

# VST Pro User Guide

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This guide will cover the VST Pro branching video player and editor.

(Important Note: The Zone editor is recommended to run on at least a 1366x768 or higher desktop resolution. It will work on a 1280x720 resolution but you will need to hide the taskbar.) (Also Note: You can install the VST to a different PC to use the editors and create scenes if needed. The editors do not require a license code to use.)

## Recommended Video filming settings

- Set you camera to record at 1280x720 @ 30 fps or 60 fps.
- Use shotgun or lavalier mic for best audio.
- Frame your scene knowing the size the image will be projected on a screen.

## Creating New Scenes

The VST Pro includes the tools needed to add new scenes. The basic steps are as follows:

1. Film scene clips and edit as needed and export at 1280x720 resolution.
2. Video clips must be at 1280x720 resolution before converting to the Theora codec.
3. Convert clips to Theora codec.
4. Create new scene by running the Scene Editor from the Smokeless Range menu and clicking on Create. Then follow the steps under The Scene Editor section of this manual to add all your video clips to the scene.
5. Use the Zone Editor to add any needed hit zones.
6. Use the Scene Editor to build the scene structure.

## Video Requirements

Video Clip Resolution – 1280x720


Theora Video Codec – Must convert all video to the Theora video codec with the included Video2Theora converter.

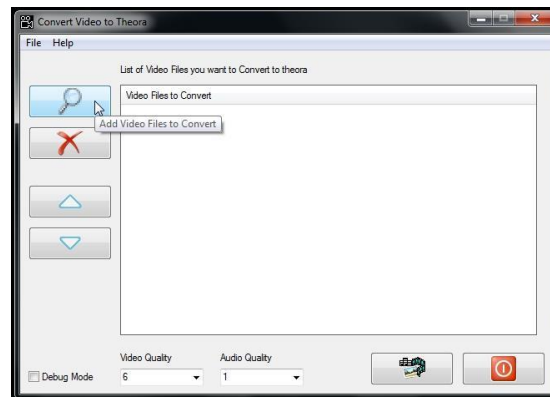
## Convert Video to Theora Codec

The VST Pro player uses the Theora video codec which has a file extension of .ogg or .ogv. The VST Pro installer will have installed the Video2Theora video converter on your desktop.

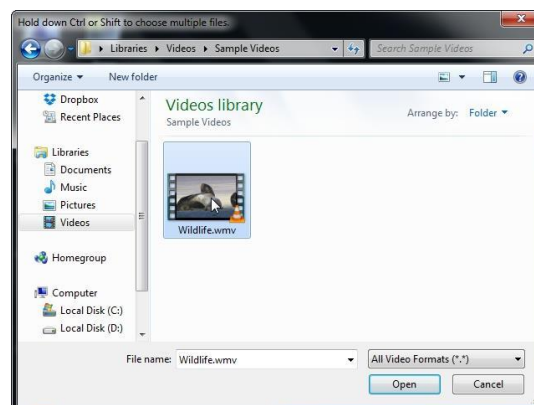



Launch the Video2Theora converter from the desktop icon.

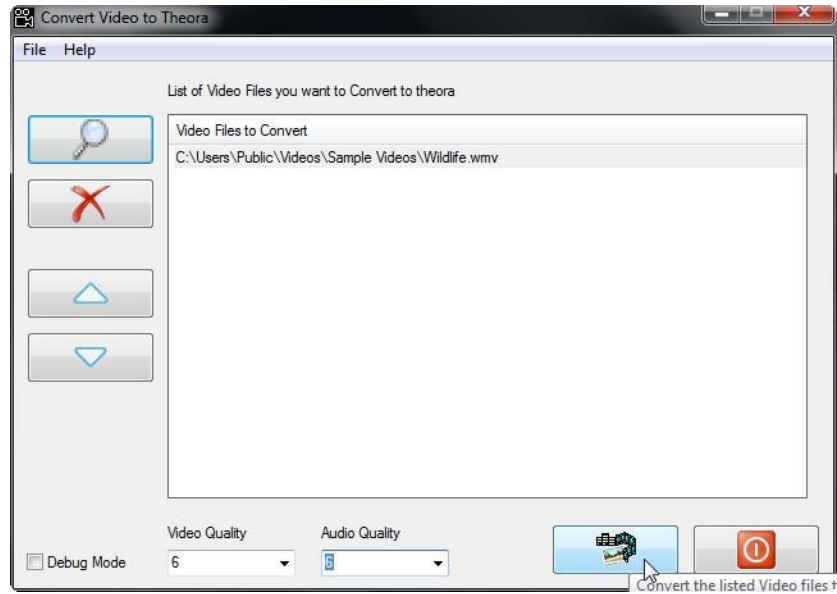
Click the  icon to select your new video file.



