



**ODYSSEY**

**Vision**

**QHD**

**User Guide**

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## Patents

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## EMC Directive Statement

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EMC Directive Compliance      This equipment was tested and found to conform to the Medical Directive 93/42/EEC for electromagnetic compatibility.

Compliance with this Directive is based upon compliance with the following harmonized standards:

Emissions:      IEC 60601-1-2:2004 third-Ed., EN 60601-1-2:2007  
EN55011:2007+A2:2007, EN61000-3-2:2006  
EN61000-3-3:1995 +A1:2001 +A2:2005

Immunity:      IEC 60601-1-2:2007, IEC 60601-1-2:2004 third-Ed.  
EN61000-4-2:1995 + A1:1999 + A2:2001, EN61000-4-3:2006,  
EN61000-4-4:2004, EN61000-4-5:2005, EN61000-4-6:2007,  
EN61000-4-8:1993 + A1:2001, EN61000-4-11:2004

When operating this equipment, verify that other devices installed near it conform to the applicable EMC standards for that device.

## Related documents



HDW-0311, *Odyssey Vision* User Guide

HDW-0209, *Odyssey Cinema* Client User Guide

HDW-0312, *Niobe ES* User Guide

PRO-727, *Odyssey Vision* System 1.5 Standard Lab Site Planning Guide (for safety information on connecting external systems to the *Odyssey* platform)

HDW-0188, *Odyssey Quad HD Installation Manual*  
HDW-0310, *Odyssey Quad HD Workstation Management and Service Manual*  
HDW-0295, *Vdrive User Guide* (if the optional *Vdrive* unit is installed)

### **Operating conditions**

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Temperature: 15°C to 30°C

Humidity: 20% to 75%, non-condensing

Atmospheric pressure (kPa): 700 hPa to 1060 hPa

### **Equipment classification**

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Equipment is classified as Class I Medical Electrical equipment.

### **Cover art**

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Cover art © 2012 Stereotaxis, Inc.

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# Section 1: Overview

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## Intended Use

The Stereotaxis *Odyssey* Vision Solution (also called “Vision” in this user guide) is an optional display and user interface package designed to consolidate the point of control of the catheterization lab.

## About the System

The primary goals of the *Odyssey* Vision system are to:

- Integrate with external data providers
- Simplify the user interface and allow customization
- Streamline clinical workflows
- Consolidate a multitude of video sources, keyboards, and mice to a combined output onto a single display controlled by a single mouse and keyboard

The user may employ the *Odyssey* Vision Solution with QuadHD monitors to view:

- Up to 16 video sources in the interventional lab on a single display
- Screen representations of video sources that are sized and positioned according to a workflow requested in *Navigant*
- Screen representations of video sources that are sized and positioned according to layouts the user can customize (**Figure 1**)
- Status, caution, and warning messages display at all times on the *Odyssey* Vision system during a procedure
- Identical video content on both the *Odyssey* Vision Control Room display and Procedure Room display

## Required Training

The Stereotaxis Training Department provides physician technologist and nurse training and associated materials for safe and effective use of the *Odyssey* Vision system’s primary operating functions based on the intended use of the system.

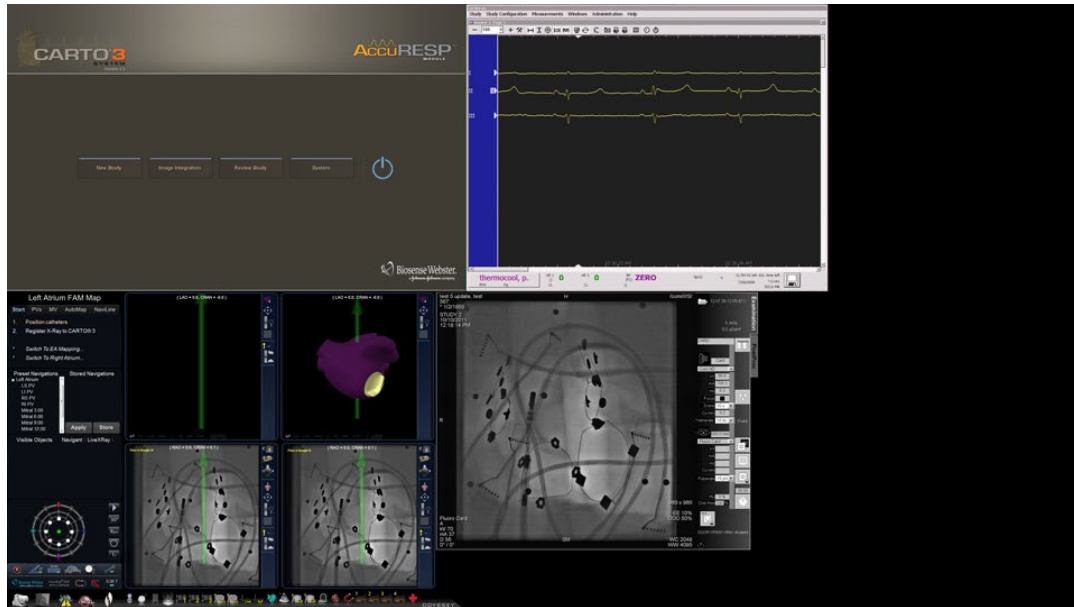








Figure 1: Sample *Odysseey Vision* screen

## Warnings/Precautions

- 
**WARNING:** Federal (USA) law restricts this device to sale by or on the order of a physician.
- 
**WARNING:** The *Odysseey Vision* system should be used only by qualified medical professionals who have been thoroughly trained in its use.
- 
**WARNING:** Only third party devices that have been validated by Stereotaxis should be connected to the *Odysseey Vision* system.
- 
**WARNING:** The user should not attempt to upgrade, configure, or run any other software programs on the *Odysseey Vision* system, other than those specifically installed by Stereotaxis personnel or authorized representative.
- 
**WARNING:** There are no user serviceable parts inside the *Odysseey Vision* system. The user should not remove any covers, guards, or attempt to disassemble any portion of the workstation.
- 
**CAUTION:** Please ensure the *Odysseey Vision* keyboard and mouse control the appropriate window before performing any function using the workstation.



Refer to the *Niobe ES* User Guide for a full list of warnings and precautions associated with magnetic navigation.



## Electrical Safety Compliance

It is the customer's responsibility to ensure the whole system, when other devices are connected to the *Odyssey* Vision system, complies with IEC 60601-1-1.

## Electromagnetic Compatibility Information



**WARNING:** The use of accessories, transducers, and cables other than those specified, with the exception of transducers and cables sold by Stereotaxis, Inc., may result in increased emissions or decreased immunity of the Vision system.



**WARNING:** The Vision system should not be used adjacent to or stacked with other equipment and, if adjacent or stacked use is necessary, the Vision system should be observed to verify normal operation in the configuration in which it will be used.

## Emissions

The Vision system is intended for use in the electromagnetic environment specified in the following tables. The customer or the user of the *Odyssey* Vision system should ensure that it is used in such an environment.

The following table provides guidance and Stereotaxis' declaration on **electromagnetic emissions** for the Vision system:

Emissions	Compliance	Electromagnetic environment—guidance
RF emissions CISPR 11	Group 1	The Vision system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A Complies	
Harmonic emissions IEC 61000-3-2		
Voltage fluctuations/ flicker emissions IEC 61000-3-3		

## Immunity—General Electromagnetic Effects


The following table provides guidance and Stereotaxis' declaration on **electromagnetic immunity** regarding general electromagnetic effects for the Vision system:

<b>Immunity test</b>	<b>IEC 60601 test level*</b>	<b>Compliance level*</b>	<b>Electromagnetic environment—guidance</b>
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % $U_T$ (>95 % dip in $U_T$ ) for 0.5 cycle 40 % $U_T$ (60 % dip in $U_T$ ) for 5 cycles 70 % $U_T$ (30 % dip in $U_T$ ) for 25 cycles <5 % $U_T$ (>95 % dip in $U_T$ ) for 5 s	<5 % $U_T$ (>95 % dip in $U_T$ ) for 0.5 cycle 40 % $U_T$ (60 % dip in $U_T$ ) for 5 cycles 70 % $U_T$ (30 % dip in $U_T$ ) for 25 cycles <5 % $U_T$ (>95 % dip in $U_T$ ) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Vision system requires continued operation during power mains interruptions, it is recommended that the Vision system be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

\*  $U_T$  is the a.c. mains voltage before application of the test level.

## Immunity—RF Interference

The following table provides guidance and Stereotaxis’ declaration on **electromagnetic immunity** regarding RF frequency for the Vision System:

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment—guidance
Conducted RF IEC 61000-4-6	3 V <sub>rms</sub> 150 kHz to 80 MHz	3 V	<p>Portable and mobile RF communications equipment should be used no closer to any part of the Vision system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p><b>Recommended separation distance</b></p> $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P} \text{ 80 MHz to 800 MHz}$ $d = 2.3\sqrt{P} \text{ 800 MHz to 2.5 GHz}$ <p>where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> is the recommended separation distance in meters (m).</p>
Radiated RF IEC 61000-4-3	3 V/m 80 kHz to 2.5 GHz	3 V/m	<p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,<sup>a</sup> should be less than the compliance level in each frequency range.<sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol :</p> 

**Note 1:** At 80 MHz and 800 MHz, the higher frequency range applies.

**Note 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

<sup>a</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Vision system is used exceeds the applicable RF compliance level above, the Vision system should

be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Vision system.

- b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

## Separation Distances

The Vision system is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Vision system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Vision system as recommended in the following table, according to the maximum output power of the communications equipment.

The table provides **recommended separation distances** between portable and mobile RF communications equipment and the Vision system.

Rated maximum output power of transmitter* W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

\* For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

**Note 1:** At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

**Note 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

## About This User Guide

This user guide describes how to operate the *Odyssey* Vision QHD 1.5 system. It does not describe how to operate the *Navigant* platform or any other devices in an interventional lab.

The manual is divided into six sections:

1. Overview
2. Basics that apply to all configurations
3. User information for a non-magnetic lab with a QuadHD monitor
4. User information for a *Niobe* magnetic lab with a QuadHD monitor

5. *Odyssey Cinema* (“Cinema”)
6. System information

## Graphics and Symbols

The following graphics and symbols are used in this user guide.



### WARNING

**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### CAUTION

**CAUTION** indicates a potentially hazardous situation which, if not avoided, could result in injury to patient or operator or damage to the equipment.



