Stop Motion Pro

Quickstart guide

Create your own animated films!

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Stop Motion Pro
Quickstart guide

Stop motion animation is created by moving or changing subject material in front of a camera, while filming each incremental change. Playing back these images creates the illusion of movement, the very essence of animation.

We have designed our software so you can make your own animated films. You can now distribute your films online, even make flipbooks! Stop Motion Pro will ensure you are at the forefront of animation creation technology.

The full potential of Stop Motion Pro is realized when a video camera, digital still camera or web cam is used.

About the Stop Motion Pro Quickstart guide

This guide is designed so you can create your first animated movie with sound using Stop Motion Pro in around 30 minutes. You will need to use a camera to complete the tasks in this Quickstart guide. Information on compatible cameras is on our website.

The advanced features of Stop Motion Pro can be later explored by clicking on the **Help** button on dialog boxes in the software. Our website also includes tutorials showing the tools in action for different animation techniques.

If you would like more information about animation, and to share your ideas with other animators from around the world, visit our website.

www.stopmotionpro.com

Stop Motion Pro™

Before starting Stop Motion Pro connect your camera

The tasks in this Quickstart guide require a live video source; this could be from a Stop Motion Pro Video Adapter, video camera, web cam, Canon compact digital still camera, or Canon and Nikon DSLRs. Connect the camera to your PC according to the manufacturers' specification (via Firewire, USB or S-video etc). Turn on your camera so a live image is seen in the viewfinder. Please refer to our website for the latest information on connecting cameras.

Hints:
- *Remove any DV tapes if using a DV camera.*
- *A webcam is a great way to experiment with the software*
- *Provide mains power rather than battery power to cameras if possible.*

Registration and unlocking

Stop Motion Pro needs to be registered on each machine. When Stop Motion Pro is registered it becomes "unlocked", allowing it to be used without restrictions.

Start Stop Motion Pro and the **Register** dialog is displayed:

Register

To register the software, you will need a **Serial number**, **Computer ID** and an **Unlock code**.

- The **Serial number** is included with the CDROM, or sent by email.
- The **Computer ID** is displayed below.
- If you are connected to the Internet, click **Register Direct Online**.
- The Unlock code can be obtained from our website, www.stopmotionpro.com.
  The **Licensed to**, **Email** and **Computer ID** must be exactly the same as entered on the website when obtaining the unlock code.
- Click **Load Unlock file** to open a text file containing the registration data.

| OK |
| Cancel |
| Help |

Computer ID: **SCGZ92**

Licensed to:

Email:

Serial number:

Register Direct Online

Studio HD

Open Unlock file

Unlock code:

Save Unlock file

Each copy of Stop Motion Pro comes with a **Serial number**. This is attached to the CDROM if purchased via a reseller, or sent by email if purchased on line.

A **Computer ID** is generated by Stop Motion Pro.

If your computer is connected to the internet, simply enter in your name, email address and serial number, then click **Register Direct Online**. This will automatically unlock the software.

If your computer is not connected to the internet, note down the **Computer ID** and, with your **Serial number**, visit our website to obtain an **Unlock code**, and enter it manually.

Task 1 – Make your first animation
In this task you will learn how to create a new project, capture frames, play your animation, use onionskining and be introduced to the editing functions of Stop Motion Pro.

Creating a new production / shot
Stop Motion Pro stores your animations in a structured format that makes it easy for you to create, find and manage your work. When you want to create a new animation, you need to create a **Production** name, then your actual film will be a **Shot** in that production. You can add new shots to your productions later (note, some editions of Stop Motion Pro have additional project management options).
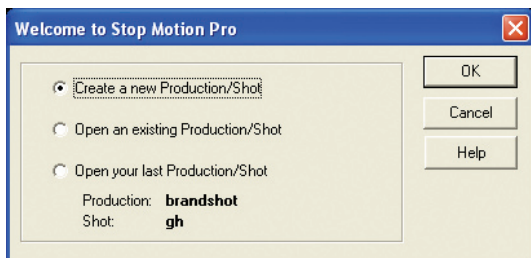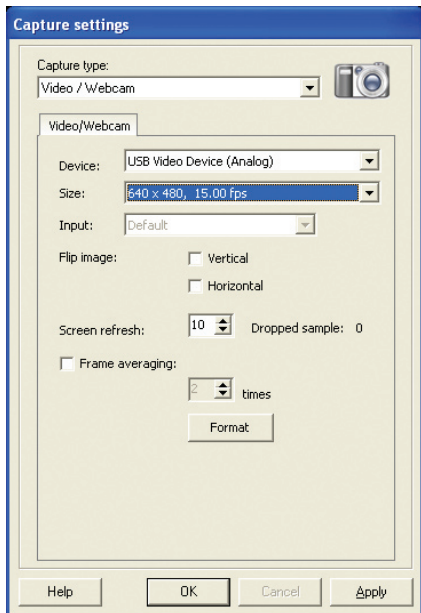

