

GETTING MORE FROM SHOGUN

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About this guide

About this guide

After you've become familiar with the topics covered in *Getting started with Vicon Shogun*, you may want to take your use of Shogun further. The following topics describe some of the ways in which you can do this.

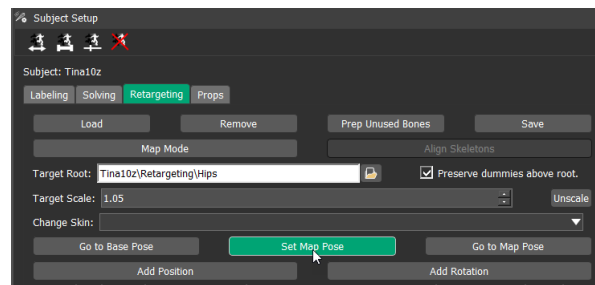
- [Map pose and best rig practices on page 3](#)
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For information on scripting with Shogun, see the *Vicon Shogun Scripting Guide* and for information on retargeting, see *Retarget with Shogun Post* in *Getting started with Vicon Shogun*.

Map pose and best rig practices

Map pose and best rig practices

Map pose is used to constrain the target skeleton to the source skeleton. To get the optimum results from the retarget, the source and target poses need to be as close as possible.



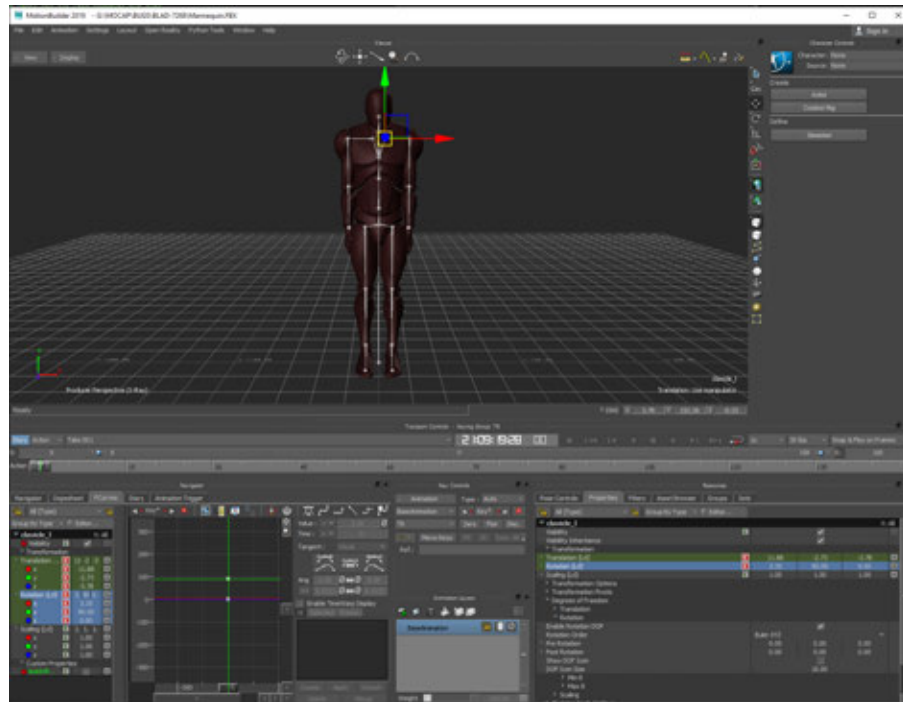
When you click **Set Map Pose**, Shogun Post takes any differences between the two skeletons and stores them as offsets within the VSR file. Any joints with default values or keys are copied onto pre-rotation to match the source Vicon skeleton and stored as the map pose for the solver to use. The original values are maintained in the FBX or USD skeleton, enabling the skeleton to be imported back onto the original rig without any issues.

In addition to supporting the use of skeletons that use pre-rotation to define the base pose (see Retarget with Shogun Post in *Getting started with Vicon Shogun*), Shogun Post also supports the use of skeletons that have zeros for pre-rotation and use keys or default values to achieve this.

For example, Mannequin.FBX is a commonly used target skeleton. It contains joints like the clavicles which, instead of using pre-rotation, use keys to define a base pose, (or more accurately, the appearance of a base pose, as the actual base pose is not a real base pose.)

Map pose and best rig practices

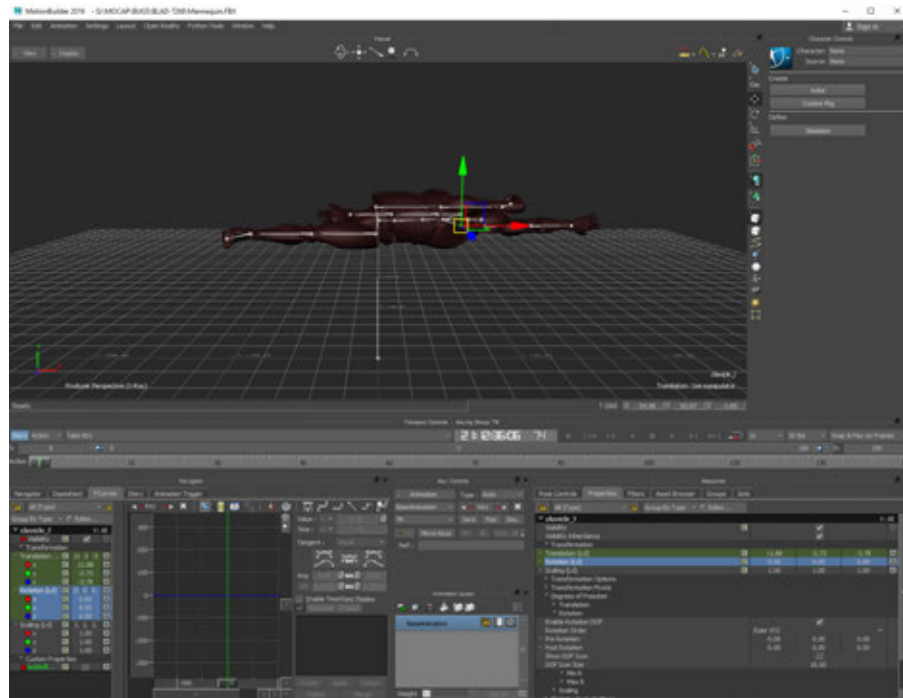
When Mannequin.FBX is loaded into AutoDesk® MotionBuilder®, at first glance it appears to be in a base pose:



However, notice that the pose is actually defined by a set of keys on frame 0 and the pre-rotation (as seen in the Properties) is zeros for bones like the clavicle, which have a rotation so the X axis can point to the side even though its parent has the X pointing up.

Map pose and best rig practices

To see the actual base pose, delete the keys and set all the rotation values for all bones to zero:



This demonstrates why it's better to use the pre-rotation to define the base pose. When all keys are removed, and all bone set to zeros, it's preferable to have a base pose that's a clear T- or A-pose instead of the stack of bones shown above. It's also more sensible because the animation you place on a skeleton via mocap or hand-keying is easier to deal with when poses are relative to zero. For example, it's easier to think of a bend of the elbow as X degrees from 0, not X from 90, which is what you'd have if straight was actually 90 because of the current base pose.

Ideally, you would rebuild skeletons like this to use pre-rotation instead, but this is not always possible. When it's not possible, you can still use the skeleton, but you must set the map pose (see Retarget with Shogun Post in *Getting started with Vicon Shogun*).

Benefits of using map pose:

- The pose used during mapping is saved and restored when you go back into map mode or load the VSR into the Retarget app.
- The target skeleton matches the source skeleton's joint orientation more closely, resulting in a better solve.

Work with custom props and meshes

Work with custom props and meshes

You can add custom prop meshes in Shogun Live and manipulate the prop during a shoot. These updates are seen instantaneously in engine, so that you can correctly position props and virtual cameras.

 Watch the Vicon video, [Shogun Live Prop Manipulation](https://youtu.be/o7X0QICz3H0)¹ on YouTube.

 Watch the Vicon video, [Shogun Live Prop Manipulation](https://vimeo.com/275782908)² on Vimeo.

Note

As the videos were recorded using an earlier version of Shogun, you may notice minor differences in the user interface.

For information on using a custom L-frame to set the origin, see *Set the origin with a custom L-frame* in *Getting Started with Vicon Shogun*, Calibrate cameras.

To create custom props:

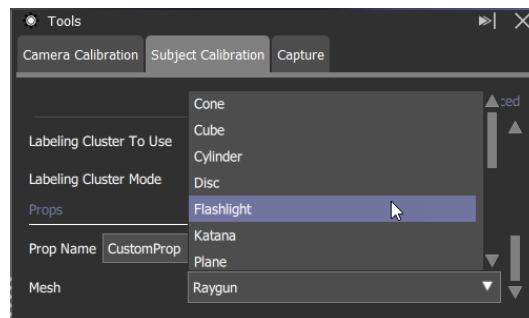
1. To make a custom prop mesh available in Shogun, copy the `.fbx` file into `C:\Users\Public\Documents\Vicon\PropMeshes`.
(Any skinned FBX object can be a prop, provided the skin bone is called Root.)
You will now be able to select it from the **Mesh** drop down list as described below.
2. In Shogun Live, to make it easy to select the required trajectories, in a 3D Perspective pane, pause the real-time stream (press the space bar).
3. Select the markers in the correct order:
 - a. Root
 - b. Target
 - c. Up vector
 - d. Any other markers
4. On the **Subject Calibration** tab, in the **Props** section, enter the name of the prop.

¹ <https://youtu.be/o7X0QICz3H0>

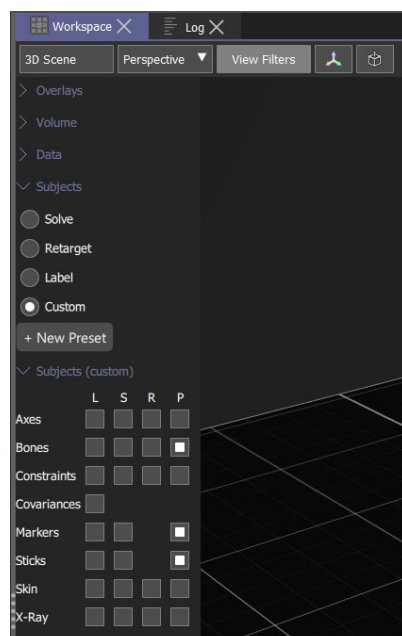
² <https://vimeo.com/275782908>

Work with custom props and meshes

- From the **Mesh** dropdown menu, select the *.fbx* that you made available in Step 1.