### NOTE

**NOTE** identifies information that could affect the outcome or results of the procedure.



### REF

**REF** indicates a reference to an instruction manual.

## Glossary

The following terms may appear in this document:

Acronym / Term	Definition
<b>Active video window</b>	The global control video window that currently has focus.
<b>API</b>	Application Program Interface. The set of classes or functions used to access the capabilities of the application.
<b>Cardiodrive</b>	The Stereotaxis <i>Cardiodrive</i> Catheter Advancement System (CAS) used to advance and retract a catheter in the patient’s heart while the <i>Niobe</i> magnets precisely steer the working tip of the device. This function enables the physician to perform an electrophysiology procedure from the Control Room, greatly minimizing X-ray radiation exposure. The <i>Cardiodrive</i> system is used only for magnetic procedures in magnetic labs.
<b>CARTO® 3</b>	Biosense Webster’s CARTO® 3 Mapping System, which combines 3D mapping and navigation systems with the Stereotaxis <i>Niobe</i> Magnetic Navigation System. (The magnetic and <i>Niobe</i> references apply only to magnetic labs. Non-magnetic labs are limited to displaying the video output of the CARTO® 3 system.)

Acronym / Term	Definition
<b>CAS (Catheter Advancement System)</b>	See <i>Cardiodrive</i> .
<b>Clinical Workflow Manager (CWM)</b>	A component of the <i>Navigant</i> application software that executes clinical workflow scripts to guide medical procedures. CWM is available only for magnetic procedures.
<b>Global control video window</b>	A window that can receive keyboard and mouse events from the <i>Odyssey Vision</i> global keyboard and mouse.
<b>Layout</b>	A set of video windows in a particular configuration on the <i>Odyssey Vision</i> display.
<b>Magnetic Navigation System</b>	See <i>Niobe</i> Magnetic Navigation System.
<b>Manual procedure</b>	A non-magnetic procedure that can be performed in a magnetic lab or a non-magnetic lab.
<b><i>Navigant</i> Navigation Workstation</b>	A platform of software applications designed to simplify clinical workflows. It provides enhanced integration of catheterization and electrophysiology labs and improved automation during magnetic navigation of medical devices. (Available only in magnetic labs.)
<b><i>Niobe</i> Magnetic Navigation System</b>	A Stereotaxis system that enables physicians to more effectively navigate catheters, guidewires, and other magnetic interventional devices through the blood vessels and chambers of the heart to treatment sites and then to effect treatment. (The <i>Niobe</i> System is available only in magnetic labs.)
<b><i>Odyssey Cinema</i></b>	The optional recording system for the <i>Odyssey Vision</i> Platform, referred to as “Cinema,” that provides remote viewing of live and recorded procedures.
<b><i>Odyssey Vision</i> Tableside Controller</b>	An optional 4- x 5-inch touch screen attached to the patient table accessory mounting rail, providing basic control of the <i>Odyssey Vision</i> system in the Procedure Room.
<b>QuadHD (or QuadHDTV)</b>	A display that has four times the resolution of a standard HD display. QuadHD has a pixel resolution of 3840 x 2160.
<b>Screen layout</b>	A set of video windows in a specific layout configuration
<b>Video window</b>	A window on the <i>Odyssey Vision</i> display that contains the video display from one of the applications (e.g., <i>Navigant</i> , ECG, X-ray).
<b>View-only window</b>	A window for viewing only that cannot receive keyboard focus or mouse input; therefore, the cursor cannot display on this type of window. One example is the ultrasound window.

# Section 2: Basics

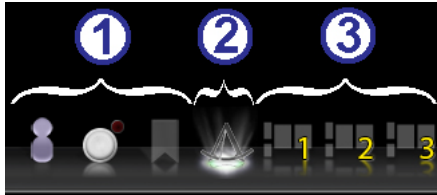
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## Typical Vision Toolbar

The Vision toolbar (**Figure 2**—split into **Figures 2A** and **2B** for illustration only) displays horizontally at the bottom of the monitor. It contains 6 main sections.



**Figure 2A**

### Key to Figure 2A

- ① Section 1 contains three Cinema (*Odyssey Cinema Studio* and *Odyssey Cinema LT* products; see [Section 5](#)) buttons.
- ② Section 2 is the *Navigant* button (shown here in the selected state).
- ③ Section 3 contains three Quick Layout buttons.



**Figure 2B**






### Key to Figure 2B

- ④ Section 4 contains the third-party device buttons.
- ⑤ Section 5 contains the digital video connection buttons (up to 4).
- ⑥ Section 6 is the Emergency Layout button.



## Toolbar buttons



The following table describes each button within the Vision toolbar.

Button	Name	Description
<b>Cinema buttons</b>		
	<b>Connections</b>	Displays the status of remote connections through Cinema. (See <a href="#">Connection buttons</a> .)
	<b>Record and Pause</b>	Starts and pauses recording in Cinema. It is disabled when Cinema is not available. (See <a href="#">Record / Pause buttons</a> .)
	<b>Bookmark</b>	Enables the user to bookmark the timeline during a Cinema recording session. The button is disabled when Cinema is not available. (See <a href="#">Bookmark button</a> .)
<b>Navigant button</b>		
	<b>Navigant</b>	This functions as a home button for the <i>Navigant</i> system. It returns you to the current layout in Clinical Workflow Manager if you are viewing a Quick Layout or emphasized video source.
<b>Quick Layout buttons</b>		
	<b>Quick Layouts 1, 2, and 3</b>	Each button displays a layout the user can customize and save in the Layout Editor.

Button	Name	Description
<b>Third-party device buttons</b>		
Clicking a third-party device button displays the video source at its maximum size and original resolution, if possible. Only one video source at a time can be displayed.		
	<b>CARTO™ RMT</b>	Emphasizes the Biosense Webster CARTO™ RMT video window.
	<b>CARTO® 3</b>	Emphasizes the Biosense Webster CARTO® 3 video window.
	<b>Siemens Leonardo®</b>	Emphasizes the Siemens Leonardo® Workstation. The icon would be different for Philips Interventional Tools.
	<b>ECG Real Time</b>	Emphasizes the Live ECG video window.
	<b>Live Fluoro A</b>	Emphasizes the Live Fluoro A video window.
	<b>Live Fluoro B</b>	Emphasizes the Live Fluoro B video window if a biplane X-ray system is installed.
	<b>Niobe</b>	Click to access the Stereotaxis <i>Niobe</i> Magnetic Navigation System Service Menu in a magnetic lab.
	<b>Auxiliary Input Procedure Room 2</b>	Emphasizes the Auxiliary Input connected to the Procedure Room hub box port #2.
	<b>Reference Fluoro A</b>	Emphasizes the Fluoro A Reference video window.
	<b>Reference Fluoro B</b>	Emphasizes the Fluoro B Reference video window if a biplane X-ray system is installed.

Button	Name	Description
	<b>ECG Control</b>	Emphasizes the ECG control and dialog list window.
	<b>Ultrasound</b>	Emphasizes the ultrasound machine connected in the Procedure Room.
<b>Additional third-party device buttons</b>		
These device buttons display as needed, depending on system configuration.		
	<b>ECG Image Reference</b>	Emphasizes the Reference ECG video window.
	<b>Patient</b>	Emphasizes the patient view in the Procedure Room.
	<b>Philips Allura® Live</b>	Emphasizes the Philips Allura® video window.
	<b>Philips Allura® Admin Live</b>	Emphasizes the Live Philips Allura® Admin video window.
	<b>Philips Allura® Reference 1</b>	Emphasizes the Live Philips Allura® Reference 1 video window.
	<b>Philips Allura® Reference 2</b>	Emphasizes the Live Philips Allura® Reference 2 video window.
	<b>Videoconferencing</b>	Emphasizes the videoconferencing video window.
	<b>Biplane X-ray system</b>	Emphasizes the biplane X-ray system video window.

Button	Name	Description
	<b>Camera 1</b>	Emphasizes the Camera 1 video window.
	<b>Camera 2</b>	Emphasizes the Camera 2 video window.
	<b>Anesthesia Cart</b>	Emphasizes the anesthesia cart system video window.
	<b>EP Nav</b>	Emphasizes the EP Nav system video window.
	<b>Hemodynamics</b>	Emphasizes the hemodynamics video window.
	<b>IVUS Imaging System</b>	Emphasizes the IVUS imaging system video window.
	<b>NavX</b>	Emphasizes the NavX system video window.
	<b>Picture archiving and communication system (PACS)</b>	Emphasizes the PACS video window.

Button	Name	Description
	<p><b>Digital Video Connections 1, 2, 3, and 4</b></p>	<p>Emphasizes up to 4 additional digital video windows for systems with 15 video displays.</p>
<p><b>Emergency Layout button</b></p>		
	<p><b>Emergency Layout</b></p>	<p>Click to display the Emergency Layout window with the video sources Live Fluoro A and ECG Real Time. This is a toggle icon. Click the Emergency Layout button to return to the previous layout.</p>

## Toolbar button states

All of the toolbar buttons display slight differences in appearance, depending on their state. The example below is the Real Time ECG button.



The three most common states for Vision toolbar buttons are enabled, selected, and disabled.

## System status messages

To check system status, double-click the system icon on the hardware status indicator toolbar (shown at right).



Figure 3 is a sample System Status message.

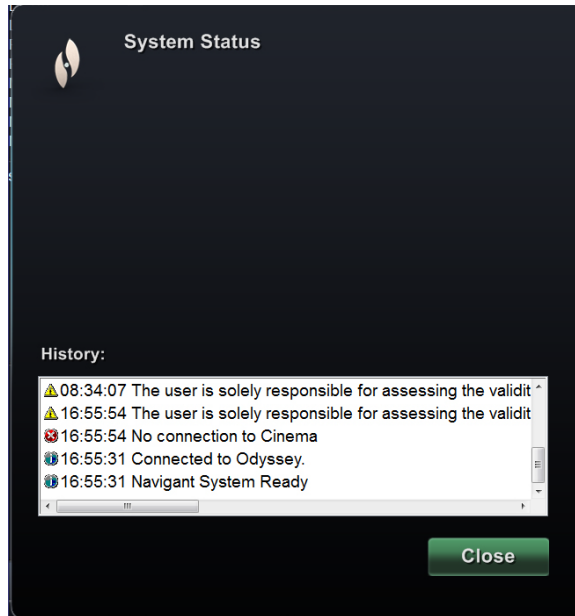


Figure 3: Sample System Status message

## Special Window Types

Some applications with the *Odyssey* Vision platform have special window types:

- View-only windows are for the display of information only. The Vision global keyboard/mouse never sends input to this type of window. The cursor can move across the window, but it will change from a white arrow to a white arrow with a “no” symbol (⊘) to remind the user the mouse cannot affect this window.
- Another special window type is an application that has an extended desktop, such as ECG. These windows can be positioned in any orientation on the consolidated display.