Start Stop Motion Pro and the **Welcome** dialog is displayed. Choose **Create a new Production/Shot**, then click **OK**.
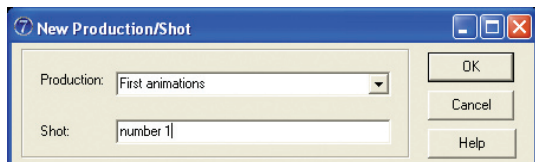
Enter a **Production** name, then **Shot** name and click **OK**.

Once you create a new production/shot, the **Capture settings** dialog is displayed. This dialog is designed to show you what hardware is available for you to use with Stop Motion Pro when making your animation.

A range of capture methods are displayed depending on the video capture card/camera connected and your particular edition of Stop Motion Pro.

Choose the method that best suits how you are working.

Note: Some of the options only appear if you have that type of hardware connected.

Refer to our website for latest camera connection information.

www.stopmotionpro.com

Select the capture method that relates to your camera then set the **frame size** (if required) and click **OK**.

Set up your camera so you are looking at an object (model) that you can move easily – a toy car, cup, pen, anything you can manipulate. You are going to make your first animation by moving the model in small steps, each time taking a photo (called "capturing"). Playing back these captured images creates the illusion of movement, the very essence of animation! Let's get started.

To capture frames, you must be in **live** mode. On the main toolbar, click the **live** button and it will glow to indicate live mode. If you move your hand in front of the camera you should be able to see it moving on screen.

To capture a frame, click the **capture** button.
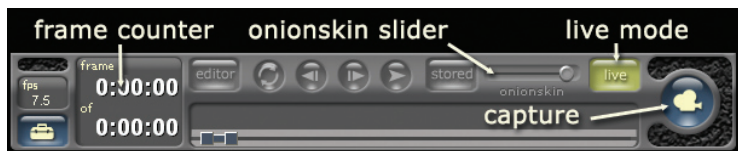
When a frame is captured, the frame counter will increment. Now make a change to the object the camera is looking at.

You can see the difference between the previously captured frames and the current live video by using the onionskin function. Move the **onionskin** slider to the left to increase onionskin visibility.

Let's start to animate the object. Move the object along a straight line, click the capture button to capture a frame after each small move. Do this 10 times, capturing 10 frames.

At this point *leave your hand in shot* and capture a frame; we will remove this frame later. **Capture** another 10 or so frames, moving the object every frame.

Playing your animation

To play your animation you must be in stored mode. On the main toolbar, click the **stored** button and it will glow to indicate stored mode.


Click the **play** button to play your animation. Notice you hand appearing in the shot during the playback.

Click the **next** or **previous** buttons to step though your animation.

Hint:
- *You can quickly toggle between **live** and **stored** mode by pressing the space bar on your keyboard.*

The play rate (how fast or slow the animation plays back) is visible in the **fps** (frames per second) window on the main toolbar. Let's make the animation go faster by increasing the number of frames played every second. Use your mouse and right click the **fps** window, a drop down menu will appear.
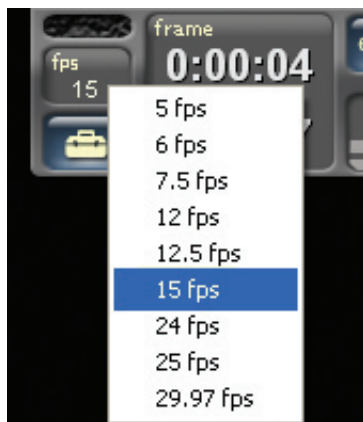