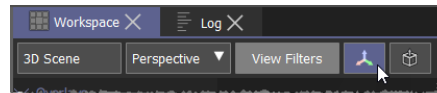


- Click **Create Prop**.
- Un-pause the real time (press the space bar again) to see the prop and mesh move together.
- To change the view of props independently of subjects, select **View Filters** and then select the **Props** options that you want at the bottom left of the pane.



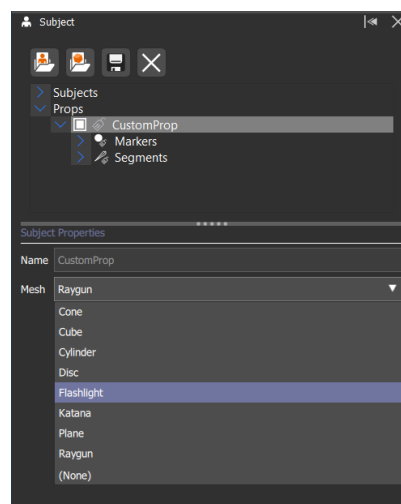
Work with custom props and meshes

- To change the position of your new prop, pause the scene, select the root bone and use the Object Manipulator (select it at the top of the 3D Scene view or press M). Note that you can't currently use the manipulator in the Cameras view.



- When you have finished manipulating the prop, its constraints are automatically updated and a new version is saved.

You can quickly change skins for both subjects and props. To do this, on the **Subject** tab, select the subject or prop whose skin you want to change, and in the **Properties** pane below, from the Mesh list, select the required skin.



Create a subject calibration hotspot

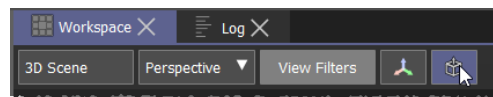
Create a subject calibration hotspot

To avoid having to clear the volume whenever you need to calibrate or re-calibrate a subject, you can use visualize the reconstruction volume and set aside a part of the volume (known as a hotspot) specifically for subjects to perform their calibration ROMs, leaving the rest of the volume free.

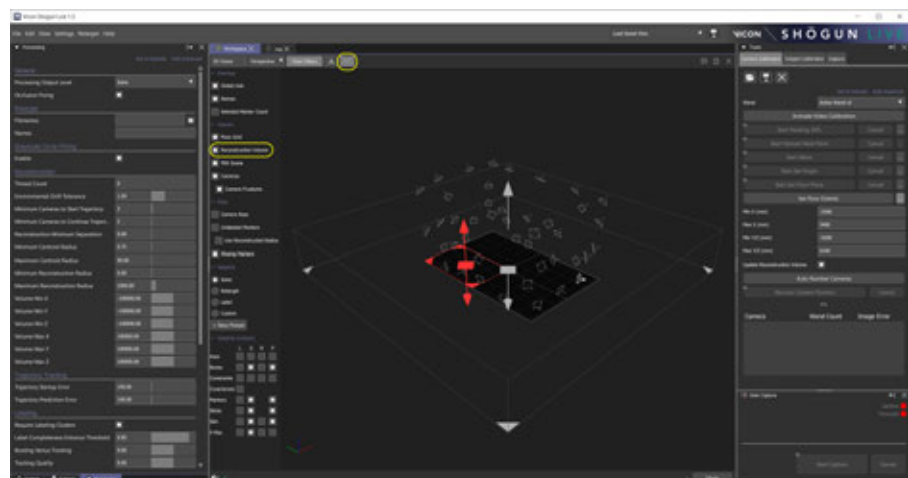
Before you begin, ensure you have completed the usual setup steps, including camera calibration, as described in *Getting started with Vicon Shogun*.

To view the default reconstruction volume and subject calibration hotspot:

1. In Shogun Live, in a **3D Scene** view, display the **View Filters** and ensure that **Reconstruction Volume** is selected, as well as any other options you want.
2. At the top of the view pane, click the Reconstruction Volume Manipulator button.



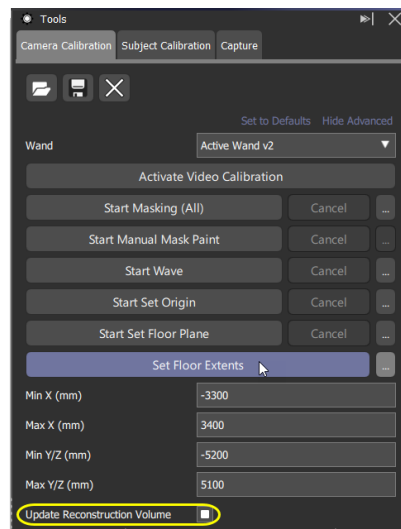
3. The boundaries of the reconstruction volume (gray) and subject calibration hotspot (red) are displayed in the 3D Scene view.



Create a subject calibration hotspot

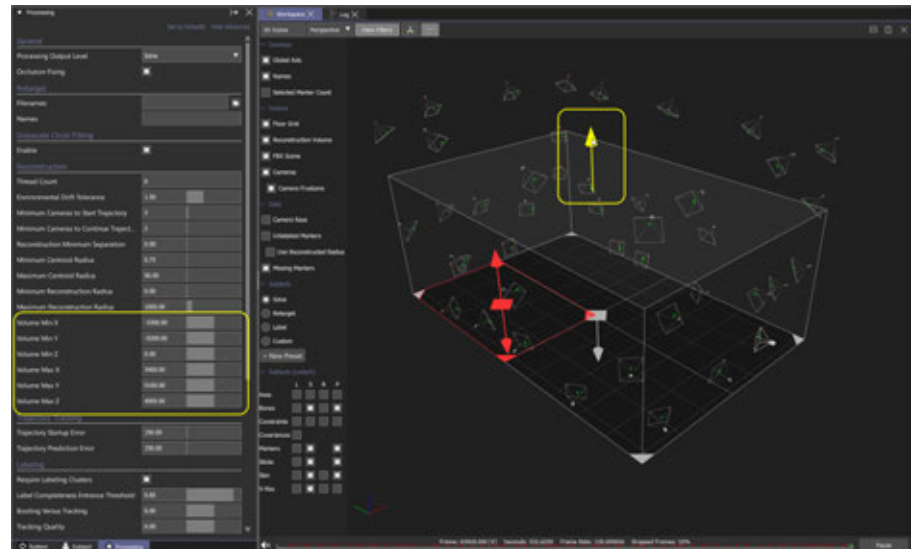
To modify the reconstruction volume:

1. If you want the reconstruction volume to match the current floor extents, in the **Camera Calibration Tools** panel, display the Advanced properties, ensure the **Update Reconstruction Volume** checkbox is selected and click **Set Floor Extents**.



2. Specify the size of the reconstruction volume (gray) in either of these ways:
 - Drag the gray arrows, which turn yellow on selection, to change the boundaries.
To move the position of the whole reconstruction volume, drag the gray diamond shape from the origin.
Or
 - On the **Processing** tab, ensure the **Advanced** properties are displayed and in the **Reconstruction** section, change the values of **Volume Min X, Y, and Z** and of **Volume Max X, Y and Z** to reflect the required volume size and position.

Create a subject calibration hotspot

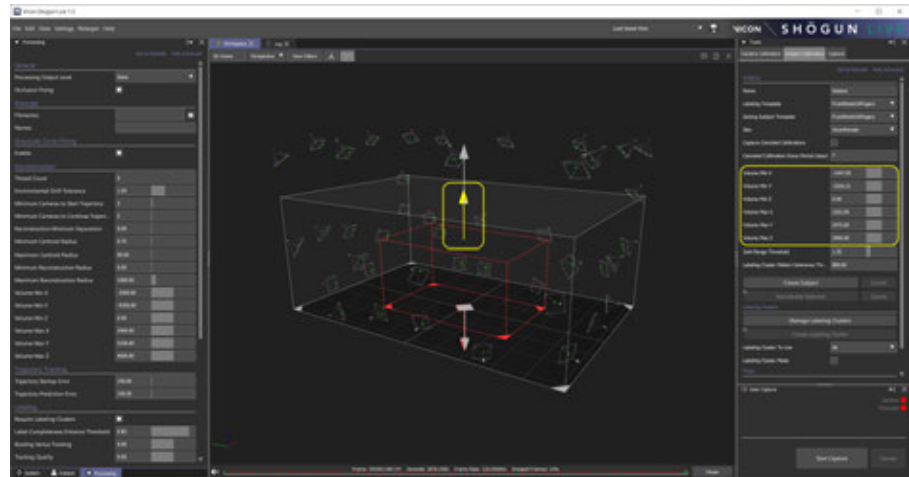


To modify the subject calibration hotspot:

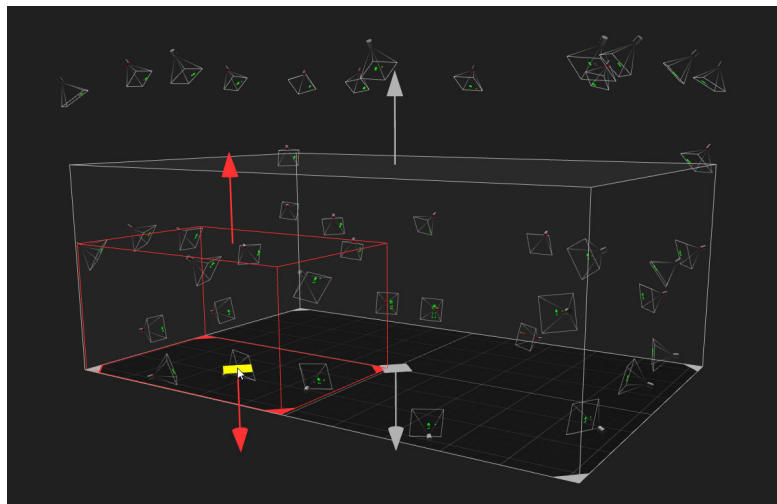
In a similar way as the reconstruction volume, you can specify a subject calibration hotspot (red).

1. Specify the size of the hotspot in either of these ways:
 - Drag the red arrows (which turn yellow on selection) to change the boundaries. To move the position of the whole hotspot area, drag the red diamond shape from the origin.
 - Or
 - In the **Subject Calibration Tools** pane, ensure the **Advanced** properties are displayed and in the **Subjects** section, change the values of **Volume Min X**, **Y** and **Z**, and **Volume Max X**, **Y** and **Z** to reflect the required subject calibration hotspot size and position.
2. The results of your changes are displayed in the 3D Scene.