## Changing Video Window Focus

When the mouse is clicked in a video window of an application, the *Odyssey* Vision system delivers mouse move and mouse click events to the window under the cursor. When the user assigns keyboard focus to one of the video windows by clicking in it, the Vision system sends keyboard and mouse events to the system with keyboard focus. In this way, the user can change which application is being controlled simply by moving the mouse and clicking the mouse in that application’s video window on the Vision display.

For example, if the user clicks in the *Navigant* video window, the Vision system sets keyboard focus to the *Navigant* window and subsequent keyboard events are directed to *Navigant*. If the user then clicks in the ECG video window, the Vision system would then send subsequent keyboard events to the ECG application. Mouse move and click events are always directed to the window in which the cursor is located.

The window model for the Vision system is the same as that for the Windows operating system. One window will have focus. The user moves the cursor over other windows, but focus does not change until some mouse click event (left-click, right-click, double-click) occurs in a window other than the one that currently has focus.

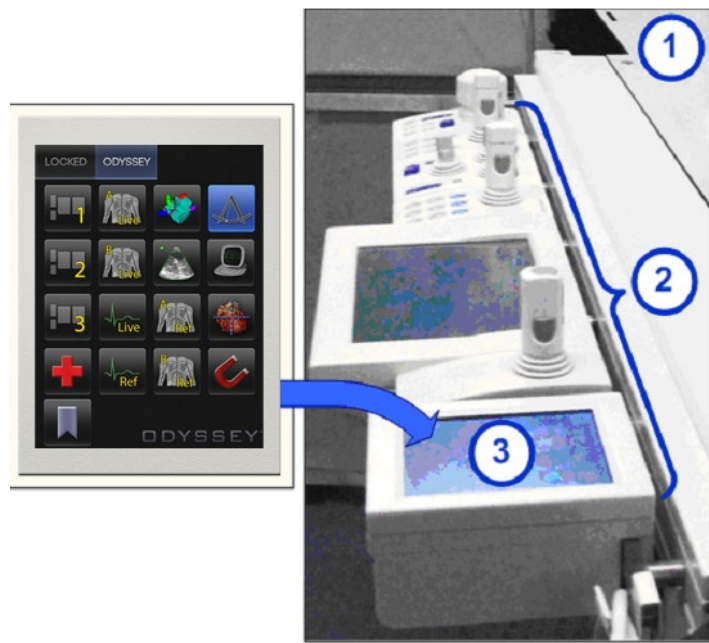
## Tableside Controller (Optional)

In a typical *Odyssey* Vision lab, the physician controls a catheter from the Control Room. However, the Tableside Controller (**Figure 4**) may be added as an option if the ability to control Vision windows from the Procedure Room is desired.

### Tableside Controller guide

- ① Patient table.
- ② Patient table accessory mounting rail. Devices may vary.
- ③ Tableside Controller — mirrors the Figure 4 buttons.

**Figure 4:  
Tableside  
Controller on  
patient table  
accessory rail**



## Connecting Third-Party Systems to Procedure Room Hub

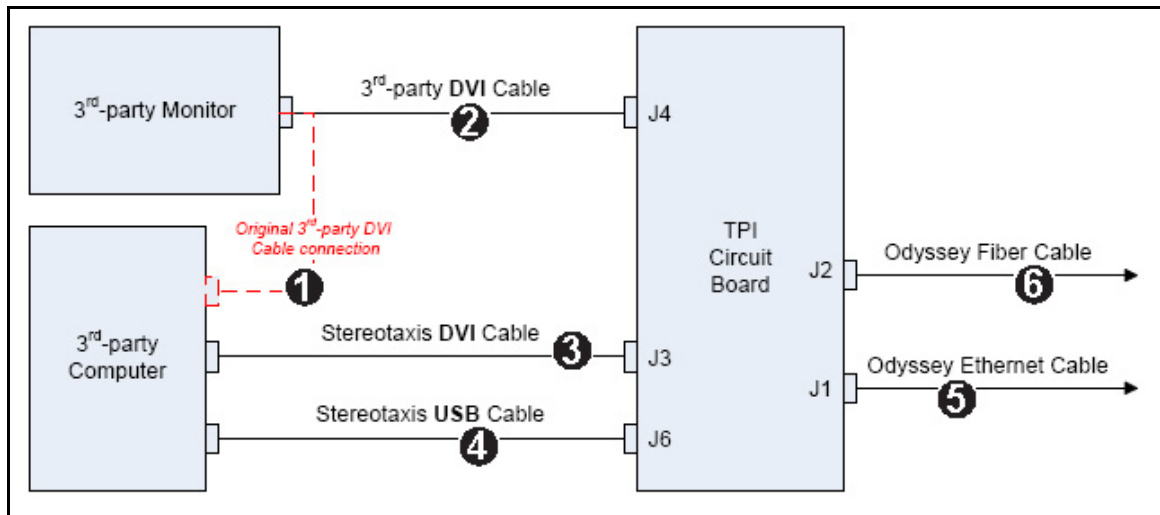
### Digital video interface (DVI)

Following are general instructions for connecting a third-party computer by way of a third-party interface (TPI) to one of two TPI circuit boards (top or bottom) in the Procedure Room hub (**Figure 5** shows a TPI box). Included in this process are the digital video interface (DVI) and USB (for mouse and keyboard control, if desired) connections. Duplicate these steps (indicated in **Figure 6**) for each computer (video source).



**Figure 5: TPI box**

1. Unhook the DVI cable currently attached to the back of the third-party computer, leaving it connected to the third-party monitor.
2. Connect the unhooked DVI cable to the TPI-J4 port on the system's associated TPI circuit board.
3. Connect the Stereotaxis-provided DVI cable between the back of the third-party computer and the TPI-J3 port on the system's associated TPI circuit board.
4. Connect the Stereotaxis-provided USB cable between the back of the third-party computer and the TPI-J6 port on the system's associated TPI circuit board.
5. Connect the appropriate *Odyssey* Vision system Ethernet cable to TPI-J1 on the system's associated TPI circuit board.
6. Connect the appropriate *Odyssey* Vision system fiberoptic DVI cable to TPI-J2 on the system's associated TPI circuit board.



**Figure 6: Procedure Room TPI connectivity for DVI**

When connections are complete, the TPI system is available as a video window on the *Odyssey* Vision screen when its digital video connection button is selected.



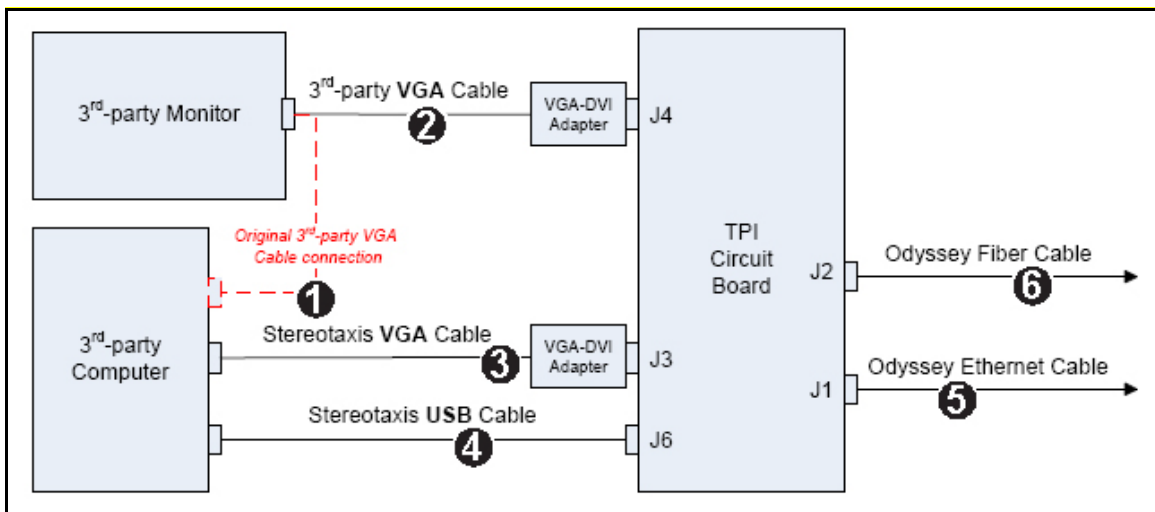
**Note:** If Auto-resolution is enabled on this connection, it will be applied in the Layout Editor and be noticeable in the associated video source's window.



## Video graphics array (VGA)

Following are general instructions for connecting a third-party computer by way of a third-party interface (TPI) to one of two TPI circuit boards (top or bottom) in the Procedure Room hub. Included in this process are the video graphics array (VGA), VGA adapter, and USB (for mouse and keyboard control, if desired) connections. Duplicate these steps (indicated in **Figure 7**) for each computer (video source).

1. Unhook the VGA cable currently attached to the back of the third-party computer, leaving it connected to the third-party monitor.
2. By way of a provided VGA-DVI adapter, connect the unhooked VGA cable to the TPI-J4 port on the system's associated TPI circuit board.
3. By way of a provided VGA-DVI adapter, connect the Stereotaxis-provided VGA cable between the back of the third-party computer and the TPI-J3 port on the system's associated TPI circuit board.
4. Connect the Stereotaxis-provided USB cable between the back of the third-party computer and the TPI-J6 port on the system's associated TPI circuit board.
5. Connect the appropriate *Odyssey* system Ethernet cable to TPI-J1 on the system's associated TPI circuit board.
6. Connect the appropriate *Odyssey* system fiberoptic DVI cable to TPI-J2 on the system's associated TPI circuit board.



**Figure 7: Procedure Room TPI connectivity for VGA**

When connections are complete, the TPI system is available as a video window on the *Odyssey* Vision screen when its digital video connection button is selected.



**Note:** If Auto-resolution is enabled on this connection, it will be applied in the Layout Editor and be noticeable in the associated video source's window.