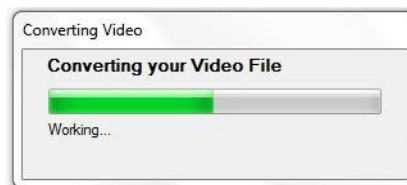
Navigate to and select the video file you want to add to VST and click Open. You can add several videos at a time if converting multiple videos. **Please note that the converted videos will be placed in the same folder as the original file.**



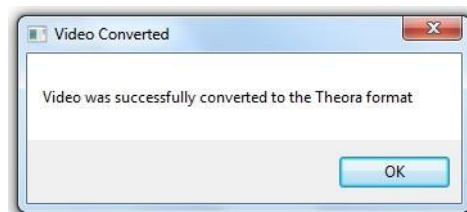
Set the video quality and audio quality both to 6 and click the  button to begin converting the video.




Wait for the video file to be converted. Depending on the size of the file this can take several minutes.



Once the video has been converted, click OK.

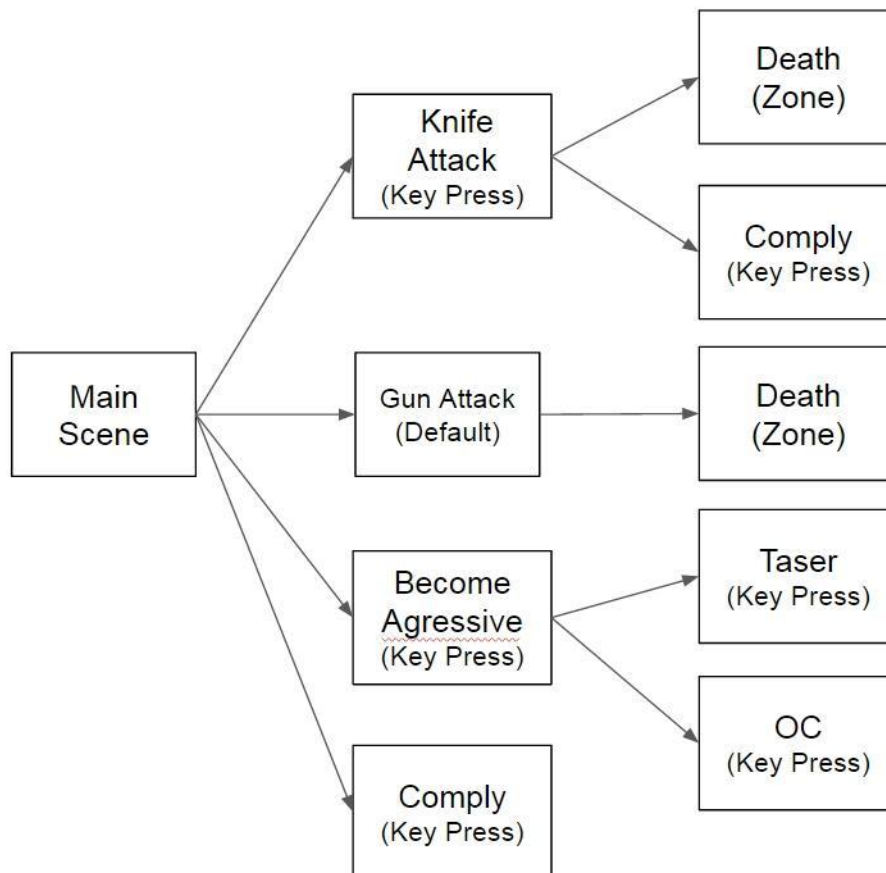


Now exit the converter by clicking the  icon.

## Scene Architecture

The VST Pro is capable of having multiple outcomes so keep this in mind when filming your scene. The typical scene will consist of a Main scene that leads up to an action point where the video can branch into one of several actions. This would typically be an attack of some kind, a comply, or even a non-report type issue.