Create a subject calibration hotspot



3. If required, move the subject calibration hotspot to a different part of the volume either by dragging the red diamond shape or by amending the **Volume Min X, Y, and Z** and of **Volume Max X, Y, and Z** values in the **Subject Calibration Tools** pane.



Run Shogun processing on multiple machines

Run Shogun processing on multiple machines

Shogun Live's multi-machine capability enables you to reduce dropped frames by running a standalone agent on one or more other machines on the same network.

- [Requirements for multi-machine processing on page 14](#)
- [Set up multi-machine processing on page 15](#)

See also:

 [Vicon Shogun 1.3 Live Tutorial - Multi-machine Workflow³](#) on YouTube.

³ <https://youtu.be/41bv18ULhAQ>

Run Shogun processing on multiple machines

Requirements for multi-machine processing

- Agent machines with high clock speeds
- Agent(s) and master machine running on the same network
- Network adapters on the network set within the range 192.168.128.###



Port numbers

Normally, you will not need to change the default port number, 37415.

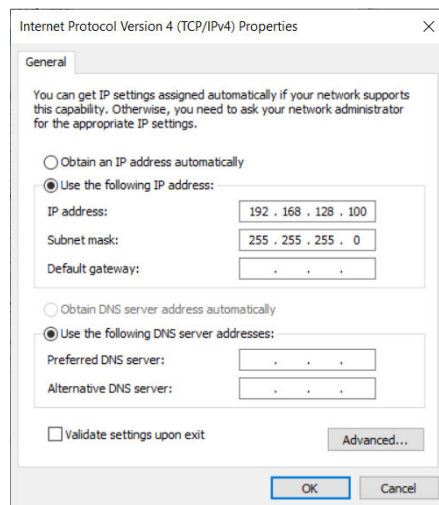
If this clashes with another application:

1. Run `ShogunAgent --port=<port number>`
2. Set the matching number in the **Add Agent** dialog box.

Run Shogun processing on multiple machines

Set up multi-machine processing

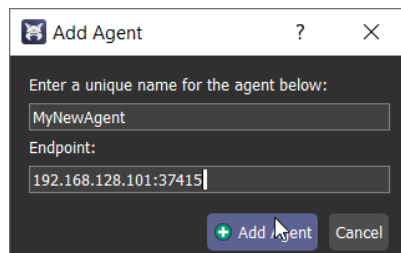
1. On the main machine, note or set the IP address. In the following example, the address is 192.168.128.100.



2. On the agent (slave) machine, note or set the IP address. In this example, it is set to 192.168.128.101.
3. Open up CMD/PowerShell and ping each machine to make sure there is a connection.
4. On the agent machine, install the agent installer (the *ShogunAgentInstaller* file, found in the Shogun installer) and run it.
5. Install the same version of Shogun on the main machine and run it.
6. On the main machine, in Shogun Live, on the **View** menu, select **Agents**.

Run Shogun processing on multiple machines

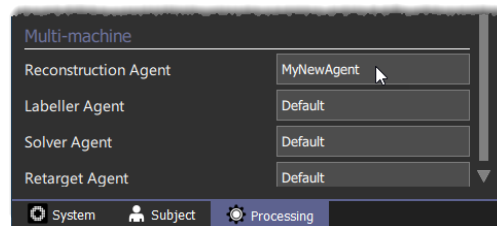
7. In the Agents dialog box, click **Add Agent**
 - a. In the first field, enter a unique name.
 - b. In the **Endpoint** field, enter the agent's IP address, for example, 192.168.128.101:



- c. Click **Add Agent**.
At the bottom of the **Agents** dialog box, **Contributing** is displayed.



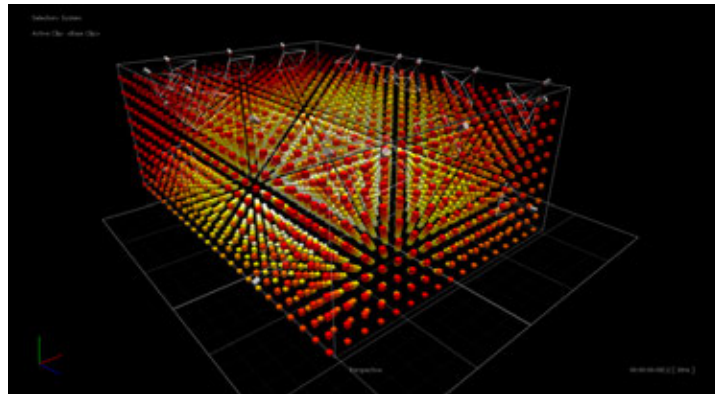
8. In Shogun Live, on the **Processing** panel, ensure the Advanced properties are displayed, scroll to the **Multi-machine** section and enter the name you specified (see Step 7a) of the agent(s) that you want to use for reconstruction, labeling, solving and/or retargeting.




Visualize camera coverage

Visualize camera coverage

At any point during your use of Shogun Post, you can use the Volume Visualizer to visualize camera coverage of real or virtual volumes based on the cameras in the scene.



The tool draws voxels for each theoretical ray intersection of cameras in the scene. This means that, within a box encompassing all cameras, every X distance from one corner to the opposite corner a box is drawn if cameras can see that position in space. You can configure the number of cameras that need to see that position and change other options to customize the visualization to more accurately represent your setup.

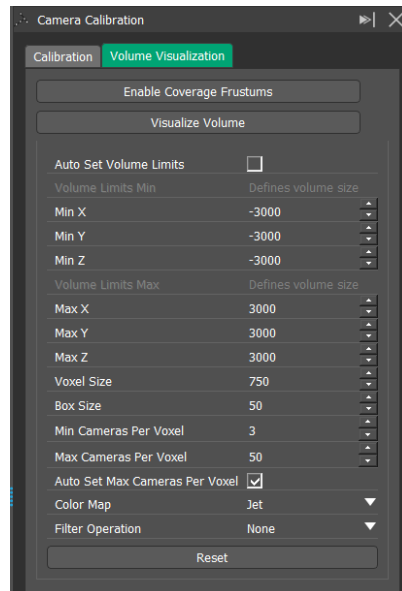
 For more information, see the following steps or watch [Vicon Shogun 1.3 Post Tutorial - Volume Visualizer](https://youtu.be/TqEL34lF-ng)⁴ on YouTube.

To use the Volume Visualizer:

1. Either load a camera calibration file (.xcp), or create cameras (on the **Objects** ribbon, click **Create Object**) or a create camera objects via a script.
2. On the ribbon, click **Camera Calibration** and in the Camera Calibration panel, click the **Volume Visualization** tab.

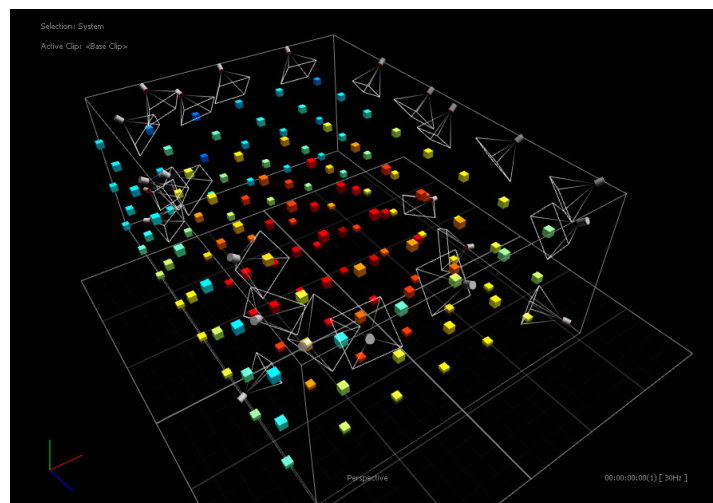
⁴ <https://youtu.be/TqEL34lF-ng>

Visualize camera coverage



3. Select whether to show camera frustums and set the other options as required (see [Volume Visualizer settings on page 20](#)) and then click **Visualize Volume**.

The volume, with colored voxels representing the area seen by the selected camera(s), is displayed.



Each box shows a position where cameras intersect. With the default (Jet) color map selected, the lighter boxes are where three cameras (the default Min Cameras Per Voxel setting) intersect, and as the boxes become red, more cameras are intersecting. By rotating around this view, you can see which

Visualize camera coverage

areas of the volume have the best coverage, whether there are dead spots, where you get the most height, etc.

4. If necessary, adjust the settings to enable you to visualize the volume as required (see [Volume Visualizer settings on page 20](#)).
You can use the Manipulator tool in the 3D Scene view to move and rotate cameras and observe the effect on the volume coverage. Note that increasing the voxel size can improve performance.
You can also add cameras (on the **Objects** ribbon, click **Create Object**), delete cameras, or change the type of a camera (from the Attributes editor), etc. This enables you to visualize not just existing calibrated camera configurations but also virtual camera arrangements, so you can try out new camera configurations.

Visualize camera coverage

Volume Visualizer settings

The following options are provided for volume visualization:

Option	Description
Enable Coverage Frustums	<p>Displays or hides the Draw_Frustum attribute of all the cameras. The Visualize Volume tool uses this attribute to determine how far each camera can theoretically see.</p> <p>You can display a camera's frustum in Shogun Post without using Visualize Volume. To do this, select one or more cameras and in the Attributes editor, display the Advanced options (⚙️) and in the Display section, select the Draw_Frustum attribute. It's drawn as a transparent pyramid extending from the camera. This is another way of visualizing the space a camera can see and can be useful on its own or with the Visualize Volume tool.</p>
Auto Set Volume Limits	If selected, the box containing the voxels automatically includes all the cameras in the scene and clamps it to the floor.
Min X, Min Y and Min Z	Defines the volume size (mm)
Voxel Size	Modifies the spacing between boxes. A lower value draws more voxels, but may take longer to draw (default is 750).
Box Size	The size of the box that is drawn at each voxel (1-1000, default is 50 mm)
Min Cameras Per Voxel	The minimum number of cameras that must see a voxel for it to be drawn. Usually, set this value to the fewest ray intersections acceptable to reconstruct a marker as a starting point.
Max Cameras Per Voxel	The maximum number of cameras that must see a voxel for it to be drawn. Usually, set this value to the number of cameras in the scene.
Auto Set Max Cameras Per Voxel	If selected, automatically sets the maximum number of cameras per voxel to the number of optical cameras in the scene.
Color Map	Lists the color schemes available to show the number of cameras that see each voxel.