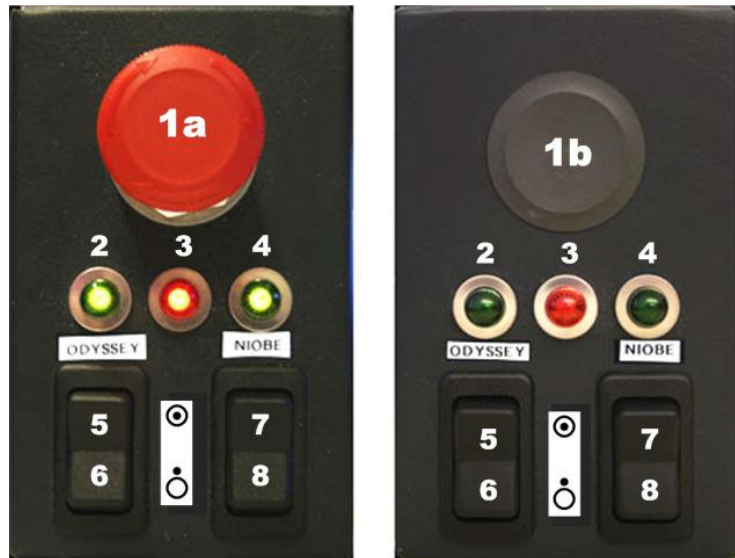
## Getting Started

Following this sequence of steps when starting the *Odyssey* Vision application is important:

- Turn on all non-Stereotaxis system computers (e.g., X-ray, ECG, and mapping systems).
- *In magnetic labs*, turn on the *Niobe* system by pressing the switch labeled “NIOBE” to the **1** position on the Vision Remote Power Box. The switch is a momentary-contact switch that will return to the middle position when released.
- Turn on the Vision computer by pressing the switch labeled “ODYSSEY” to the **1** position on the Vision Remote Power Box. Like the NIOBE switch, this is a momentary-contact switch.

### Key to Figure 8

- 1a** Siemens E-stop button
- 1b** E-stop button hole is plugged for Philips and non-magnetic labs
- 2** *Odyssey* Vision system is on when green LED is lit
- 3** E-stop is activated when red LED is lit
- 4** In a magnetic lab, *Niobe* system is on when green LED is lit
- 5** Turns *Odyssey* Vision system ON when pressed
- 6** Turns *Odyssey* Vision system OFF\* when pressed
- 7** In a magnetic lab, turns *Niobe* system ON when pressed
- 8** In a magnetic lab, toggles *Niobe* system OFF\* when pressed



**Figure 8: Vision Remote Power Box for Siemens labs (left) and Philips labs (right)**





\*Use the manual switches only when you cannot shut down the system through the Vision software. If you do need to use the switches, press and hold them for approximately 3 seconds until the system shuts down.



**Note:** The large red button displayed above is the *Niobe* emergency stop when the *Niobe* system is used in a magnetic lab with a Siemens AXIOM Artis™ dFC MNS X-ray system. This E-stop button is not present when the *Niobe* system is used in a magnetic lab with a Philips Allura® Xper FD10 X-ray system (the Allura® E-stop simultaneously stops the *Niobe* system).

## On/Off symbols

The following table shows on/off symbols for the main power and system equipment:

Symbol	Description	Note
	Off—Power (disconnection from the mains)	Button is located inside cabinet
	On—Power (connection to the mains)	Button is located inside cabinet
	Off— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems
	On— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems

# Section 3: Non-Magnetic Lab with QuadHD

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## Getting Started

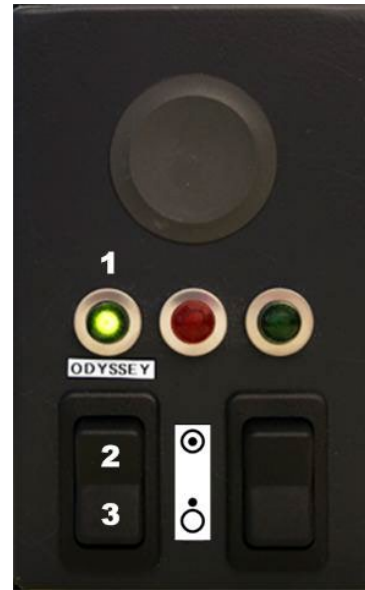
It is important to follow this sequence of steps when starting the *Odyssey* Vision application:

- Turn on all non-Stereotaxis system computers (e.g., X-ray, ECG, and mapping systems).
- Turn on the *Odyssey* Vision computer by pressing the switch labeled “ODYSSEY” to the **1** position on the Vision Remote Power Box (**Figure 9**). This is a momentary-contact switch that will return to the middle position when released.

### Key to Figure 9

- 1** *Odyssey* Vision system is on when green LED is lit
- 2** Turns *Odyssey* Vision system ON when pressed
- 3** Turns *Odyssey* Vision system OFF\* when pressed

\* Use the manual switches only when you cannot shut down the system through the Vision software. If you need to use the switches, press and hold them for about 3 seconds until the system shuts down.



**Figure 9:**  
Vision Remote Power Box  
for non-magnetic labs

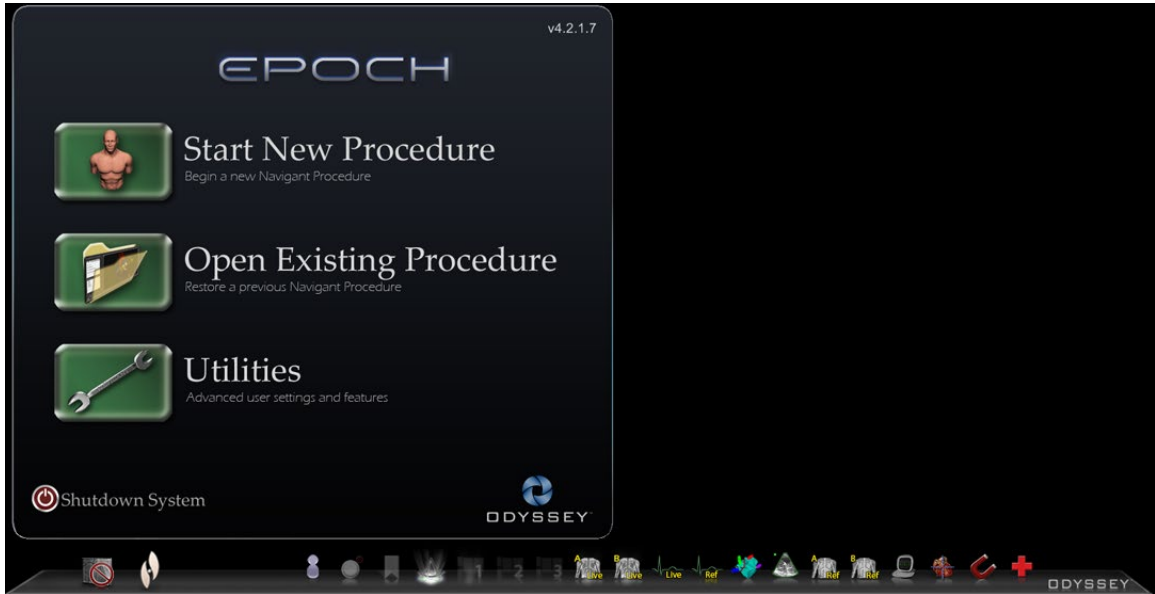
## On/Off symbols

The following table shows on/off symbols for the main power and system equipment:

Symbol	Description	Note
○	Off—Power (disconnection from the mains)	Button is located inside cabinet
	On—Power (connection to the mains)	Button is located inside cabinet
◐	Off— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems
◑	On— <i>Odyssey</i> or <i>Niobe</i> equipment	Symbol is same for both systems

## Start window

The *Odyssey* Vision start window (**Figure 10**) is shown in the lower left corner of the QuadHD screen — as are all *Navigant*-specific windows.



**Figure 10: Start window**

Click **Start New Procedure** (**Figure 11**).



**Figure 11: Start New Procedure**

## Procedure information window

We recommend entering all patient information into the X-ray system before starting a procedure on the *Odyssey* Vision system. The information will then be automatically imported into the appropriate fields on the Vision system.

You may also fill out procedure information fields manually. If entering the procedural information manually, type in the Patient First and Last Name, their Patient ID, and Date of Birth (DOB), and then select the appropriate Sex. The Physician and Profile fields each contain a drop-down menu, provided for ease of usage. Click the down arrow to the right of the field to choose physician and procedure if working with previously entered information.

New information may be entered for the Physician and Profile fields and will be stored for future procedures. The Physician and Profile fields are used to display the customized layouts that a physician has created. The Notes section is an optional field for any additional information.

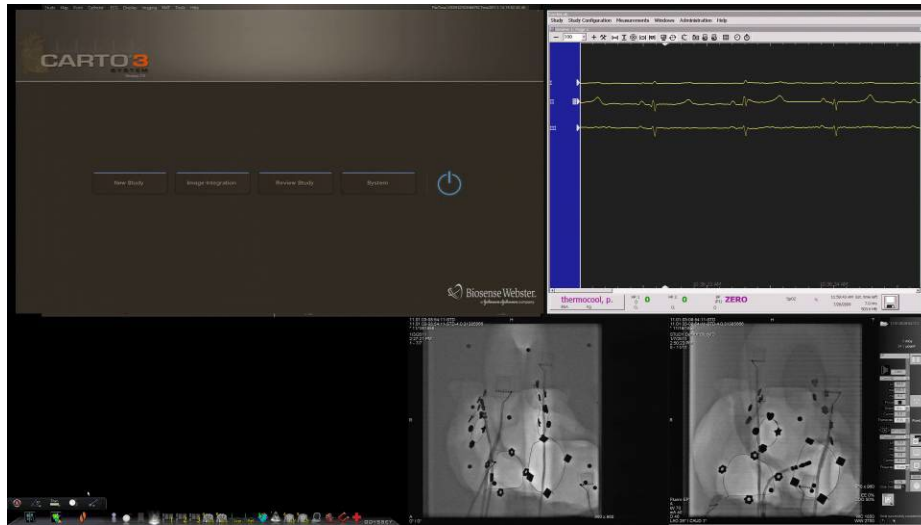
The Procedure Type section of this window contains four tabs to indicate the general procedure type. Select (click) the desired tab, and then click to choose options within the Procedure Type section. Selecting 3D Mapping changes the procedure layout to include the mapping video source. The example in **Figure 12** shows **Electrophysiology, Right Atrium, and Use 3D Mapping** selected.

**Figure 12: Non-magnetic procedure information window**

After entering procedure information and selecting procedure type options, click **OK**. The layout associated with this procedure displays. The procedure is now open and the main window (**Figure 13**) displays.



**Note:** You **must** fill out the Patient (First and Last Name, ID, DOB, and Sex) and Physician fields to continue with the procedure. Enter the patient information exactly as it appears on the X-ray system.