Select the option **7.5 fps**. Now press the play button on the main toolbar. You can see your animation play back slower (this is because 7.5 frames are playing every second, rather than 15).
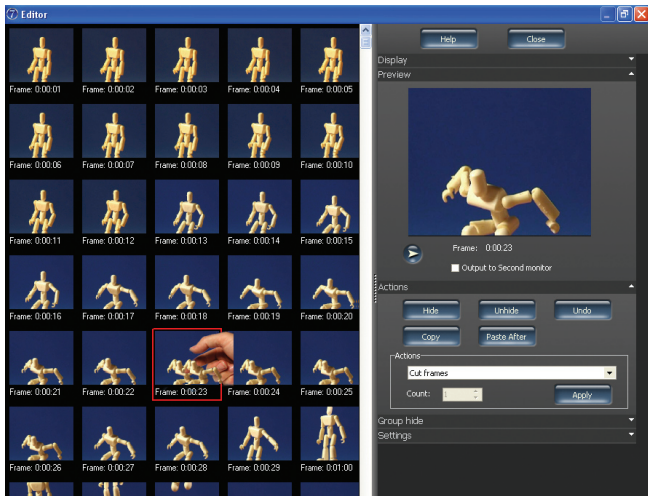
Change the **fps** back to **15 fps** using the same method.

Editing your animation

When playing back your animation your hand clearly appears in shot. Let's remove your hand from the animation using the inbuilt editing tools.

To edit your animation, you must be in **editor** mode. On the main toolbar, click the **editor** button and it will glow to indicate editor mode.
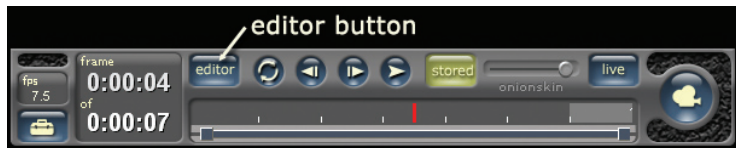
A thumbnail of each frame is displayed.
Use the windows scroll bar (to the far right of the thumbnail images) to navigate through the thumbnail frames in the editor if needed.

Left click your mouse on the frame you captured with your hand in it. The frame will become highlighted in red. On the side toolbar, left click on the **Actions**. You can now choose to hide the frame using the **Hide** button on the right hand side of the Editor window. The frame with your hand in it will have a diagonal yellow line, and will not be visible when you playback the frames. You can check this by clicking the **play** button and watching the animation.
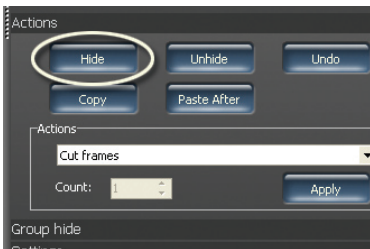
Hints:
  - *Multiple frames can be selected using the **Shift** and **Ctrl** keys.*
  - *Drag and drop can be used to move the frames.*
  - *Double click on a thumbnail frame to go back to stored frame mode.*

Congratulations, you have completed the first task in this Quickstart guide!

Task 2 - Making an animation with a sound track

This part of the Quickstart guide builds on the fundamentals you learnt in Task 1. You will create a longer animation that employs a pre-recorded sound track to direct the action. You will output the final animation as a WMV movie clip that you can use in editing applications such as Windows Movie Maker (for adding titles and other effects).

Stop Motion Pros' audio tools are designed for lip sync and matching animated effects with audio. In many professional studios the audio for animation is completed first, being used as a guide for the action. You can of course add audio to an animation after it is filmed.

Firstly let's look and listen to an animation with an audio track. To watch the animation you need to open Microsoft "Windows Media Player". Do this by going to your Windows **Start** menu, locate Windows Media Player. In Media Player select **File|Open** and open the movie below:

C:\Program Files\Stop Motion Pro v7\assets\Quickstart\quickstart_movie.mpg

It is a 3 second animation of a character walking into an object. You are going to use the same audio track to make an animation. Find a character to animate - you could use a plastic figure, toy car, pencil sharpener - whatever you have lying about. You will also need an object for the character to bump into, this could be a cup, box or telephone, and again, use whatever you have at hand.

Start a **New Production/Shot** in Stop Motion Pro. Name the **Production** *My animation* and the **Shot** *walk crash,* then click **OK**.

Set the capture parameters as you did in *Task 1*. Once you have a live view from your camera, set up the object that is going to be bumped into to the right of the screen. Position your character to the left of the screen, just out of shot.