Typically you will film the Main scene up to this action branch point and then cut your scene and have the actors hold their positions as best they can. Then have them act out the different branch scenes one at a time. After each branch have your actors return to their previous positions and then act out the next action. As an example, Film the Main scene and then cut the scene. Then with the actors starting in the same positions they were in when the Main scene was cut have them act out an Attack scene. When filming the Attack scene have the actor play out the scene as if the trainee did nothing to stop them. Then have the actor act out getting shot and falling over as a death scene. Then have the actors reset into the Main scene positions again and then film a comply scene and so on. The below diagram illustrates a scene clip architecture.

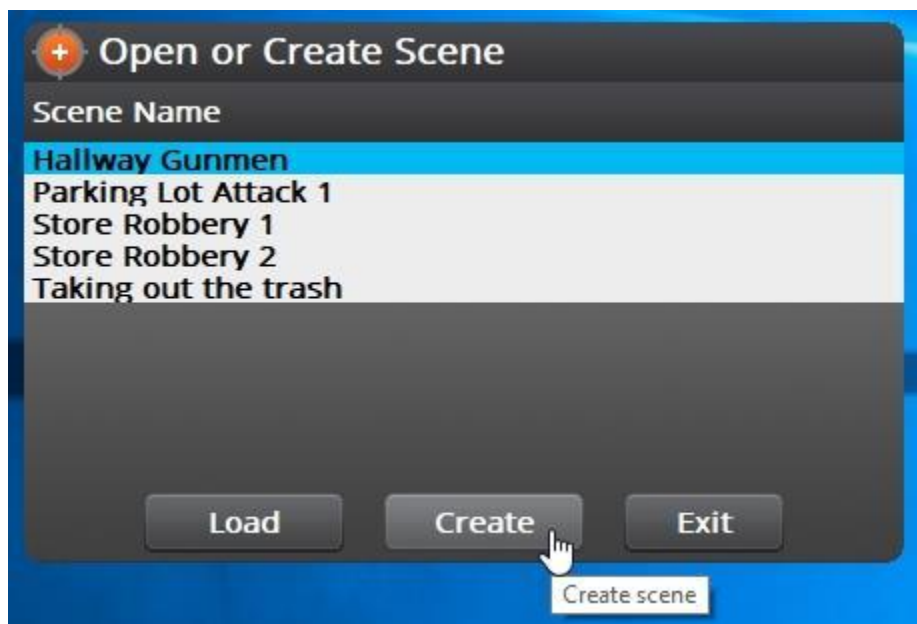


## Create New Scene

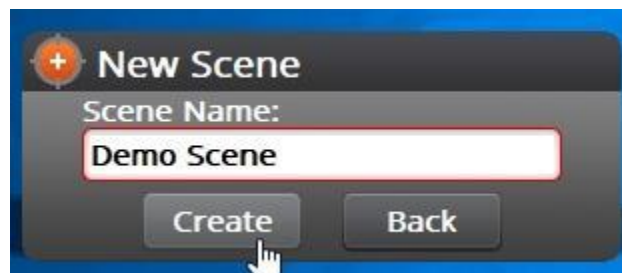
Launch the Scene Editor from the Smokeless Range Menu by clicking VST Pro Edit.



Click Create



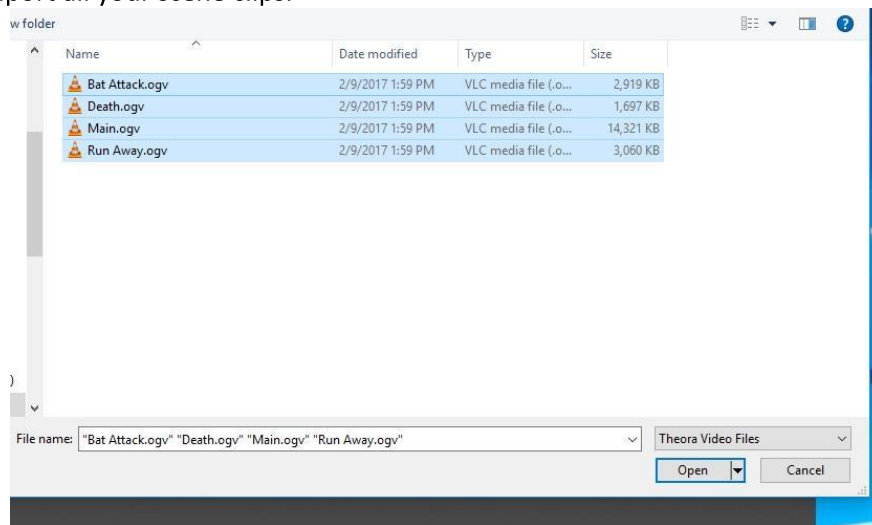
Enter a name for the new Scene and click Create