**Figure 13: Main window for procedure in non-magnetic lab**

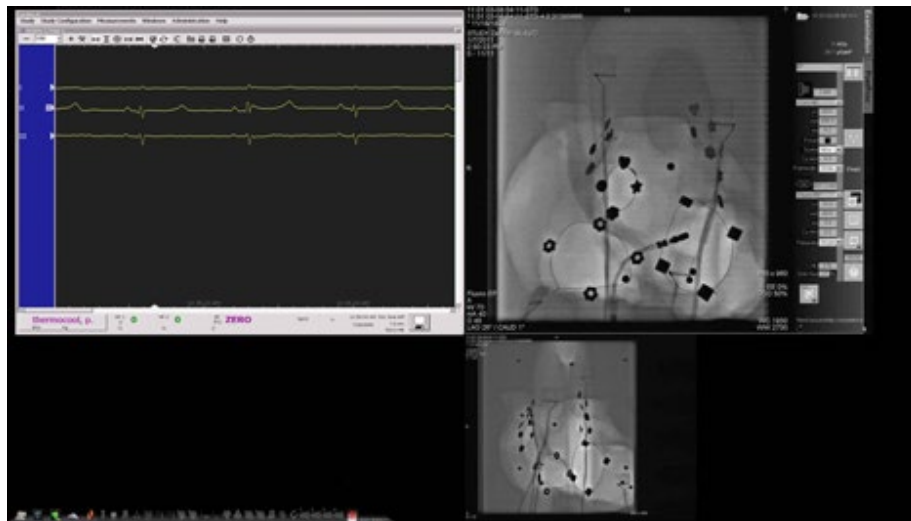
## Emergency Layout

The Emergency Layout is available when the Vision application starts and can be accessed at any time during the procedure by clicking the red cross (**Figure 14**) on the Vision toolbar. The QuadHD screen displays Live ECG, Live Fluoro A, and Reference Fluoro A (**Figure 15**).



**Figure 14: Emergency Layout button on Vision toolbar**

The Emergency Layout button acts as a toggle. Clicking it once displays the Emergency Layout; clicking again returns to the previous screen.



**Figure 15: Emergency Layout**



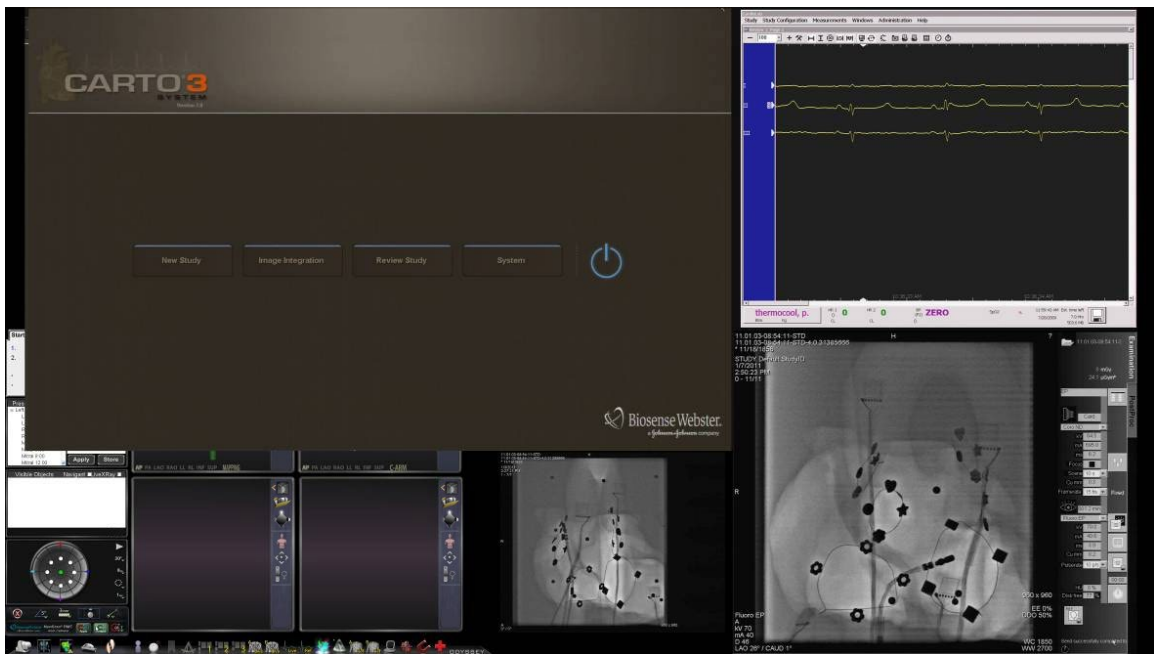
## Altering Layouts

The Vision Solution offers several options for altering a layout:

- Emphasize a video source
- Change the layout through the Layout Editor
- Customize the default Quick Layouts

### Emphasize video sources

Clicking a video source button on the Vision toolbar displays the video source in an emphasized state at or near full resolution on the screen (**Figure 16**).



**Figure 16: Emphasized video source – CARTO® 3**

## Layout Editor

The Layout Editor, a *Navigant* feature, allows customization of the procedure layout displayed.

### “Picture within a picture”

When opening the Layout Editor, you can still view three quarters of the live screen. This feature is significant because if your live videos (Live ECG and Live Fluoro) are displayed on the main window, you can still view them in Layout Editor (**Figure 17**).

When you move or modify images within Layout Editor, you will not see the change on the main window until you save your changes. This rule includes the live feeds.

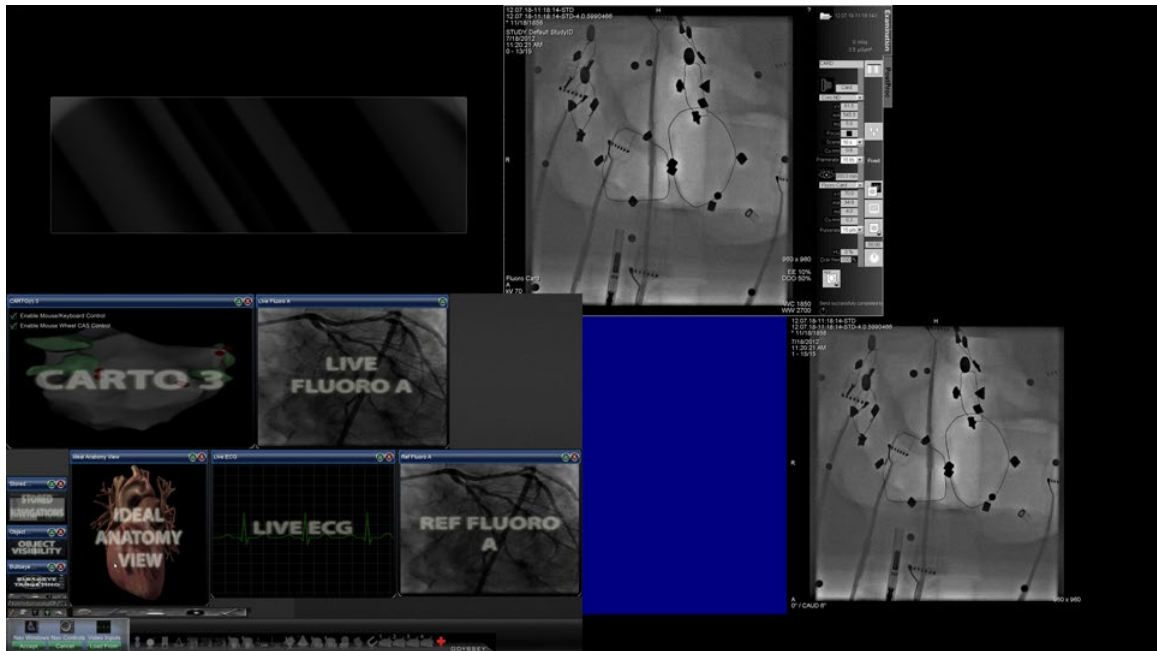


Figure 17: Non-magnetic Lab Layout Editor

## Control Panel



Figure 18: Non-magnetic Lab Layout Editor Control Panel

### Non-magnetic Lab Layout Editor Control Panel guide (Figure 18)

**Nav Windows menu button.** Displays a list of available and displayed *Navigant* windows.

**Nav Controls menu button.** Displays available and displayed *Navigant* control panels.

**Video Inputs menu button.** Displays available and displayed video inputs.

**Accept button.** Saves the designated layout.

**Cancel button.** Rejects layout edits and returns to previous screen.

**Load From button.** Allows the user to copy a layout from another user for the same layout.

Similar to the **Nav Windows** and **Nav Controls** menu buttons, the **Video Inputs** button displays the available video sources (dark lettering in **Figure 19**) for the current procedure. The video sources already displayed on the Layout Editor appear shaded on the menu.

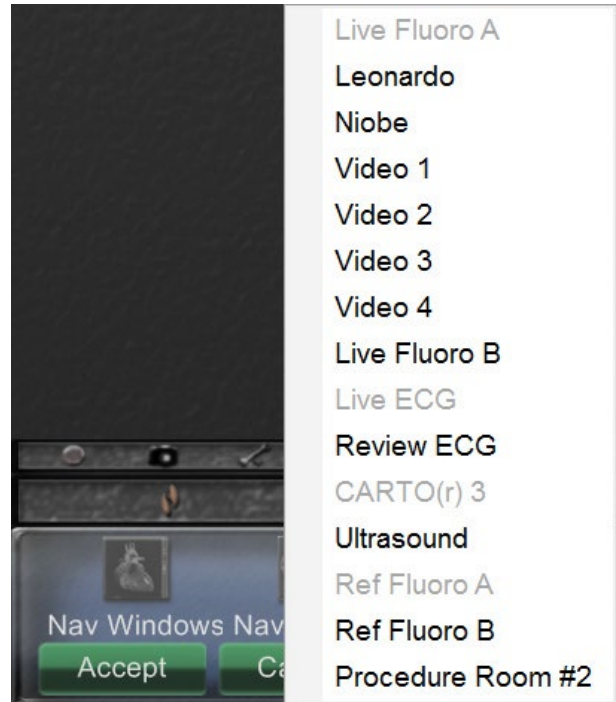
**Figure 19: Example of Video Inputs menu in Layout Editor – Siemens system**



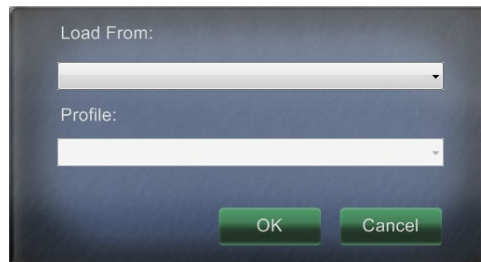
**Notes:**

A video source may not be repeated within a layout. Only one instance of Live Fluoro may exist in any given layout.

Figure 19 represents the Layout Editor window list for a Siemens system. Some of the window names differ slightly for other systems.



Select a video source from the menu to add it to the layout. Move or resize other elements in the layout if necessary so none are overlapping. (Overlapping elements are indicated by a red border.) If the layout is satisfactory, click the **Accept** button. (The **Accept** and **Cancel** buttons are available only after a layout is changed.) If you prefer to use an existing layout, you may use the Load From dialog (**Figure 20**).