Check your frames per second rate (fps) on the main toolbar. Ensure the (fps) is set to 15. If you need to adjust it use your mouse and right click the **fps** window, a drop down menu will appear, select **15 fps**.

Animating with Audio

Before you start to animate, we need to add our audio track and ensure that it starts at the right time. To do this, select menu **Tools|Audio sync**.
Select the following WAV file:
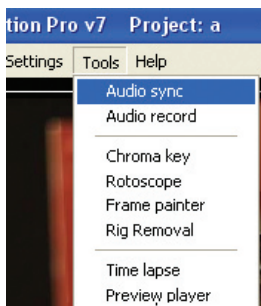
C:\Program Files\Stop Motion Pro v7\assets\Quickstart\walk_crash_ow.wav

The **Audio sync** window will show the wav audio file as a green wavy line, a visual representation of the audio track. Click the **play** button on the **Audio sync** window to hear the audio file. In the diagram below you can see the key noises that we want to synchronize our animation to. The audio file starts with footsteps from the character that crashes into a cup, the character then says: *"Owww!"*
The short vertical lines under the audio waveform indicate where the actual frames of the animation will fall.

To make sure the audio starts and stops at the right time we need to "synchronize" to frame 1 of both the visual frames and the audio frames.
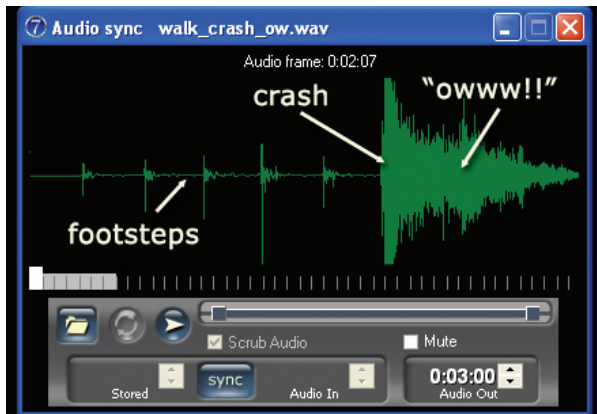
Let's do this now. Left click on the green wav form and drag your mouse to the left until you are on frame 1. Click the **sync** button on the **Audio sync** window. The **Audio sync** window toolbar should look like this:
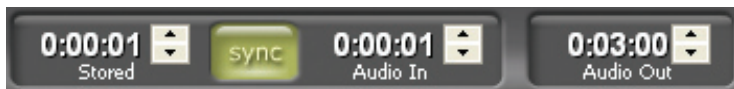
Now you can start animating your characters to the audio track. Capture a couple of frames, move your "person" character into shot slightly. Take another couple of frames and move the character again.

The frames that you have captured are shown in grey, with the current stored frame highlighted in white. This gives you a clear indication what point you are up to in your sound track.

Take a moment to look at what is happening on the audio track:
The key point is the moment that the character hits the object. This is exactly 2 seconds into the soundtrack. Move your character around the set as you capture each frame, aiming to hit the object at the 2 second mark.
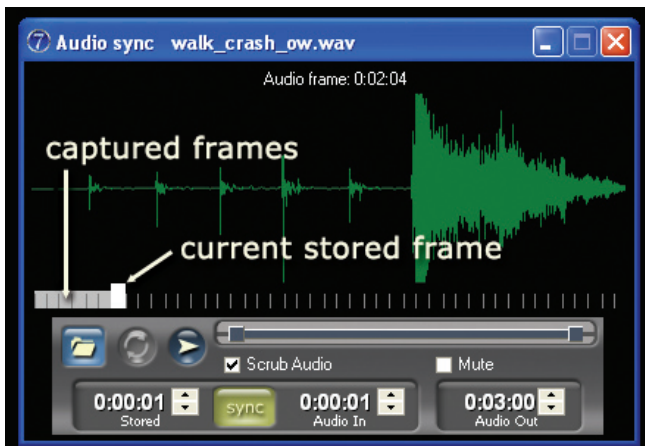
If you need to, review the sample video to see how we animated with this sound track. To watch our animation we need to open Microsoft "Windows Media Player". Go to your Windows **Start** menu, and locate Windows Media Player. In Media Player select **File|Open** and open the movie below:

C:\Program Files\Stop Motion Pro v7\assets\Quickstart\quickstart_movie.mpg

Consider using the editor to copy, paste or hide frames (as you learnt in Task 1) improving the timing of the events. Be prepared to try animating this scene a couple of times. You will find your animation will improve dramatically from one shot to the next. Give your shots different names so you can review your progress later.