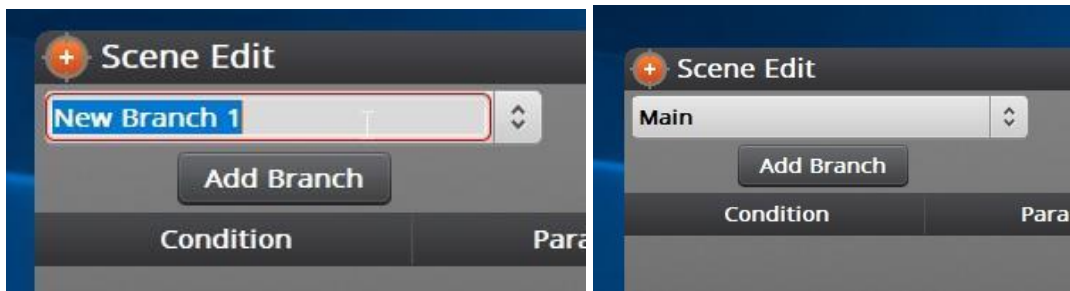
The Scene Editor will now be displayed. The Scene Editor tells VST how to present the video clips and how to handle zones and hot keys.

## Build Scene

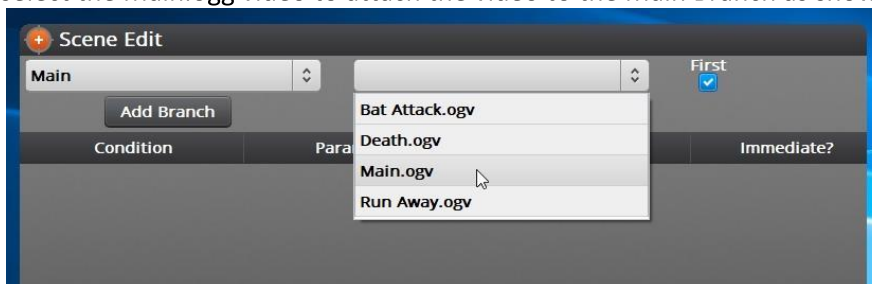
1. Click Add Video, navigate to the folder with your converted clips, select all the clips and click Open to import all your scene clips.



2. The Scene consists of Scene Branches and their associated Video Clip. Add the first branch by clicking Add Branch. The Main scene should be the first branch you add. You can click in the box and rename the branch to Main as below.



3. Now attach the Main scene video clip to the Main branch you just created. Click the drop down arrow and select the Main.ogv video to attach the video to the Main Branch as shown below.



4. Now click Add Branch and add your next branch. Then associate the correct video clip with it. Continue this process until you have added all of your branches.
5. Once you have all your Branches added and their video clips attached, you can click the drop down in the Branch box and select through the branches and make sure the correct video clips are attached to each one.

## Zone Editor

Use the Zone Editor to add a hit zone to any clip that can result in a death. For example, if a suspect pulls a weapon in an aggressive manor you would add a hit zone to the video clip so that the VST player will know if the trainee shoots the suspect. If the trainee shoots a hit zone the player will branch to a death scene. The Zone is a mask that you add and shape using control points that covers the desired hit area of a character in the scene. The Zone is moved and shaped over each frame to follow any movement by the character.

Select the Branch that you want to add a zone to and click Edit Zones. The Zone Editor will now be displayed.

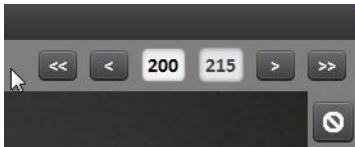


## Zone Edit Controls

Add/Remove Zone – Use to add/remove and name zones.