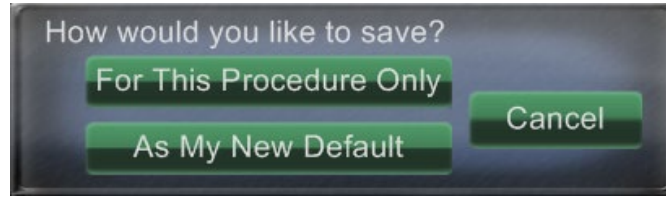
**Figure 20: Load From dialog in Layout Editor**

### Load From dialog guide (Figure 20)

- To import this layout from a different physician, use the Load From dialog. Select a physician name (and/or profile for the layout), and then click **OK**.
- To use the Vision default layout, leave the Physician Name and Procedure Type fields blank and then click **OK**.

After clicking the **Accept** button from the Layout Editor or after clicking the **OK** button from the Load From dialog, the save dialog (**Figure 21**) displays. Click the **For This Procedure Only** button to use the layout for *only* the current procedure. Click the **As My New Default**

button if you want the layout to be available for *all future* procedures for this *physician and procedure type*.



**Figure 21: Save dialog in Layout Editor**

## Quick Layouts

### Configurations

The Quick Layouts are grouped by clinical specialty and procedure type for manual, CARTO® 3, and non-CARTO® 3 equipment combinations.

Each of the following Electrophysiology categories has separate Quick Layouts (1, 2, and 3):

- Right Atrium (CARTO® 3 and non-CARTO® 3)
- Left Atrium (CARTO® 3 and non-CARTO® 3)
- Right Ventricle (CARTO® 3 and non-CARTO® 3)
- Left Ventricle (CARTO® 3 and non-CARTO® 3)

The three Quick Layouts (1, 2, and 3) may be used for the following Interventional Cardiology categories:

- Coronary
- Peripheral (Femoral or Tibial).
- Cardiac Resynchronization Therapy—Coronary Sinus—procedures use the same three Quick Layouts (1, 2, and 3) for all procedures.

### Buttons

To view and customize alternative (quick) layouts, click one of the Quick Layout buttons (**Figure 22**) on the Vision toolbar. To modify the Quick Layout, use the Layout Editor feature, above. The next time you click the same Quick Layout button, the new layout displays.

**Figure 22: Three Quick Layout buttons on Vision toolbar**



**Note:** You must click one of the Quick Layout buttons first to customize Quick Layout 1, 2, or 3. Opening the Layout Editor directly (without clicking a Quick Layout button) will *not* save the altered layout as a Quick Layout.

# Section 4: Magnetic Lab with QuadHD

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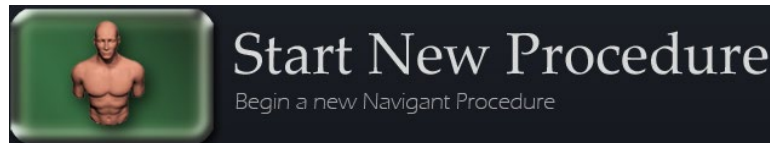
## Start Window

The *Odyssey* Vision start window (**Figure 23**) is shown in the lower left corner of the QuadHD screen — as are all *Navigant*-specific windows.



**Figure 23: Start window (magnetic lab)**

Click **Start New Procedure** (**Figure 24**).



**Figure 24: Start New Procedure**

## Procedure Information Window

We recommend entering all patient information into the X-ray system before starting a procedure on Vision. The information will then be automatically imported into the appropriate fields on Vision.

You may also fill out procedure information fields manually. If entering the procedural information manually, type in the Patient First and Last name, their Patient ID, and Date of Birth (DOB), and then select the appropriate Sex. The Physician and Profile fields each contain a drop-down menu, provided for ease of usage. Click the down arrow to the right of the field to choose physician and procedure if working with previously entered information.

New information may be entered for the Physician and Profile fields and will be stored for future procedures. The Physician and Profile fields are used to display the customized layouts that a physician has created. The Notes section is an optional field for any additional information.

The Procedure Type section of this window contains four tabs to indicate the general procedure type. Select (click) the desired tab, then click to choose options within the Procedure Type section. Selecting CARTO® 3 changes the procedure layout to include CARTO® 3 options. The example in **Figure 25** shows **Electrophysiology, Right Atrium, Use CARTO® 3, and Use Niobe** selected.

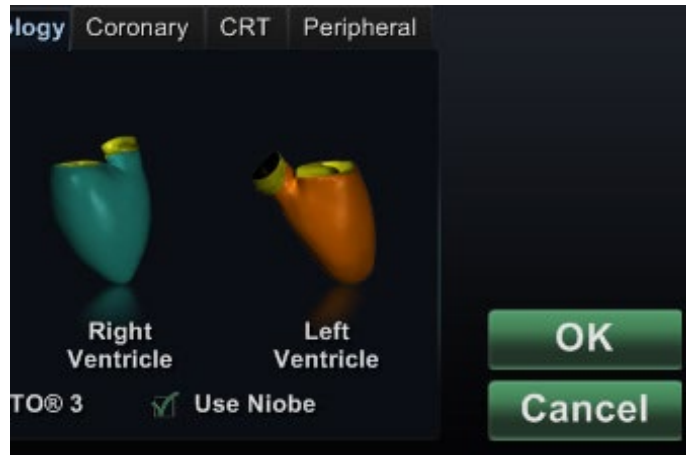
**Figure 25: Magnetic procedure information window**

After entering the procedure information and selecting the procedure type options, click **OK**. The layout associated with this procedure displays. The procedure is now open and the main window displays.



**Note:** You **must** fill out the Patient (First and Last Name, ID, DOB, and Sex) and Physician fields to continue with the procedure. Enter the patient information exactly as it appears on the X-ray system.

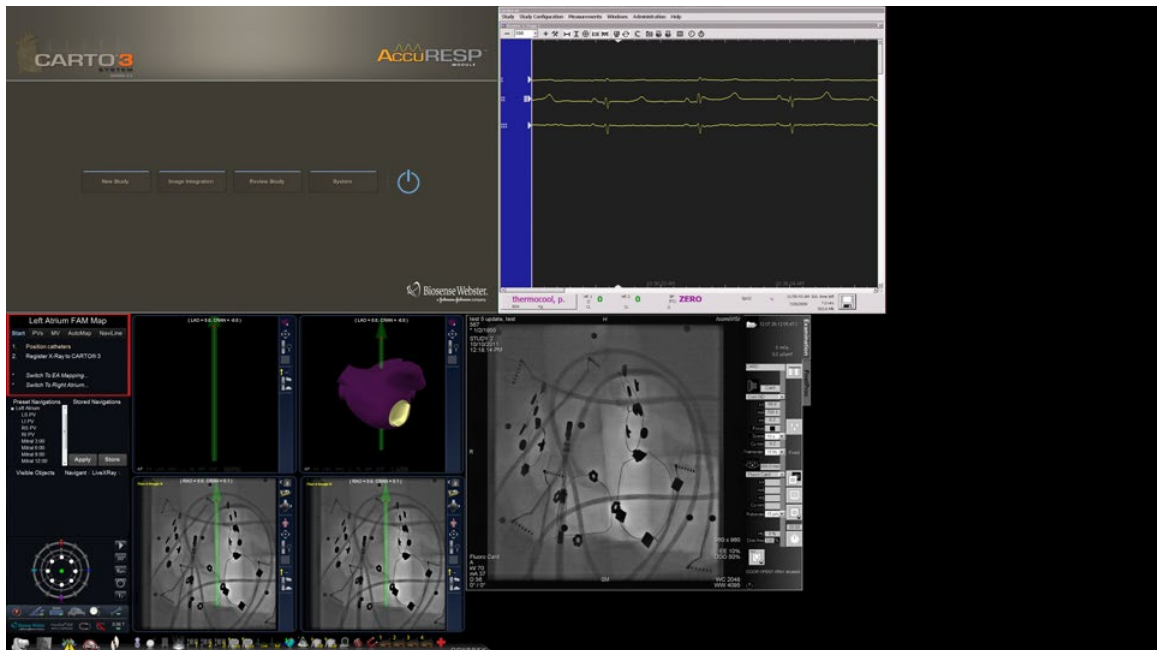
## Magnetic procedures



**Figure 26: Selected Use *Niobe* checkbox on Vision procedure information screen for magnetic procedure**

To start a magnetic procedure from the Vision procedure information window, leave the Use *Niobe* checkbox selected as shown in **Figure 26**. *Niobe* ES procedures can run only with the *Niobe* Magnetic Navigation System. Vision procedures can run with or without the *Niobe* system.

1. Select or clear the Use CARTO® 3 checkbox to start a procedure with or without CARTO® 3.
2. Click **OK** to begin the procedure.



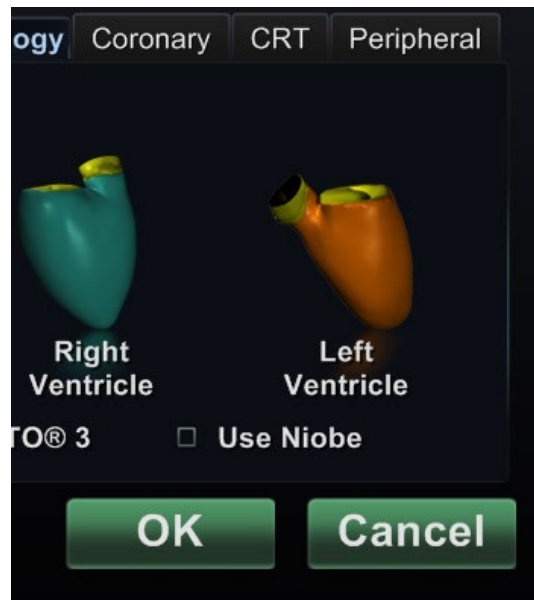
**Figure 27: Magnetic procedure with CARTO® 3**



The Clinical Workflow Manager (red box in **Figure 27**) displays in the upper-left corner of the bottom quadrant of the QuadHD screen. The Clinical Workflow Manager controls the opening layout for any procedure. If you want to change the video source display, you can select:

- A device button on the *Odyssey* Vision toolbar to open a single, emphasized video source
- The Tools (wrench) button and then Layout Editor from the menu
- One of the three Quick Layout buttons on the toolbar