Hint:
*Try "scrubbing" the audio in the audio sync tool, click the right mouse button in the frame indicator on the main toolbar and select **Scrub audio**. Hold down the left mouse button over the frames slider and move from left to right to hear the audio.*
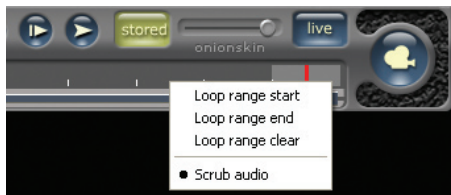
Once you have finished filming your animation you can move onto the next step, turning it into a movie.

Making a movie

After creating your animation sequence it can be exported to a wide range of applications. This can be useful if you want to put your animation onto DVD, email or the web, or if you want to add titles, fade in/outs, dissolves music or other sound tracks with video editing software.

Select main menu **File|Make movie** to output your animation from Stop Motion Pro. The **Make movie** dialog is displayed.

For this example, make sure you have selected **Use audio file** which includes the audio file you have used in your animation in the output movie.
Select **All frames**.
Specify the height and width of the output movie (leave as is for now). Click **OK.**
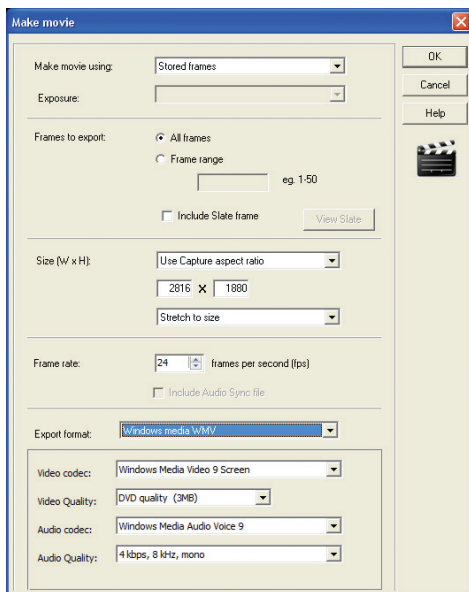
Give your animation a filename:
my animation.wmv
and save it to your desktop.

Congratulations on completing this task! You have made your first animation with audio.

You can now open this file in Windows Media player for viewing or Windows Movie Maker for editing.

Hints:
- ***WMV** has a smaller file size and plays back reliably on a wide range of machines, you should use this option to email movies. You will need to experiment with different audio and video compression settings, as they are dependent on your system*
- *Use **AVI Lossless** to export the animation to a video editing software application for output to DV tape or DVD.*
- *Also note the **File | Export to YouTube** function for easy online distribution of your animation.*

Recording an audio track

It is great fun to record your own audio over your animation. With the audio recorder and a microphone, it is easy to add dialogue and sound effects while you animate.

Select main menu **Tools|Audio recorder** and the **Audio recorder** window is displayed.

Ensure your microphone is connected to your computer. To set up your audio recording, use the three drop down menus at the top left (**Device, Input** and **Format**).
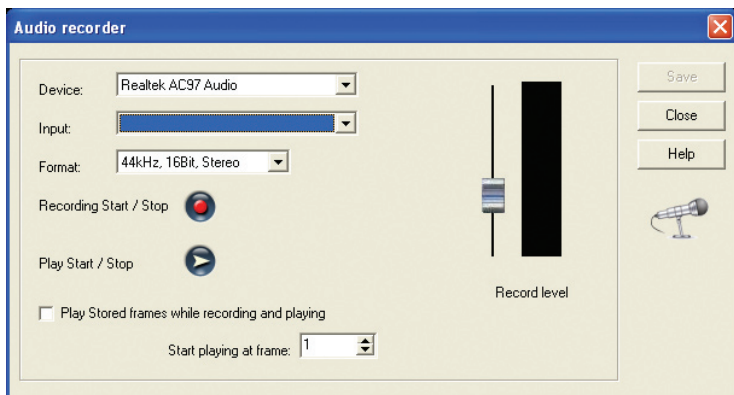
Press the **Recording Start / Stop** button. When you speak into the microphone you should see movment on the recording level indicator (two green bars). To stop recording simply click the Start/Stop button again. You can save the audio files (for editing later) or

have them automatically syncronised to your current animation in the audio sync window.