Frame Navigation – Use to navigate through the clip frames. Click on single arrow to move one frame and click on double arrow to jump 10 frames. You can also click in the number box and type in a frame number then click in the light gray bar next to the arrows (where the mouse is in the below picture) to jump directly to a frame.



Zone Controls – Use these to define the hit zone.



-Move all points at same time.

-Add a point.

-Remove a Point.

-Add point with each mouse click

-Change to frame will affect all following frames when blue. (So if you move the zone in a frame, the zone will also be moved the same amount in all following frames.) When this is gray, changes will only affect the current frame. (So if you move the zone in a frame, this will not affect all following frames.)

Zone Active/Inactive – When this is blue the zone is inactive. When this is gray the zone is active. Use this so that the zone is only active when threat is present in clip.



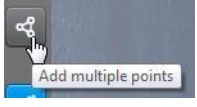



Save and Exit – Save will save your current work but keep the Zone Editor open. Exit will close the Zone Editor without saving any changes.

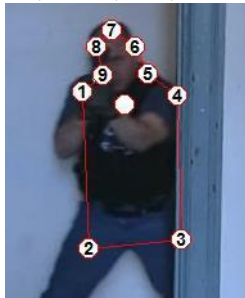
**Note: It is important you save your work after any big changes and before exiting or your work will be lost!**

## Creating a Zone

1. Click Add Zone and give the zone a name like Death1. This most important if there are multiple zone to be created.
2. When the Zone Editor is opened the video clip will start on frame 1. It is best to advance the clip to the first frame where you will want the zone to become active. This way the target character will be presenting in a way where you can add the whole zone. Especially if they are coming out from behind an object.

3. Click on the add point with each mouse click button to turn it blue.  Now click to add control point markers to define the zone. When done click on the Move a Point button so

you will not add any more control point.  Your zone will look something like the one below. Remember that the zone shape is up to you and this is only an example.



4. Make a note of what frame you want the zone to become active. Now go back to frame 1 by entering 1 in the current frame box and then click to the left in the gray area to jump to frame 1.



5. Make the zone inactive by clicking the Zone Inactive button and turning it blue. Then enter the frame you made note of where you want the zone to become active into the current frame box and jump back to that frame. Now click the Zone Inactive button to turn it gray. Now the zone is inactive from frame 1 to this frame and is now active from this frame on.
6. Now use the arrows to move forward frame by frame and make any needed adjustments to the zone control points to keep the zone aligned with the desired hit zone on the character.

7. If you do not want the zone to stay active until the end of the video clip, you can click the Zone inactive button again once you are on the frame you want the zone to become inactive. Then any remaining frames the zone will be inactive.
8. Once you are done adding the zone, click Save and then click Exit.

## Design the Scene

6. Select the Main Branch in the drop down list.



7. Click Add Action. An Action defines what to do with the branch.



- Condition
    - Default – This will happen if no input is given by the instructor or the trainee.
    - KeyPress – Allows an action to be assigned to a keypress. Like branch to a Comply Scene.
    - Zone – If the selected Branch has a hit zone this allows the zone to be selected and a video clip to branch to when the zone is shot to be assigned.
    - Random – This will randomize which clip that will come next if no input is given.
  - Parameter – The parameters given will depend on what Condition is set.
  - Branch – Use this to set the Branch to jump to when the Action occurs.
  - Immediate – If this is selected the action will happen immediately when activated. If it is unchecked the action will happen when the current video clip ends.
8. Since our demo scene only has a death branch, I will select Zone under Condition. Then under Parameter I will select the correct hit zone that I named Death1. Under Branch, I will select the Death Branch I named Death. I will then select Immediate because I want the branch to happen immediately if the zone is shot.



9. If my scene had other branches that can happen from the main scene, I would add an Action for each one. If I had other actions for another Branch then I would select that Branch from the Branch list and then add Actions to it next.

10. Once you are done building the scene, Click Save and then Click Exit.

(Note: If you do not click Save before you click Exit your work will be lost!)

## Run New Scene in Player

Now that your new scene is complete run it to ensure it works as you designed it. You should see your new scene listed in the Scene List. Click on the scene and click Load to run the scene.

## Support

For support or help with the VST Pro or any Smokeless Range software, contact us at [support@calibersimulation.com](mailto:support@calibersimulation.com).