## Manual procedures in magnetic labs

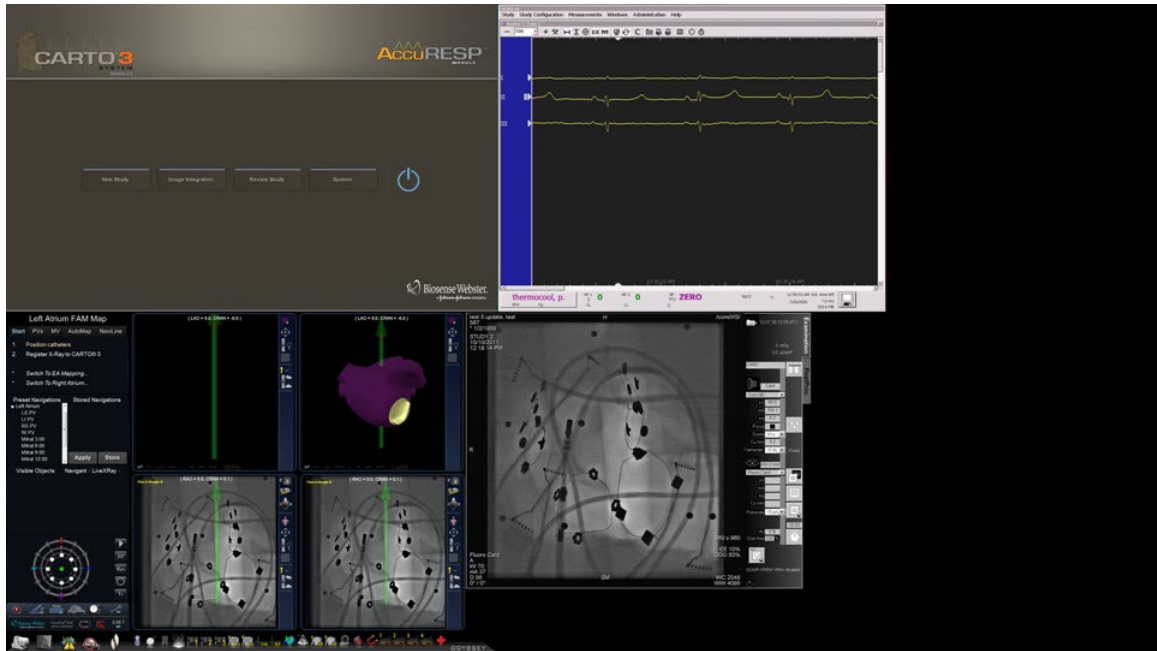


**Figure 28: Cleared Use *Niobe* checkbox on Vision procedure information window for manual procedure in magnetic lab**

The Vision procedure information window also allows you to perform manual procedures without using the *Niobe* Magnetic Navigation System. If you are starting a manual procedure, clear the **Use *Niobe*** checkbox on the procedure information window (**Figure 28**).

The Clinical Workflow Manager will not display on the Vision screen. However, CARTO® 3, ECG, X-ray, and other systems will still display. Most *Navigant* features also display, such as control panels, guidance dialogs, and Layout Editor.

Click **OK** to begin the procedure. **Figure 29** displays.



**Figure 29: Manual procedure in magnetic lab with CARTO® 3 main window**

This opening window of a manual procedure displays default video sources based on the selected procedure. If you want to change the video source display, you can select:

- A device button from the Vision toolbar to open a single, emphasized video source, displaying at or near full resolution.
- The Tools (wrench) button and then Layout Editor from the menu.
- One of the three Quick Layout buttons.

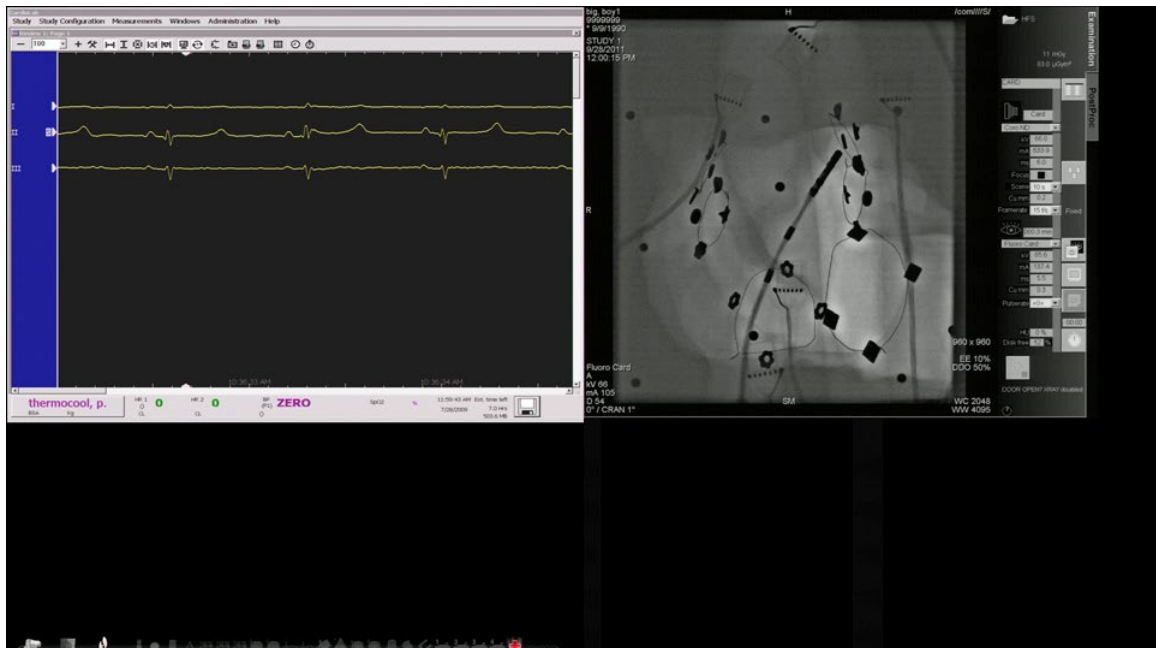
## Emergency Layout

The Emergency Layout is available when the Vision application starts and can be accessed at any time during the procedure by clicking the red cross icon (**Figure 30**) on the Vision toolbar. The QuadHD screen displays Live ECG, Live Fluoro A, and Reference Fluoro A (**Figure 31**).



**Figure 30: Emergency Layout button on Vision toolbar**

The Emergency Layout button acts as a toggle. Clicking it once displays the Emergency Layout; clicking again returns to the previous screen.



**Figure 31: Emergency Layout**

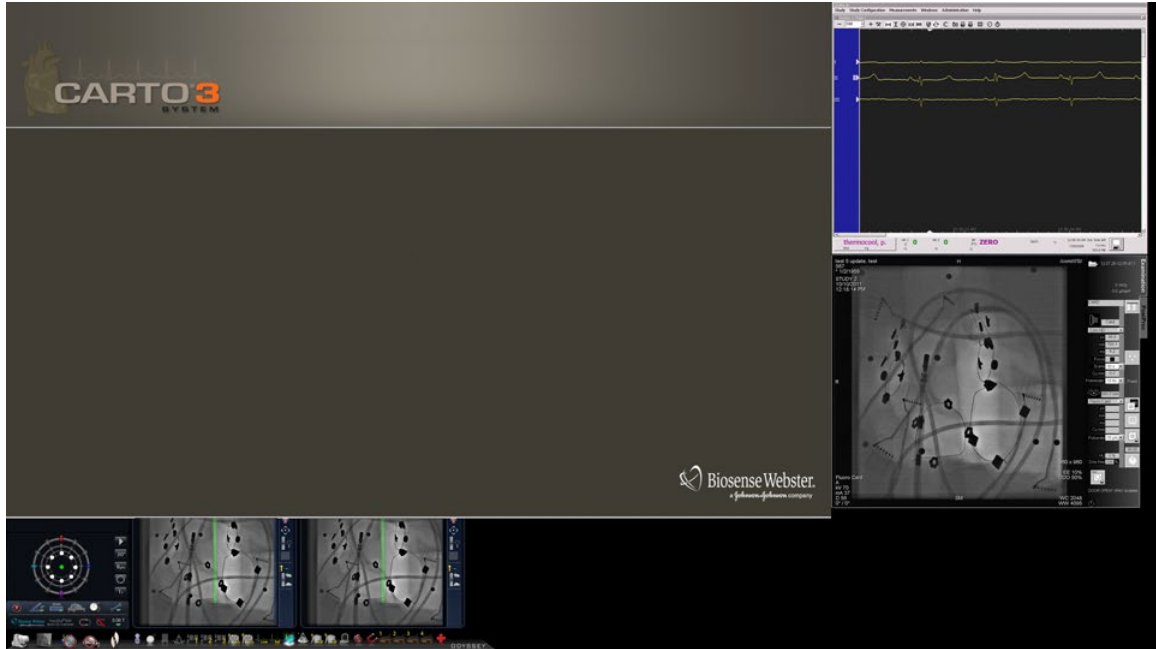
## Altering Layouts

Vision offers several options for altering a layout:

- Emphasize a video source
- Change the layout through the Layout Editor
- Customize the default Quick layouts

## Emphasize video sources

When you click a video source button on the Vision toolbar, the video source you selected displays (**Figure 32**) in an emphasized state on the screen at or near full resolution.



**Figure 32: Emphasized video source – CARTO® 3**

To return to the previous procedure layout when done with the emphasize layout, select the *Navigant* icon (**Figure 33**) on the toolbar.



**Figure 33: *Navigant* toolbar icon**

## Layout Editor

The Layout Editor is a *Navigant* feature that allows you to customize the procedure layout displayed.



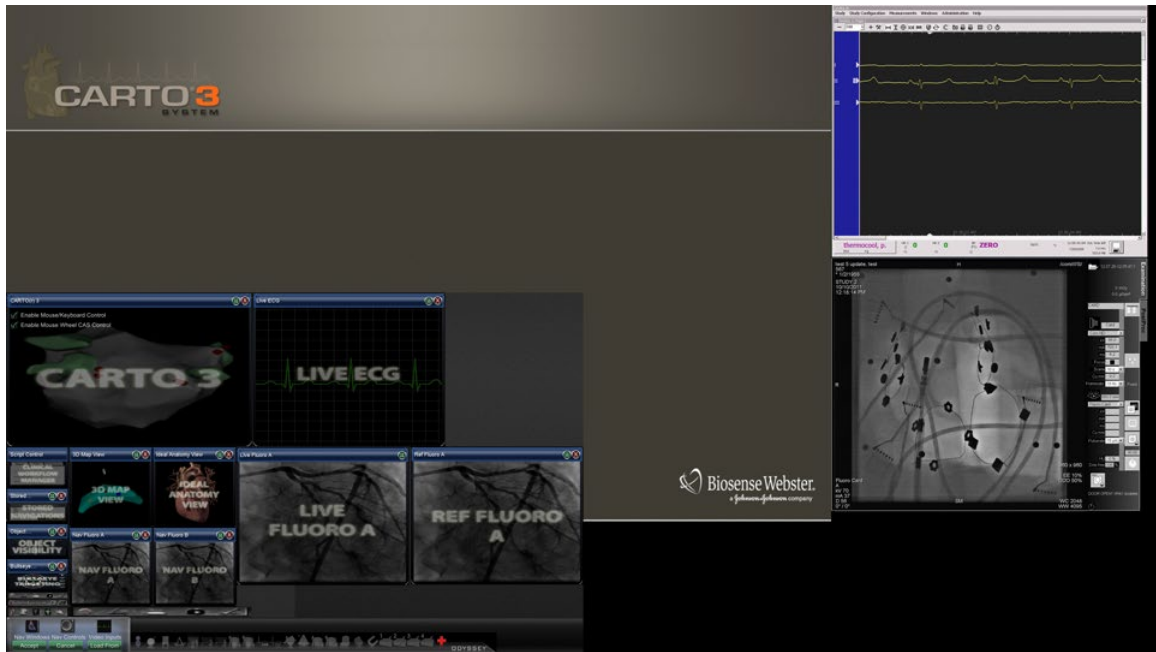
Refer to the *Niobe ES User Guide* for a complete description of procedure layout customization.