Visualize camera coverage

Option	Description
Filter Operation	<p>By default the tool works on all cameras, but this setting lets you display voxels based on the selected cameras.</p> <p>None Shows all the voxels seen by all cameras, regardless of which cameras are selected.</p> <p>All Selected Shows only the voxels seen by all the selected cameras.</p> <p>Any Selected Shows voxels seen by any of the selected cameras.</p> <p>None Selected Shows voxels that are not seen by the selected cameras.</p>

Set up SDI video in Vicon Shogun Live


Set up SDI video in Vicon Shogun Live

You can include up to two SDI video cameras in your Vicon Shogun system.

When you have calibrated the SDI video cameras, you can overlay the motion capture data and check the solve against the video. You can also export the calibrated cameras with the image sequence directly into Autodesk® Maya® software as an FBX file.

The following steps describe how to set up SDI video with a single Blackmagic URSA Mini 4K camera and an Evertz 5601MSC timecode generator, but the same principles apply to other supported hardware.

- [Check the hardware on page 23](#)
- [Connect the system components on page 24](#)
- [Set up a Blackmagic DeckLink card on page 27](#)
- [Set up an Evertz 5601MSC timecode generator on page 29](#)
- [Set up a Blackmagic URSA Mini 4K camera on page 32](#)
- [Choose shutter duration, video standard and system frame rate on page 33](#)
- [Complete the setup in Shogun Live on page 36](#)
- [Calibrate the system on page 39](#)

 For details about this procedure, watch the Vicon video, [Shogun Live SDI Video](#)⁵, available on YouTube.

 The Vicon video, [Shogun Live SDI Video](#)⁶, is also available on Vimeo.

Note

As the videos were recorded using an earlier version of Shogun, you may notice minor differences in the user interface.

⁵ <https://youtu.be/X-GiJ9bHAvY>

⁶ <https://vimeo.com/275782939>

Set up SDI video in Vicon Shogun Live

Check the hardware

- Check that your hardware is included in [Recommended SDI video hardware on page 41](#).

Set up SDI video in Vicon Shogun Live

Connect the system components

To ensure that the camera shutters are aligned, the SDI camera must be genlocked to the Vicon system. This ensures that the SDI camera reliably see strobes from the Active Wand.

Timecode is used to identify the time at which data from the SDI camera and the Vicon system was captured. This ensures that the data from the two sources can be aligned. The calibrator can then determine any small remaining discrepancy and apply an offset to the video input to correct for it.

Consequently, both the SDI camera and the Vicon system must have a valid genlock signal and a valid timecode. Two cables are required to transmit reference sync and timecode to the camera, whereas the a single cable can carry both reference sync and timecode to the Vicon Lock unit.

Note

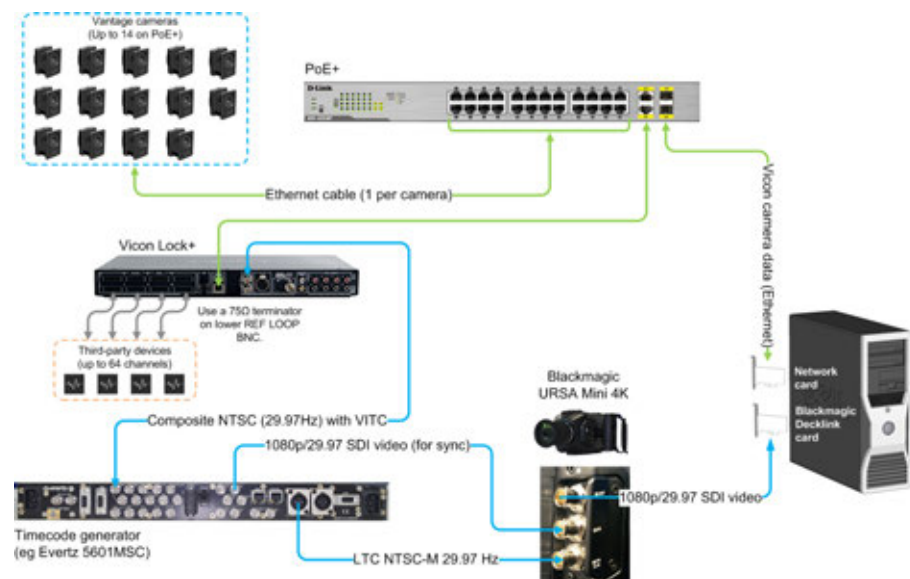
In the following instructions and except where differences are noted, references to Vicon Lock units apply to Vicon Lock, Vicon Lock+ and Vicon Lock Studio.

To connect the system components:

1. On the Blackmagic URSA Mini 4K:
 - a. Connect **SDI Out** to the input on the DeckLink card on the PC that will run Shogun Live.
 - b. Connect **SDI In** to **TG1-2** on the Evertz 5601MSC.
 - c. Connect **REF IN / TC IN** to **LTC OUT 1** on the Evertz 5601MSC.

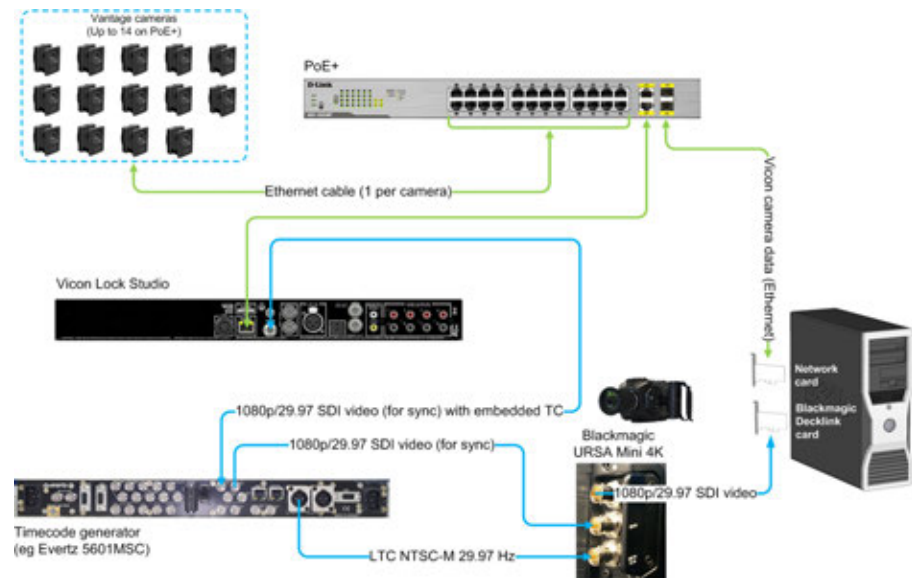
Set up SDI video in Vicon Shogun Live

2. Connect from the Evertz 5601MSC to the Vicon Lock unit, depending on your Lock model:
 - **Vicon Lock or Vicon Lock+:** Connect **SYNC 1** on the Evertz 5601MSC to **REF LOOP** on the Lock or Lock+. Put a 75Ω terminator on the other **REF LOOP** connector. (Note that Lock or Lock+ can capture only PAL (25Hz) or NTSC (29.97Hz): for true 30Hz, you must use a Lock Studio.)



Set up SDI video in Vicon Shogun Live

- **Vicon Lock Studio :** Connect **TG1-1** on the Evertz 5601MSC to **SDI In** on the Lock Studio.



Set up SDI video in Vicon Shogun Live

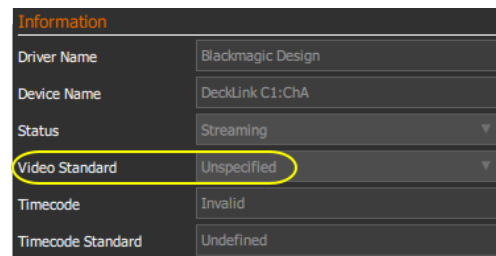
Set up a Blackmagic DeckLink card

1. Install the capture card in your computer.
2. Download and run the Blackmagic Desktop Video Installer, which includes the drivers. Vicon recommends version 10.9.11 or later.
3. Open Shogun Live and ensure that in the **System** panel, the card is listed under **Video Inputs**.



If the device isn't listed, the capture card could be incorrectly installed, the correct driver could be missing, or another instance of Shogun Live could be running and using it.

4. Ensure that the card is selected and in the **Information** section of the Properties, note that **Video Standard** is set to Unspecified. This indicates that the cable is not connected or there's no signal on it.



5. Identify which BNC connector is the video input. Some cards have multiple inputs that are not labeled, so you may need to refer to the Blackmagic documentation.
6. Connect this input to the SDI output from the camera. In the Properties, the icon changes in the **Video Inputs** section.



Set up SDI video in Vicon Shogun Live

In the Information section, the **Video Standard** is now displayed.

Information	
Driver Name	Blackmagic Design
Device Name	DeckLink C1:ChA
Status	Streaming ▼
Video Standard	HD_1920_1080P_2997 ▼
Timecode	13:27:47;00+00
Timecode Standard	29.97Hz NTSC Drop

If the video standard is not shown, the standard may not be supported by the capture card, or there may be a problem with the camera or the cabling.

Set up SDI video in Vicon Shogun Live

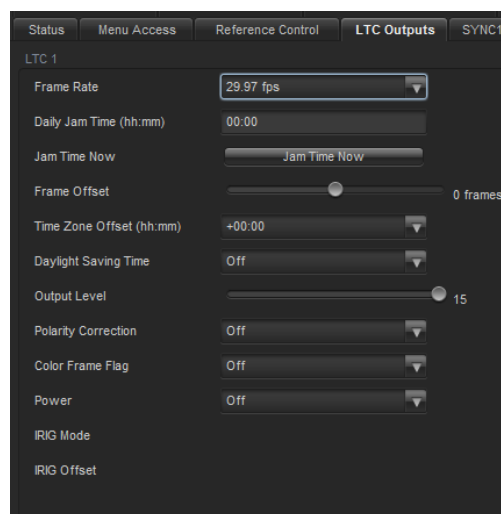
Set up an Evertz 5601MSC timecode generator

The Evertz 5601MSC must be set up to provide reference and timecode to both the SDI camera and the Vicon system. The URSA Mini 4K always requires two cables to provide both timecode and sync. The Vicon system requires one cable that can carry both reference sync and timecode. Consequently, at least three connections on the timecode generator are used.

VistaLINK PRO⁷ software is used to control the timecode generator.