You can check the box marked **Play Stored frames while recording and playing**, letting you use your already filmed animation as a guide while recording audio.

Once you have finished recording, you can have the audio file imported into the Audio sync tool automatically, so you can use it as a guide for your animation.
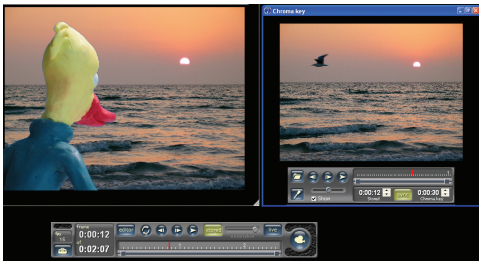
Chroma key

Use the Chroma key tool to replace a specific color range in your **live** video with another image. This is also known as green screen or blue screen.

This is demonstrated in the image below where the background around the character (a blue colour), is going to be replaced with an image of a sunset.

Left:
Before choma key

Left:
After chroma key applied

To use the chroma key tool: Select main menu **Tools|Chroma key** and the **Chroma key** window is displayed.

For Chroma key functions to become active you must synchronise the Chroma key file to a stored frame.
  - Select the stored frame using the slider bar on the main toolbar
  - Select the Chroma key frame using the slider bar or playback buttons on the Chroma key window
  - Click **sync** and the button will be highlighted in yellow.
  - When synchronized, the locked stored frame number and the corresponding Chroma key locked frame number are displayed in the Chroma key window.
  - As you step through the stored frames with the main toolbar the Chroma key will remain in sync.

Select the Chroma key **color picker** button and click the left mouse button on the color in the live video window that is to be replaced by the Chroma key image.
Using the tolerance slider it is possible to blend the Chroma key footage with the live video image.

Once synchronized, the chroma key effect can be made visible or not by checking the **Show** option on the Chromakey tool window.

Hint:
  - *For Chroma key (or blue / green screen) to be effective lighting must be even on the background color. Soft focus, hair and other factors can influence the results from this tool.*

Other tools
There are some fantastic tools in Stop Motion Pro. They are designed to make your animation experience even more fun and give you the power to push creative boundaries.

Frame Painter - all editions
Paint directly onto frames. Great for adding explosions, flowers, thought bubbles, lightning strikes and even mouths!

Time lapse - all editions
Use Time Lapse to automatically capture images at predefined

intervals. Time lapse is used to condense time, which is great for showing clouds racing across the sky, fl owers opening or digging up fossils!

Rotoscope - some editions
Import and sync video and still images to use as a guide for your work. Great for learning the craft of animation.

Rig Removal - some editions
An amazing tool that lets you remove wires, supports and cut out parts of frames to reveal others underneath.

Flip book - all editions
Have a printer? You can print out your animation as a flip book and share it with anyone, anywhere!

What next?

So, you have made your animation, it is looking good and you want to add animation sequences together, include multiple audio tracks, titles, further editing and finally output to DVD.

There are other video editing applications for the PC and MAC that will work with Stop Motion Pro, use the **File|Make movie** function   to output AVI, WMV or MOV files.

Recommended video editing packages:
- **Movie Maker** is an entry-level video editing tool. It's a free component of Windows that's easy to use and has many features.
- The **Stop Motion Pro Video Adapter** includes ArcSoft Video editing software

There are many features in Stop Motion Pro you can use to improve the quality of your animation:
- **Overlay and markers** allow markers and lines to be placed over you animation to help with lineup and create smooth motion
- Options allowing you set personal preferences for a wide range of features and functions, including keyboard shortcuts and where projects are stored
- **Multiple users** can each have their individual settings and storage area for projects
- **Free soundtracks** - Stop Motion Pro includles free audio files for your films. You are free to use and distribute these audio clips with your animation. You will find these in:
  C:\Program Files\Stop Motion Pro v7\assets\audio_files

More information can be found in main menu **Help|Contents**

We look forward to your comments and feedback.

Stop Motion Pro

Create your own animated films!
www.stopmotionpro.com