action will follow. Also known as the Path of Action
lip-sync	The lip-sync is the character`s mouth synchronization with the dialogue sound track. Frame by frame, the mouth will be adjusted to fit the sound to give the illusion of the character is speaking.
low resolution	This format is ideal for videos destined for the web, where size and fast download of a video file might take precedence over quality. A low-resolution image is one that lacks fine detail.

manual lip-sync detection	The manual swapping of mouth position drawings to match a voice track. For this process, both sound scrubbing (listening to a sound wave broken up frame-by-frame) and drawing substitutions from the Library view are used.
master palette	A master palette is a group of colours attributed to a character or a prop. The palette is used throughout the entire production to maintain consistency in the look and to ensure that the same colours are used throughout the production. Also known as palette.
model/colour model	In animation, a model is the definitive character, prop or location design that each artist must follow for the production. A colour model is the official colour design that must be used to paint the animation.
motion keyframe	In Toon Boom, the motion keyframe is a keyframe with computer-generated interpolation.
mouth chart	Adding a lip-sync to a project can really enhance its quality and storytelling. However, it can be difficult to shape a character's mouth so that it matches the sound at the precise frame. To solve this problem, Toon Boom provides a lip-sync feature which analyses the contents of a sound element and generates a mouth chart based on the eight animation phonemes (A, B, C, D, E, F, G, and X, which is used to represent silence).
multiplane	The effect of passing through multiple levels of drawings to create a sense of depth in a shot. A multiplane is a scene in which the layers are placed at different distances from the camera so that when the camera moves, a depth illusion occurs. With a multiplane, all the perspective and scale is calculated automatically.
NTSC	The standard analogue television broadcasting system used in North America. NTSC conforms to North American standards on how rectangular pixels are displayed for computer and television screens.
nudge	A small push (left, right, up, down, forward or backward) done with the keyboard arrow keys on a selected element. Nudging is used to move a selection very slightly and precisely.
onion skin	A feature that lets you see the previous and next drawings of a sequence.
overlay	A part of the scene environment, such as a chair or a bush, that is placed in front of the main animation.
PAL	A resolution that works best with the European format for television and computer screens, as the rectangular pixels are displayed at a different orientation.
palette/master palette	A palette or master palette is a group of colours attributed to a character or a prop. The palette is used throughout the entire project to maintain a consistency in the look and avoid the colour changing during the animation. Also referred to as a master palette.

palette style	A palette style is a second version of an existing palette with a slight change in the tint and value. A palette style can be used to create the night version of a palette. It may also be called a clone palette.
pan	To move the camera across the scene in any direction.
panel	In a storyboard, a panel is a frame in a shot. A shot can be composed of one or several panels.
paperless animation/tradigital	The paperless animation process is the action of animating digitally. The main paperless animation process is to draw, frame by frame, the animation directly in the software.
passing position	When drawing a walk sequence for a character, the passing position is the point at which one leg passes the other.
path of action	Direction that the action will follow. Also known as the Line of Action.
peg	In traditional animation, a tool used to ensure accurate registration of action as cel layers move. In digital animation, in which you are doing a more advanced puppet rigging, you can use peg layers. Peg layers are trajectory layers that do not contain drawings. They are motion paths that you can use to add path articulations. For the latter, you can also use the Inverse Kinematics tool.
phoneme	Unit of sound in a language.
pivot	A pivot is the point around which a peg or a drawing rotates.
pixel	Smallest element of an image displayed on a monitor or TV screen. Pixel, short for Picture Element, is a single point in a graphic image. It is a small sample of an image, a dot, a square, or a very small section made out of smooth filtering. If you zoom in close enough on a digital image, you will see the pixels, which look like small squares of different colours and intensity.
pose-to-pose animation	The pose-to-pose animation process is the action of creating all the main action poses, called key poses, and then placing the secondary poses between the keys. The secondary poses are called breakdown. Finally, the animator fills the gaps with the in-between drawings to achieve a smooth animation.
rendering	The final step when animating by computer. During rendering, the computer takes each pixel that appears on screen and processes all of the components as well as adding motion blur before it produces a final image. In animation, the rendering process is the action of calculating the final images after the compositing process.
resolution	The resolution is the size of a scene, generally calculated in pixel. For example, the NTSC resolution is 720 x 480. Resolution type should match your final output: HDTV, film-1.33, film-1.66, NTSC, PAL, low.
RGB	Red, Green, Blue: method of defining colour by specifying amounts