To set up the timecode generator:

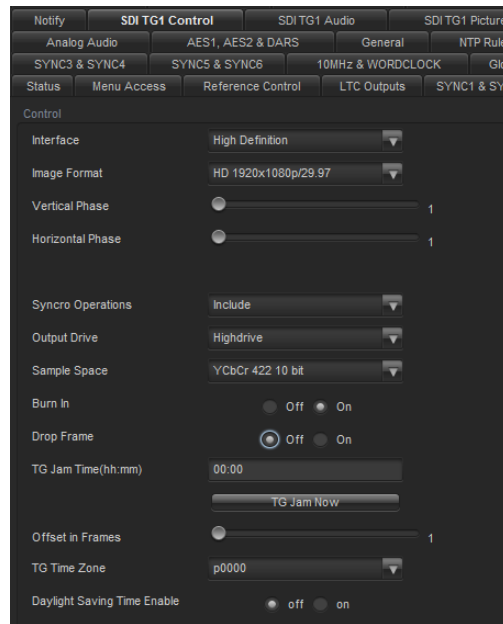
1. Set the frame rate for the timecode signal (LTC) for the URSA camera. This must be set to the base rate associated with the desired video standard on the camera. For example, for 59.94 Hz video standards, the timecode frame rate is 29.97 Hz.



⁷ <https://evertz.com/solutions/vistalink>

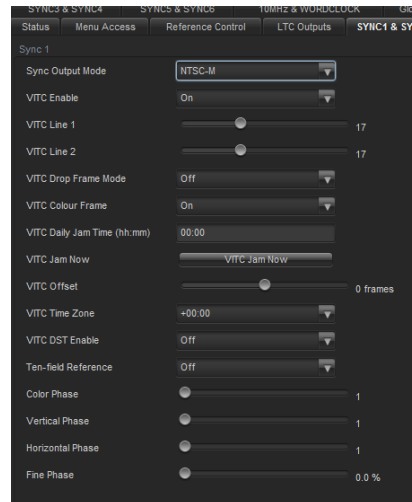
Set up SDI video in Vicon Shogun Live

2. Set up the SDI reference signal for the camera. This must be the same as the video standard that is selected on the camera.

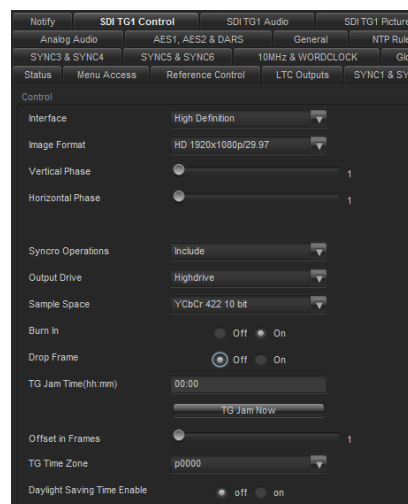


3. Set up the timecode reference to the Vicon Lock unit. The connection to use depends on your Vicon Lock model:
 - **Vicon Lock or Lock+:** Use one of the SYNC outputs from the timecode generator. Lock or Lock+ supports only analog black-burst sync with VITC. This means that only base rates of 25Hz (PAL) or 29.97Hz (NTSC) are available (for true 30Hz, use a Lock Studio). Choose either PAL or NTSC-M, to match the base rate of the SDI video standard.

Set up SDI video in Vicon Shogun Live



- **Vicon Lock Studio:** Use one of the SDI TG-x outputs on the timecode generator. Lock Studio supports HD-SDI with embedded timecode. Ensure that the settings match those you specified in step 2 for the camera.



Drop frame setting

Shogun Live supports 29.97Hz timecode in drop-frame or non drop-frame mode. However, the drop-frame setting must be consistent between all three outputs on the timecode generator.

Set up SDI video in Vicon Shogun Live

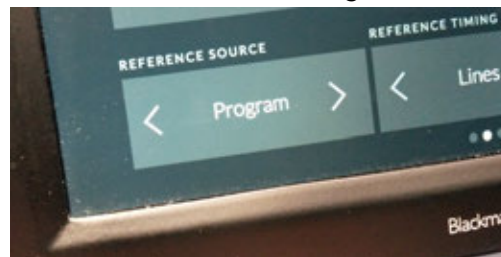
Set up a Blackmagic URSA Mini 4K camera

The camera requires two inputs:

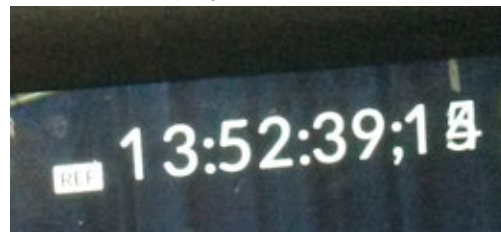
- **SDI In** Used for reference input
- **REF-IN/TC-IN** Used for LTC timecode input

To set up the camera:

1. Ensure that the software on the camera is version 4.9 or later. This reduces video latency.
2. From the onscreen display, choose the correct video standard.
3. Set **Reference Source** to **Program**.



REF is now displayed on the camera monitor.



4. Check that timecode is working correctly. The timecode should be in sync with the timecode generator and EXT should be displayed above TC on the camera monitor.



Set up SDI video in Vicon Shogun Live

Choose shutter duration, video standard and system frame rate

The SDI video standard frame rate and Vicon system frame rate must both be multiples of the same SMPTE base rate. The SMPTE base rates are 23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz.

As shown in the following table, it is usually best to have the Vicon system rate higher than the video standard frame rate, so that the Vicon cameras can accurately track fast movement, but so the video cameras do not produce data at a rate that is higher than the PC can capture.

Base rate (Hz)	SDI video standard	Vicon system frame rate (Hz)
24	1080p/24 (1x)	96 (4x)
25	1080p/25 (1x)	50 (2x)
25	1080p/50 (2x)	100 (4x)
29.97	1080p/29.97 (1x)	59.94 (2x)
29.97	1080p/59.94 (2x)	119.88 (4x)

Note

Vicon Active Wands do not work at system frame rates below 50Hz.

When the system is set up in this way, the Vicon system strobes several times during each video frame. The active wand calibration device also strobes in sync with the optical system, so when the wand is moving, the video camera may see it in more than one place during each video frame. For this reason the shutter duration must be set within a particular range:

- If the shutter duration is set too low, the camera may not see the wand at all because the shutter is not open while it is strobing.
- If the shutter duration is set too high, the camera will see the wand in several places because the wand strobed more than once during the period the shutter was open.

Set up SDI video in Vicon Shogun Live

The first situation is easy to spot by looking at the video screen on the camera. As long as the video is synced to the same source as the Vicon system, the strobes are clearly visible. If they are not, increase the shutter duration to cause them to appear.

The second situation is harder to spot. You can detect it by pausing live video of a wand wave in Shogun Live and carefully stepping through the video frames to look for multiple wands. Alternatively, set the shutter duration to a safe maximum value, as shown here:

Base rate (Hz)	SDI video std	Video frame period (ms)	Vicon system rate (Hz)	Vicon frame period (ms)	Vicon frames per video frame	Safe max. shutter duration
25	1080p/25 (1x)	40	50 (2x)	20	2	$1 / 60 = 16.7 \text{ ms}$
25	1080p/25 (1x)	40	100 (4x)	10	4	$1 / 120 = 8.3 \text{ ms}$
25	1080p/50 (2x)	20	100 (4x)	10	2	$1 / 120 = 8.3 \text{ ms}$
29.97	1080p/29.97 (1x)	33.4	59.94 (2x)	16.7	2	$1 / 60 = 16.7 \text{ ms}$
29.97	1080p/29.97 (1x)	33.4	119.88 (4x)	8.3	4	$1 / 120 = 8.3 \text{ ms}$
29.97	1080p/59.94 (2x)	16.7	119.88 (4x)	8.3	2	$1 / 120 = 8.3 \text{ ms}$

Set up SDI video in Vicon Shogun Live



Caution

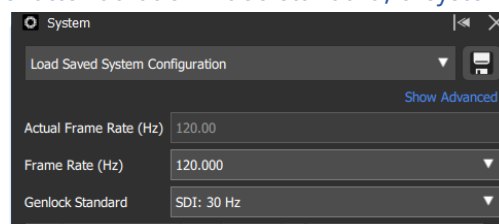
It might seem a good idea to reduce the shutter duration during calibration and then increase it afterwards for capture. However, this is not good practice because the shutter timing on the Blackmagic URSA 4K Mini is not center-aligned. In other words, the middle of the shutter-open time shifts as the duration is changed. If your video is always too dark, it may be better to reduce the Vicon system frame rate for calibration and increase it afterwards for capture, or choose a higher frame rate video standard.

Set up SDI video in Vicon Shogun Live

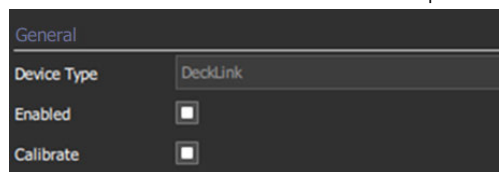
Complete the setup in Shogun Live

Set up the video input device

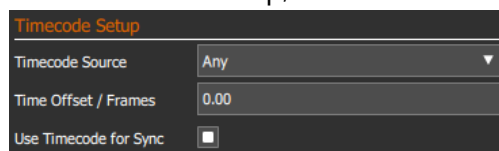
1. On the **System** tab, ensure the required frame rate is selected ([Choose shutter duration video standard, & system frame rate on page 33](#)).



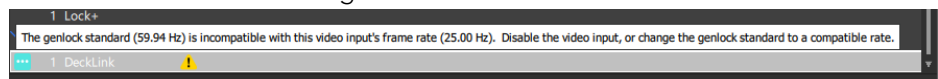
2. In the System Properties for the video input device, in the **General** section, ensure the **Enabled** and **Calibrate** options are selected.



3. Under **Timecode Setup**, ensure that **Use Timecode for Sync** is selected.



4. Ensure that the video standard is compatible with the Vicon system standard, and that there are no warnings such as this one:

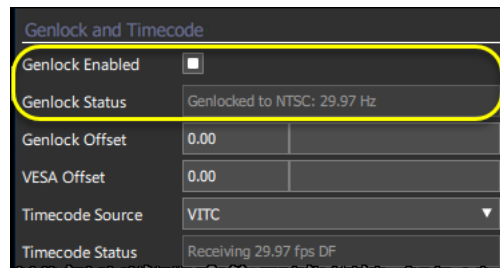


5. Ensure that the correct timecode is present on the video. You should be able to see it counting up.

Set up SDI video in Vicon Shogun Live

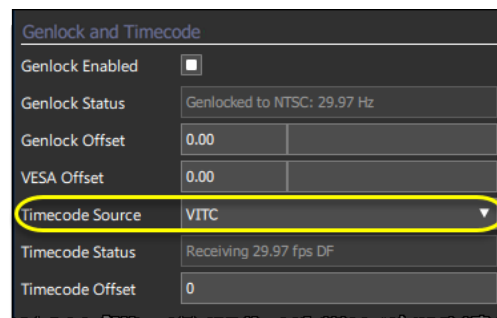
Set up the connectivity device

1. Go to the System Properties for the Vicon Lock unit, and in the **Genlock and Timecode** section, ensure that **Genlock Enabled** is selected.
2. Ensure that **Genlock Status** shows that the Vicon Lock unit is genlocked.



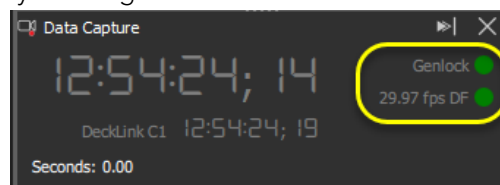
3. Ensure that a valid timecode source is set for the Lock unit.

- **Lock or Lock+** Set the timecode source to VITC.



- **Lock Studio** Set the timecode source to SDI.

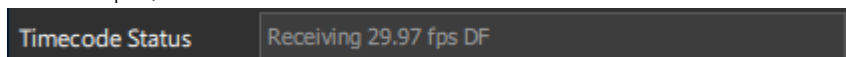
4. On the **Capture** tab on the right, in the **Data Capture** panel, ensure that the system is genlocked and has timecode. This is indicated by two green circles.



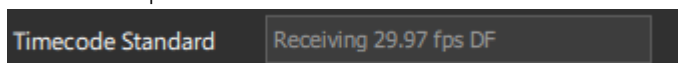
Set up SDI video in Vicon Shogun Live

5. If you are running at 29.97Hz timecode, ensure that drop-frame modes are compatible between the Vicon Lock and the video input device.

For example, if the Lock shows this:



The video input should show this:



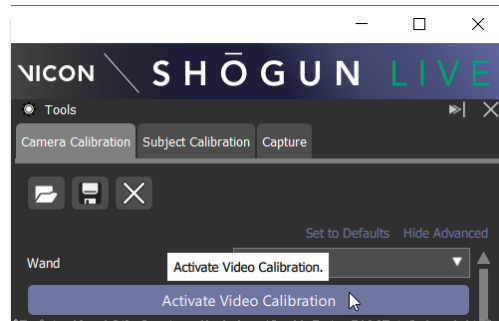
Set up SDI video in Vicon Shogun Live

Calibrate the system

Before attempting to calibrate, ensure you have been through all the steps in the previous section.

Note that tracked circles are not visible until you select Activate Video Calibration, as described below.

1. In the **Camera Calibration** panel, display the advanced options and click **Activate Video Calibration**.



Tip

If you can't see any tracked circles on the wand, this may be due to the system and camera not being frame-aligned. To correct this, in the **Genlock & Timecode Settings** section, drag the slider for the Advanced setting, **Genlock Offset**, until the circles appear.

2. Ensure that video camera is positioned so that items in its field of view, including the wand, can also be seen by the Vicon cameras.

Set up SDI video in Vicon Shogun Live

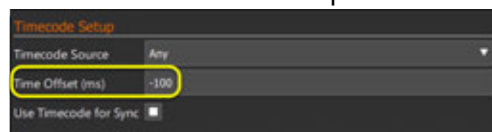
3. As normal, mask out any artifacts that could be mistaken for circles by selecting **Start Masking**. To ensure that the image is not so bright that the whole view is masked, but not so dark that the camera is prevented from seeing the wand, do one of the following:
 - On the camera, reduce the aperture, ensuring that the wand is still visible; or
 - In Shogun Live, go to the System Properties for the Decklink card and in the **Optical Mode** section, adjust the **Threshold** setting.



Tip

A setting of 0.6 is a good starting point for most studios, but for a very bright space, you may need a slightly higher value.

4. Click **Start Wave** and ensure that the wand is waved so that it is seen by the SDI video camera as well as the Vicon cameras.
Note that video cameras normally see less wand information than optical cameras: half the amount seen by the optical cameras is usually enough for a good calibration.
5. During calibration, any time offset between the video camera and the system is calculated and automatically applied. If necessary, you can change the offset in the **Timecode Setup** section of the DeckLink properties.



6. With video calibration turned off, you can now set the origin as normal.

Set up SDI video in Vicon Shogun Live

Recommended SDI video hardware

In Vicon Shogun Live 1.2 and later, you can display and capture video from SDI video cameras. This enables you to use a huge range of third-party, professional-quality video cameras to overlay and capture calibrated reference video.

The following recommendations are based on what the software supports for calibration and what has been tested with this version of the software. They are provided to help you to choose the most suitable SDI hardware.

Recommended video cameras

For a camera to work well with Vicon Shogun it must:

- Have a global shutter sensor.
- Be able to output progressive video (eg, 720p, 1080p). Interlaced video (eg, 625i/PAL, 525i/NTSC, 1080i) is not supported.
- Support a genlock/reference/sync input.
- Have a timecode input and support embedding timecode in the video, or else you will need a separate timecode embedder.
- Produce output that is compatible with a Blackmagic DeckLink capture card.

Set up SDI video in Vicon Shogun Live

Following testing, Vicon recommends these cameras for calibrated reference video:

Camera	SDI outputs	Global shutter	Genlock/Reference sync	Timecode input	Timecode embedded in output	Recommended capture rates
Blackmagic URSA Mini 4K ¹	1 x 12G 1 x 3G	✓	✓	✓	✓	1080p at 60 fps ³
IO Systems Flare 2KMSDI-B ²	2 x 3G	✓	✓	✗	✗	1080p at 30 fps

1. Only LTC timecode is supported. When LTC timecode is used, only the SDI reference signal can be used (ie, not tri-sync).

Set **Reference Input** on camera to **Program** and check for REF and EXT on screen overlay.

The Blackmagic URSA Mini 4.6K uses a different sensor that is not global shutter, so is not recommended.

2. This is a grayscale sensor.
Tri-sync reference is supported.
A timecode embedder is required.
3. 4k at 60 fps is possible, but the file sizes are very large.

The following camera has been used for capturing reference video in Shogun Live, but because it has a rolling shutter sensor, it can't be used for calibration:

Camera	SDI outputs	Global shutter	Genlock/Ref. sync	Timecode input	Timecode embedded in output
Blackmagic Micro Studio 4K ¹	1 x 6G	✗	✓	✗	✗

1. SDI reference is supported.
A timecode embedder is required.

Set up SDI video in Vicon Shogun Live

Recommended capture cards

Shogun Live supports capturing from Blackmagic DeckLink cards using the DeckLink API, thus any DeckLink card should work with it. Vicon have tested Shogun Live with the following cards from the range:

Decklink card	Number of inputs	Notes
Blackmagic Decklink 8K Pro	4 x 12G	Recommended for multi-camera captures. The host PC must be sufficiently powerful to support multi-camera capture. In particular, it must have enough fast drives.
Blackmagic Decklink Mini Recorder 4K	1 x 6G	Recommended as a cost effective option for setups where 12G is not required.
Blackmagic Decklink 4K Pro	1 x 12G	Recommended for setups where 12G is required.
Blackmagic Decklink 4K Extreme 12G	1 x 12G	
Blackmagic DeckLink SDI 4K	1 x 6G	
Blackmagic DeckLink 4K Extreme	1 x 6G	

Recommended timecode embedder

We have tested the following timecode embedder:

Timecode embedder	Number of channels	Notes
Blackmagic Teranex Mini Audio to SDI	1 x 12G	Use right XLR audio input to insert LTC timecode, and select Timecode mode in control software.

Set up SDI video in Vicon Shogun Live

Recommended master clock/SPG/timecode generator

We have tested the following timecode generators:

Timecode generator	Notes
Evertz 5601	<p>If the camera requires SDI sync (eg. Blackmagic URSA) then this master clock must have the SDI TG (Test Generator) option. This is not always apparent from the number of connectors (ie, the connectors can be present even if the option is not included).</p> <p>Typically the following connections are required:</p> <ul style="list-style-type: none"> • LTC 1, 2 (XLR): Provide LTC for SDI camera or timecode inserter. • TG 1, 2 (BNC): Provides SDI sync if SDI camera accepts this, or • Sync 1, 2, 3, 4, 5, 6 (BNC): Provide Tri-Sync or Blackburst if camera accepts this. • Sync 1, 2, 3, 4, 5, 6 (BNC): Can be configured to supply PAL/NTSC sync with VITC to Lock/Lock+, or • TG 1, 2 (BNC): Provide SDI sync to Lock Studio.
Courtyard CY460	<p>Typically the following connections are required:</p> <ul style="list-style-type: none"> • Balanced Audio/AES/LTC (Molex): May be configured to provide LTC output. Custom cable required. • SDI 1, 2 (BNC): Provides SDI sync to camera, or • Tri/Black 2, 3, 4: Provide Tri-sync to camera • Composite (BNC): Provides PAL/NTSC sync with VITC to Lock/Lock+, or • SDI 1, 2 (BNC): Provides SDI sync to Lock Studio

Set up SDI video in Vicon Shogun Live

Recommended cabling

SDI video uses co-ax cable with 75Ω characteristic impedance. Cables labeled RG-59U will be 75Ω, but may not be of sufficient quality for 3G video. Good quality cables with low return-loss are very important, and become even more crucial over longer distances and at higher standards, such as 6G and 12G. SDI sync also requires good quality video cable because it is also an SDI video signal. Analog blackburst, tri-sync and LTC signals are likely to be more forgiving.

Vicon has tested the following cable types:

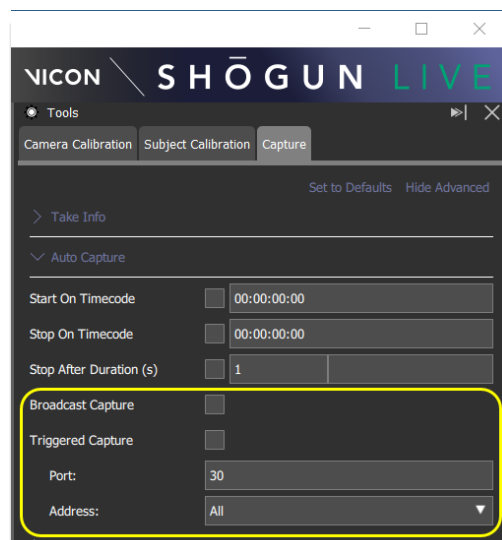
Cable	Notes
Belden 1694A	This is sometimes said to be industry-standard video cable. This was used for testing up to a range of 30m for 3G and 20m for 6G.
Van Damme 278-175-000 LSZH	20m lengths of this were used for 3G and 6G.