	of these three colour components.
rigging	The rigging process is the action of attaching the cut-out puppet parts one to the other.
rotary table	The Rotary Table is equivalent to the animation disk/table and allows one to rotate the workspace to be more comfortable while drawing.
rotoscoping	Is an animation technique in which animators trace over live-action film movement, frame by frame, for use in animated films. The act of sketching over live-action footage to create an animated sequence.
roughs	The roughs are the skeleton sketch of an animation or a design. Roughs mainly consist of sketch lines and shapes, though they can also contain design details.
safey area	In animation and movie parlance, the safey area is the zone at the centre of the scene's frame, one safe from being cropped by the TV frame. As a TV frame cuts a margin off the original frame size, maintaining a safey area ensures that the scene's main action will remain clearly visible once the film is screened on television.
scene	A scene is a shot in a movie or show. A sequence is composed of several scenes. A scene changes to another scene by a simple cut, or a transition.
script	The script is the original text containing all the movie or show information. In animation, the script contains all of the location descriptions, dialogues, time and more. A project starts with a script.
sequence	In animation, a sequence is a series of scenes or shots forming a distinct part of the story or movie, usually connected by unity of location or time.
shot	A shot is a scene in a movie or show. A sequence is composed of several shots. A shot changes to another shot by a simple cut, or a transition.
slow-in	Gradual acceleration in the action. Another common term for slow-in is ease-in.
slow-out	Gradual deceleration in the action. Another common term for slow-out is ease-out.
slugging	In Storyboard Pro, slugging refers to indicating the start and stop times of dialogue and relevant actions.
sound scrubbing	A process that lets you hear sound in real time while you move the playhead forward or backward. This is very useful for finely-tuned lip-syncing.
stop-motion keyframe	A stop-motion keyframe is a keyframe with no computer generated interpolation.
storyboard	A visual plan of all the scenes and shots in an animation. The storyboard indicates what will happen, when it will happen and

	how the objects in a scene are laid out.
straight-ahead	A technique in which an entire sequence is drawn from the first position to the last, in order. There is very little planning in this methodology, and where the character ends up and how it gets there can be a surprise for both the audience and the animator. While this approach is a lot more spontaneous and creative, it can create inaccurate results.
strokes	Strokes are invisible vector lines forming the drawing zones. They can be adjusted with Bézier handles.
tablet/pen	Device used in conjunction with, or instead of, a mouse to move a mouse pointer (sometimes referred to as the cursor) around the computer screen.
template	In Toon Boom, a template is an asset stored in the library, one that can be reused in any project. A template can be a drawing, a series of keyframes, a sound file, a panel, a cut-out character, an effect, a trajectory, an animation, or anything else used in the software.
thumbnails	A thumbnail is a very small image used as a reference or indicator.
timecode	Timecode is timing information printed on a movie clip to indicate what scene, hour, minute and second is currently displayed on the screen.
timeline	The timeline is a horizontal representation of the scene`s elements, timing and keyframes.
trace and paint	After the rough animations have gone through cleanup and a final line or pencil test, each drawing is traced and painted for the final animation. In today's digital world, this may be done in a variety ways other than via the traditional celluloid or acetate methods.
track breakdown	The soundtrack for animated film is broken down into individual sounds documenting the precise frame-by-frame position of each sound.
traditional animation	The traditional animation process is the action of drawing on paper all of the animation sequences, before either scanning them or inking them on cels.
trajectory	A computer generated path or trajectory that elements can follow. The trajectory can be controlled by control points, keyframes and velocity.
transition	A transition is an effect placed between two scenes as they pass from one to the other. Common transition effects are cross-dissolve and wipe.
underlay	In animation, an underlay is a specific part of the decor placed behind the main animation.
aspect ratio	The aspect ratio describes the shape of the grid unit. A square grid unit would have the ratio 1:1, whereas a grid unit of aspect ratio 4:3 is a unit with one side 1.33 times as big as the other side.

vector	A vector-based image is composed of points and Bézier curves. The computer reads the points and traces the segments, linking them to reproduce the image shape. There is no fixed size or resolution in a vector image. The graphic can be enlarged and distorted as much as desired and the system will simply recalculate the segments and rebuild the shapes. Vector images are translated and displayed in pixels once the calculation is done.
velocity/ease	In animation, the velocity, also known as ease, is the acceleration or deceleration of a motion. This can be achieved by a function curve, or via a series of animated drawings. Other common terms for ease-in and ease-out are slow-in and slow-out.
walk cycle	To avoid making innumerable drawings, animators routinely make a walk cycle for their character. This comprises a series of drawings ``on the spot`` that describe the walk for that character. The illusion of movement is created via the use of background pans.
workspace	In Toon Boom, the workspace is made up of the views, toolbars, and menus.
Xsheet (exposure sheet)	The Xsheet or exposure sheet, is a sheet with several vertical columns and horizontal frames used to indicate a scene's timing. Each column represents a scene's layer. In each column, the drawing numbers are indicated and spread over the specific amount of frames they need to appear. The exposure sheet is used by animators, directors and other members of a crew to track the sequence and timing of images, dialogue, sound effects, sound tracks and camera moves. Also known as a Dope Sheet.
zone	An area which can be painted with colour.