UDP capture broadcast/trigger

UDP capture broadcast/trigger

Vicon Shogun supports a simple UDP protocol to broadcast when capture has started. Shogun can also receive these messages, which can be used to trigger a capture remotely.

The port for broadcast and trigger is configurable and defaults to 30.



UDP capture broadcast/trigger

The XML file contains the following notifications:

- [Start notification on page 48](#)
- [Stop notification on page 49](#)
- [Complete notification on page 50](#)
- [Timecode Start notification on page 51](#)
- [Timecode Stop notification on page 53](#)
- [Duration Stop notification on page 54](#)

UDP capture broadcast/trigger

Start notification

The following example shows a Start notification. Note that the broadcast must fit into one UDP packet.

The indents in the following example are for clarity: the actual packet is not indented. White space between tokens is removed.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureStart>
  <Name VALUE="dance"/>
  <Notes VALUE="The pets ants crime deer jump. "/>
  <Description VALUE="The crowd pencil pets alert fold deer.
With welcome practice representative complete great? Or jolly tiny
memorise thread. However wool insect pipe! "/>
  <DatabasePath VALUE="D:/Jeremy/Susan/Captures/Take"/>
  <Delay VALUE="33"/>
  <PacketID VALUE="33360"/>
</CaptureStart>
```

Where:

Name	The name of the trial, which is used as the filename for the capture files, for example <Name>.x2d.
Notes	Any notes provided
Description	Any description provided. Avoid very long description strings as the broadcast must fit into one UDP packet. If it does not, the broadcast is not sent.
DatabasePath	The target path for the capture files.
Delay	The number of milliseconds that the broadcast is made before the capture starts. This delay enables clients to do any preparation required to respond.
PacketID	A number that individually identifies the packet. It is incremented for each packet generated. Use it to discard duplicate packets that are delivered by UDP. (This can happen if there are multiple paths between the broadcasting and listening machines.)

UDP capture broadcast/trigger

Stop notification

The following example shows a Stop notification. It is a notification that capturing has stopped.

Note that writing the file to disk may not be complete. Wait for the corresponding Complete notification before trying to open the file.

Possible values for the result are:

- SUCCESS - Everything was ok.
- FAIL - Everything was not ok. Perhaps the disk ran out of room, or the system was unplugged. You may get a truncated file.
- CANCEL - The user stopped the capture process. There will not be a Complete notification.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureStop RESULT="SUCCESS">
  <Name VALUE="dance"/>
  <DatabasePath VALUE="D:/Jeremy/Susan/Captures/Take"/>
  <Delay VALUE="33"/>
  <PacketID VALUE="33361"/>
</CaptureStop>
```

UDP capture broadcast/trigger

Complete notification

The following example shows a Complete notification. It indicates that the captured file is ready at the path specified. Note that:

- When capture is complete, buffers have yet to be flushed to disk.
- If the file is on a remote drive, it may be captured locally and then copied to the final location. This may take some time.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureComplete>
  <Name VALUE="dance"/>
  <DatabasePath VALUE="D:/Jeremy/Susan/Captures/Take"/>
  <PacketID VALUE="33362"/>
</CaptureComplete>
```

UDP capture broadcast/trigger

Timecode Start notification

The following example shows a Timecode Start notification. It is generated when the system is armed. Note that:

- Capture starts when the system receives the timecode specified.
- Additional notifications may be generated if the start timecode is updated after the system is armed.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureStart>
  <TimeCode VALUE="0 38 10 17 0 0 0 4"/>
  <Name VALUE="slip"/>
  <Notes VALUE="The last ants great blade jump. "/>
  <Description VALUE="The truthful pencil pets ants crime deer.
With geese trail representative complete crowd? Or jolly
toothbrush slip thread. However worried insect nest! "/>
  <DatabasePath VALUE="D:/Captures/Take/DayOne/Final"/>
  <PacketID VALUE="33364"/>
</CaptureStart>
```

Where:

TimeCode is represented as a sequence of integers delimited with spaces.

- Hours
- Minutes
- Seconds
- Frames
- Sub-Frame (Always zero)
- Field
 - 0 - Even Field
 - 1 - Odd Field
- Standard
 - 0 - PAL
 - 1 - NTSC
 - 2 - NTSC Drop

UDP capture broadcast/trigger

- 3 - Film at 24fps
- 4 - NTSC Film
- 5 - 30Hz exactly
- Sub-Frames Per Frame (the multiple of the timecode rate that the system is running at)

UDP capture broadcast/trigger

Timecode Stop notification

The following example shows a Timecode Stop notification. Note that additional notifications may be generated if the Timecode Stop is updated after the system is armed or possibly even capturing.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureStop>
  <TimeCode VALUE="0 46 27 15 0 0 0 4"/>
  <Name VALUE="slip"/>
  <DatabasePath VALUE="D:/Captures/Take/DayOne/Final"/>
  <PacketID VALUE="33365"/>
</CaptureStop>
```

The values for TimeCode are as listed in [Timecode start notification on page 51](#).

UDP capture broadcast/trigger

Duration Stop notification

The packet is generated when the system is armed, or immediately prior to the capture being started.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<CaptureStop>
  <Duration FRAMES="12867" PERIOD="32865" TICKS="5553087"/>
  <Name VALUE="memorise"/>
  <DatabasePath VALUE="D:/Take/DayOne/Final/Susan"/>
  <PacketID VALUE="33367"/>
</CaptureStop>
```

Where:

Duration is the number of frames that will be captured.

The packet may contain extra information describing the frame rate:

- PERIOD is the number of clock ticks between each frame
- TICKS is the number of ticks in each second

The frames per second of the system can be calculated as $TICKS/PERIOD$. This representation of the frame rate avoids rounding errors for rates such as NTSC, which cannot be stored in a double without a loss of precision.

```
<Duration FRAMES="12867" PERIOD="653254" TICKS="135000000" />
```

UDP capture broadcast/trigger

Example Code

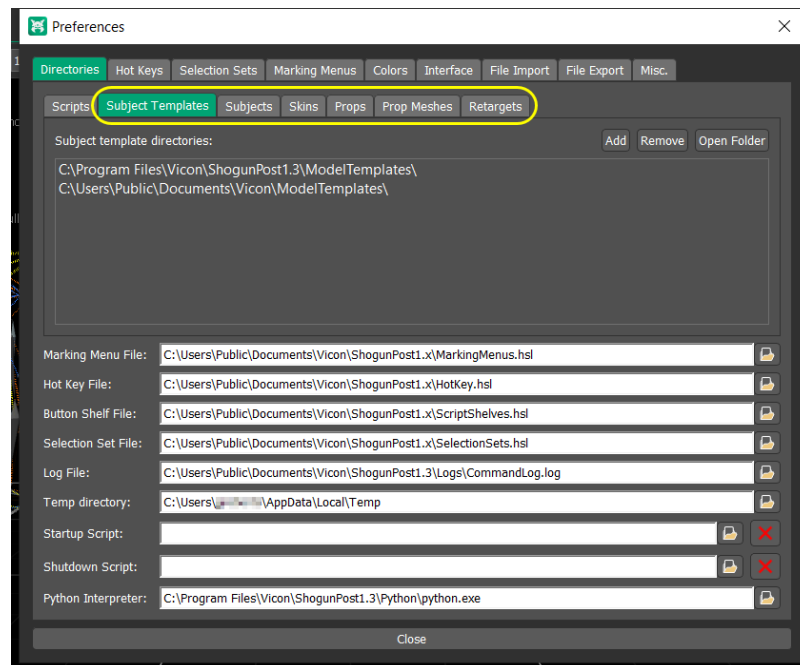
The examples are provided in C++ and require the *boost* library for communications.

1. CaptureBroadcastMonitor shows how to monitor for and decode the capture notifications described above.
2. RemoteStartStop shows how to package and send the packets to trigger capture start and stop.

Specify folders in Shogun Post

Specify folders in Shogun Post

Shogun Post lets you define folders for subject templates (VST or VSS files), subjects, skins, props, prop meshes and retargets. You do this in the Preferences dialog box.



In a similar way to the Scripts tab, the default folders are listed at the top of the tab.

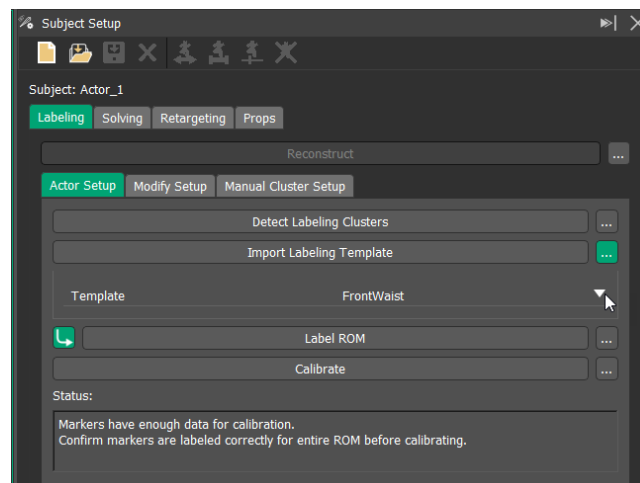
Specify folders in Shogun Post

To add or remove folders, click the **Add** and **Remove** buttons at the top right of the dialog box. You can also open the selected folder by clicking **Open Folder** or the browse button.

- **Subject Templates folders:** Contain the VST or VSS files that you load to create and calibrate a new subject.
- **Subjects folders:** Contain VSK and VSS files (labeling and solving setup files) for saved subjects.
- **Skins folders:** Contain FBX files that can be used to define the mesh used with a VSS skeleton.
- **Props folders:** Contain VSK and VSS files (labeling and solving setup files) for saved props.
- **Prop Meshes folders:** Contain FBX files that can be used to define the mesh used with a prop.
- **Retargets folder:** Contains VSR files used in retargeting.

The folders listed on these tabs affect the choices that are displayed in the **Subject Setup** panel, on the **Labeling**, **Solving**, **Retargeting** and **Props** tabs.

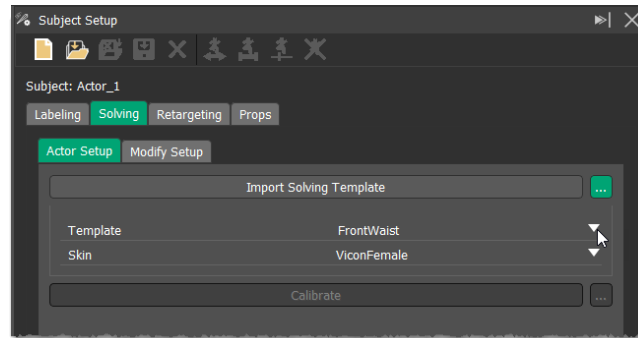
On the Labeling tab, when the More button () next to **Import Labeling Template** is selected, the VST files found in the Subject Templates folders that are defined in the Preferences dialog box are listed. To see all the VST files, click the down arrow below.



Similarly, on the Solving tab, when the button next to **Import Solving Template** is selected, the VSS files found in the Subject Templates folders that are defined in

Specify folders in Shogun Post

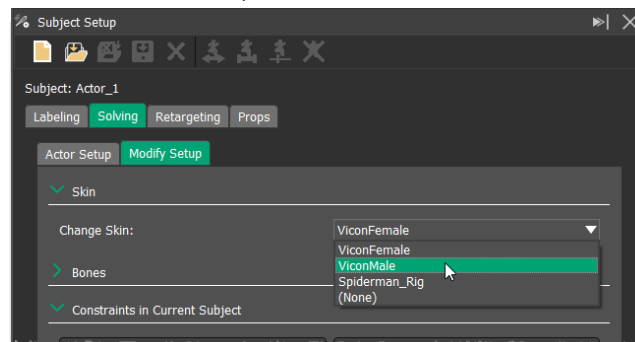
the Preferences dialog box are listed. To see all the VSS files, click the down arrow below.



The skin FBX files that are found in the Skins folders that are defined in the Preferences dialog box are also listed. To see all the skins files, click the down arrow.

To change the skin for an existing subject:

1. With the VSS subject selected, in the **Subject Setup** panel, on the **Solving** tab, click the **Modify Setup** tab.
2. In the **Skin** section, from the **Change Skin** list, select the required skin. (The skins listed are all the skin FBX files that are defined in the Preferences dialog as described above.)



Tip

Avoid giving templates or skins the same name in multiple folders. If you use the same names, you will find it difficult to select the required file from the the drop down lists, as only the name of the file is listed, not the full path.

Specify folders in Shogun Post

In a similar way, you can change the mesh for an existing selected prop by clicking the **Props** tab, and on the **Modify Setup** tab, selecting the required mesh from the **Change Mesh** list.

Using marking menus

Marking menus are tool sets that pop up as you work. They provide easy access to Shogun Post commands or scripts, regardless of where your mouse is pointing or what you are doing. Custom marking menus are a great way to create groups of commands for common tasks.

The scripts used in marking menus must exist within the directories specified in the **Preferences** dialog box (**General > Preferences**), on the **Scripts** tab within the **Directories** tab (explained in Set script folder locations, in the Vicon Shogun Scripting Guide).

Shogun Post has three default marking menus: each contains five zones. Each zone has three mouse buttons. Each zone/mouse button combination has positions for eight menu items containing scripts or commands.

You can customize the marking menus by assigning scripts and commands to suit your preferences. You can save marking menu settings to the Shogun Post marking menu file (*MarkingMenus.hs*) or create marking menu files of your own. You can use marking menus whenever you want to quickly access assigned scripts or commands.

You may also find it useful to create your own folder for storing any marking menus you create or customize.

To specify the location of the Marking Menu folder:

1. Open the the **Preferences** dialog box (see above).
2. On the **Directories** tab, click the **Scripts** tab and enter or browse to the location in the **Marking Menu File** field.

For more information, see:

- [Default marking menus on page 61](#)
- [Customize marking menus on page 63](#)
- [Use marking menus on page 66](#)

Using marking menus

Default marking menus

The following tables describe the high-level contents of the default marking menus supplied with Shogun Post. For details of the individual commands in each of these zones, see the Marking Menus tab in the Preferences dialog box as described in [Customize marking menus on page 63](#).

Default (Space) marking menu contents

Zone	Left mouse	Middle mouse	Right mouse
Center	Tracking	—	Parent/Child
Top	—	—	—
Left	Capture	—	—
Bottom	—	—	—
Right	Solving	—	—

Ctrl (Ctrl+Space) marking menu contents

Zone	Left mouse	Middle mouse	Right mouse
Center	—	—	—
Top	—	—	—
Left	—	—	—
Bottom	—	—	—
Right	—	—	—

Using marking menus

Shift (Shift+Space) marking menu contents

Zone	Left mouse	Middle mouse	Right mouse
Center	Select Sets	—	—
Top	—	—	—
Left	Select Types	—	—
Bottom	—	—	—
Right	Hierarchy Selections	—	—

Using marking menus

Customize marking menus

You can customize marking menus by assigning new commands to zones and mouse buttons.

To customize marking menus:

1. Open the Preferences dialog box (**General > Preferences**).
2. Click the **Marking Menus** tab, which contains drop-down lists and location controls.
3. From the **Select a Marking Menu to edit** drop-down list, click one of the default marking menus:
 - Default Menu (Space)
 - Ctrl Menu (Ctrl-Space)
 - Shift Menu (Shift-Space)
4. From the **Select a zone to edit** list, click one of the available zones:
 - Center
 - Top
 - Left
 - Bottom
 - Right
5. From the **Select a mouse button** list, click the desired button:
 - Left Button
 - Middle Button
 - Right Button
6. In **Entry label**, type the name you want to use for this marking menu.
7. Click the **Commands** button to display the Script Viewer.

Using marking menus

8. Click the **Style** list and select an option for the way you want to view the available menu commands and scripts that can be assigned to marking menus (those that can execute without arguments):
 - **List:** All items listed in alphabetical order.
 - **Hierarchy:** Items grouped into categories of commands: Native Commands, Menu Commands, Plugin Commands, C:/Users/Public/Documents/Vicon/Shogun Post#.#/Scripts, C:/Users/Public/Documents/Vicon/Shogun Post#.#/Layouts, C:/Program Files/Vicon/Shogun Post#.#/Scripts, C:/Program Files/Vicon/Shogun Post#.#/Layouts.
 - **Category:** Items grouped into script categories.
9. From the list, click the command or script you want to assign to a marking menu and click **OK** to close the Script Viewer.

The selected command or script is displayed in the **Command string** and **Entry label** fields in the Marking Menu Preferences dialog box.
10. Click the button that represents the mouse direction to which you want to assign the command:
 - North
 - Northeast
 - East
 - Southeast
 - South
 - Southwest
 - West
 - Northwest

The button is highlighted, and the name of the selected command is displayed in it.

Using marking menus



Tip

You can replace the default command name displayed in the selected mouse direction field with a custom name by entering a new value in the **Entry label** field. You can add additional scripts to a single mouse direction by entering a semicolon and a space, and then manually typing in the name of an additional command. Separate each additional script with a semicolon and a space, for example: `rewind; play;`

To assign commands to any of the other mouse directions for the currently selected zone and mouse button, repeat steps 6–10 .

To assign commands to a different mouse button in the currently selected zone, Repeat the procedure from step 5.

To assign commands to a different zone and mouse buttons, repeat the procedure from step 4.

11. When you are finished customizing marking menus, click **Close** to save the changes and close the Preferences dialog box.

Using marking menus

Use marking menus

You can access marking menus from anywhere and at any time while you are working with data in Shogun Post. The menu that pops up depends on your current zone and the mouse button that you are using.

To use a marking menu:

Note that the following instructions assume that default menu has been assigned the Space hotkey, the Ctrl menu has been assigned the Ctrl+Space hotkeys and the Shift menu has been assigned the Shift+Space hotkey. You can find information on how to do this in [Set hot keys on page 67](#).

1. In a view pane, display the desired marking menu as shown in the following table.

To display this marking menu	Press and hold keys
Default menu (<code>showMarkingMenu</code> command)	Space
Ctrl menu (<code>showCtrlMarkingMenu</code> command)	Ctrl+space
Shift menu (<code>showShiftMarkingMenu</code> command)	Shift+space

2. Hover the mouse over the right, left, top, bottom, or center zone and then left-click, middle-click, or right-click to view the sets of commands defined for that zone/mouse button.
3. Left-, middle-, or right-click the desired mouse direction to run the associated script or command.

Using marking menus

Set hot keys

If you want to change what happens when you press a particular key or combination of keys, you can assign or un-assign commands to hot keys. The following instructions describe how to set or clear hot key for displaying the marking menu, but can be applied to any other command for which you want to set a hot key.

To assign or clear hot keys:

1. Open the Preferences dialog box (**General > Preferences**).
2. Click the **Hot Keys** tab.



Tip

If you are clearing a hot key, you can save time by showing only the commands or scripts that have hot keys assigned to them. To do this, at the top, select **Show hot keyed only**.

3. Click the required command, for example **showMarkingMenu** to select it and then double-click to display the **Set hot key** dialog box, where you can set or clear the hot key for it.
4. Close the Preferences dialog box.

Vicon Shogun command line options

Vicon Shogun command line options

You can use command line options for Shogun Live and Shogun Post.

- [Shogun Live command line options on page 69](#)
- [Shogun Post command line options on page 70](#)

Vicon Shogun command line options

Shogun Live command line options

Shogun Live supports the following command line options:

Option	Description
--help	List supported command line options.
--log <level>	Set logging level to one of [Off, Always, Error, Warn, Info, Default, Debug].
--force-gles	Load in Graphics Compatibility mode.
--terminal-port <port number>	Specify a port number for the Live API terminal server (the default is 52800).
--nosplash	Do not show the splash screen.
--log-dir <path>	Specify a directory in which to save the log file (overrides default location).

Example usage:

```
> C:\Program Files\Vicon\ShogunLive1.3\ShogunLive.exe --log Info
--log-dir C:\tmp\ShogunLiveLogs
```

Vicon Shogun command line options

Shogun Post command line options

Shogun Post supports the following command line options:

Option	Description
<code>--force-gles</code>	Load in Graphics Compatibility mode.
<code>--SkipSplash</code>	Do not show the splash screen.
<code>--crash-handler <string></code>	Optionally, specify quiet or system. If used with no argument, the Vicon crash handler is used.
<code>--exit-after-script</code>	Close Shogun Post after running the init script.

Example usage:

```
> C:\Program Files\Vicon\ShogunPost1.3\ShogunPost.exe --SkipSplash
```