The Vision Layout Editor includes the addition of the Video Inputs menu button to the control panel.

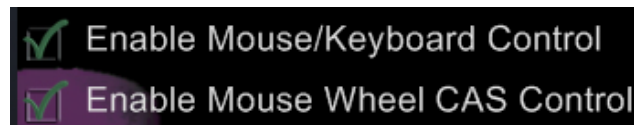
## “Picture within a picture”

When opening the Layout Editor (**Figure 34**), you can still view three quarters of the live screen. This feature is significant, because if your live videos (Live ECG and Live Fluoro) are displayed on the main window, you can still view them in Layout Editor.

When you move or modify images within the Layout Editor, you will not see the change on the main window until you save your changes. This rule includes the live feeds.



**Figure 34: Magnetic Lab Layout Editor (bottom left quadrant of screen)**



**Figure 35: Checkboxes within CARTO® 3 section of Layout Editor**

The CARTO® 3 video source on the Layout Editor window contains two checkboxes (**Figure 35**) to configure functionality within CARTO® 3 procedures.

- 1. Enable Mouse/Keyboard Control.** Checking this box enables Vision global keyboard and mouse to be used within CARTO® 3 when CARTO® 3 is the window currently in use (has focus).



**Note:** We recommend disabling the mouse/keyboard control when in a lab with two operators, one controlling the CARTO® 3 system with the native keyboard and mouse and one controlling the global keyboard and mouse on the other systems such as the *Niobe* system.

2. **Enable Mouse Wheel CAS Control.** Checking this box enables the Vision mouse wheel to advance and retract the catheter when CARTO® 3 has focus during a magnetic procedure.



**Note:** For more information on the window currently in use or changing focus, see [Changing Video Window Focus](#).

## Control Panel



**Figure 36: Magnetic Lab Layout Editor Control Panel**

### Magnetic Lab Layout Editor Control Panel guide (Figure 36)

**Nav Windows menu button.** Displays a list of available and displayed *Navigant* windows.

**Nav Controls menu button.** Displays available and displayed *Navigant* control panels.

**Video Inputs menu button.** Displays available and displayed video inputs.

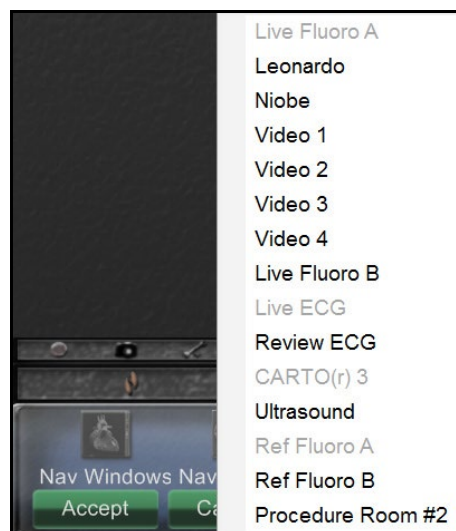
**Accept button.** Saves the designated layout.

**Cancel button.** Rejects layout edits and returns to previous screen.

**Load From button.** Allows the user to copy a layout from another user for the same layout.

Similar to the **Nav Windows** and **Nav Controls** menu buttons, the **Video Inputs** button displays the available video sources (dark lettering in **Figure 37**) for the current procedure. The video sources already displayed on the Layout Editor appear shaded on the menu.

**Figure 37: Example of Video Inputs menu in Layout Editor – Siemens system**





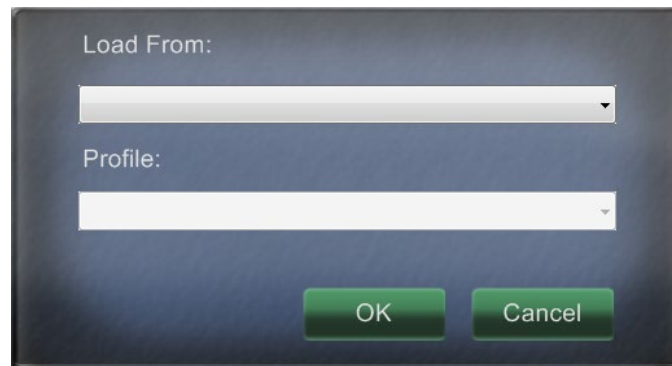
### Notes:

A video source may not be repeated within a layout. Only one instance of Live Fluoro may exist in any given layout.

Figure 37 represents the Layout Editor window list for a Siemens system. Some of the window names differ slightly for other systems.

Select an available video source from the menu to add it to the layout. Move or resize other elements in the layout if necessary so none are overlapping. (Overlapping elements are indicated by a red border.) When the layout is satisfactory, click the **Accept** button. (The **Accept** and **Cancel** buttons are available only after a layout is changed.)

If you prefer to start editing from an existing layout from another physician for this same layout in the procedure, you may use the Load From dialog (**Figure 38**).

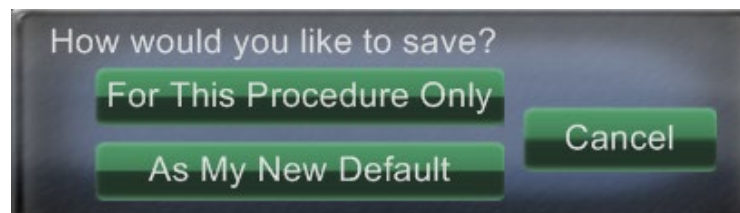


**Figure 38: Load From dialog in Layout Editor**

### Load From dialog guide

- To import this layout from a different physician, use the Load From dialog. Select a physician name (and/or profile for the layout), and then click **OK**.
- To use the Vision default layout, leave the Physician Name and Procedure Type fields blank, and then click **OK**.

After clicking the **Accept** button from the Layout Editor or after clicking the **OK** button from the Load From dialog, the save dialog (**Figure 39**) displays. Click the **For This Procedure Only** button to use the layout for *only* the current procedure. Click the **As My New Default** button if you want the layout to be available for *all future* procedures for this *physician and procedure type*.



**Figure 39: Save dialog in Layout Editor**

# Quick Layouts

## Configurations

The Quick Layouts are grouped by clinical specialty and procedure type for manual, CARTO® 3, and non-CARTO® 3 equipment combinations.

Each of the following Electrophysiology categories has separate Quick Layouts (1, 2, and 3):

- Right Atrium and Left Atrium (*Niobe* CARTO® 3 and non-CARTO® 3, Manual CARTO® 3 and non-CARTO® 3)
- Right Ventricle and Left Ventricle (*Niobe* CARTO® 3 and non-CARTO® 3, Manual CARTO® 3 and non-CARTO® 3)

The three Quick Layouts (1, 2, and 3) may be used for the following Interventional Cardiology categories:

- Coronary (*Niobe* and Manual)
- Peripheral (Femoral or Tibial) (*Niobe* and Manual)
- Cardiac Resynchronization Therapy—Coronary Sinus—procedures use the same three Quick Layouts (1, 2, and 3) for all procedures.

For example, assume you are in an Electrophysiology Left Atrium procedure and have selected to use both *Niobe* and CARTO® 3. You can make and save changes to Quick Layout 1.

You will still see these changes if you open Quick Layout 1 in a Right Atrium procedure, as long as you have selected both *Niobe* and CARTO® 3.

## Buttons

To view and customize alternative (quick) layouts, click one of the Quick Layout buttons (**Figure 40**) on the Vision toolbar. To modify the Quick Layout, use the Layout Editor feature, above. The next time you click the same Quick Layout button, the new layout displays.

**Figure 40: The three Quick Layout buttons on the Vision toolbar**



**Note:** You must click one of the Quick Layout buttons first to customize Quick Layout 1, 2, or 3. Opening the Layout Editor directly (without clicking a Quick Layout button) will *not* save the altered layout as a Quick Layout.



# Section 5: *Odyssey Cinema*

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## Cinema Overview

Cinema is an optional add-on to the *Odyssey Vision* product. “Cinema” refers to both *Odyssey Cinema Studio* and *Odyssey Cinema LT* products. When installed, the Record / Pause, Connection, and Bookmark buttons display their available states (see below). When not installed, only the disabled states display.

If you have the Cinema add-on, your Stereotaxis representative configures the system to use one of four recording control modes:

- **Recording disabled.** No recording can occur on the Vision system.
- **Manual recording.** You fully control the recording by clicking the Record / Pause button on the Vision toolbar.
- **Semi-automatic recording.** Cinema automatically starts recording when a *Navigant* procedure is opened; however, you can manually pause or resume the recording at any time.
- **Automatic recording.** Cinema automatically starts recording when a *Navigant* procedure is opened; you cannot pause or resume the recording.



**Notes:**

If your system is configured for semi-automatic recording, the Pause button will be available as soon as you start a session because the system will already be recording. (Record / Pause is a toggle button.) For alternate button states, see [Record / Pause buttons](#).

For all modes, the recording is automatically stopped when the *Navigant* procedure is closed.

## Connection Status Buttons

Cinema enables other interested parties to view your Vision procedure, if you give them permission. Another party could be the Customer Care Center, a colleague, a professor, a resident or intern, or anyone who is interested in the procedure. The Connection button tells you if anyone is connected or if anyone is waiting to be connected (a Pending connection).

No viewer (available)		No viewer (selected)		No viewer (disabled)	
Viewer pending (available)		Viewer pending (selected)		Viewer pending (disabled)*	
Viewer connected (available)		Viewer connected (selected)		Viewer connected (disabled)	

- \* The button can be in the viewer pending (disabled) state if you have opened the Vision application (so you can see the toolbar) and a potential viewer has requested permission to view but you have not started a procedure. You have to start the procedure before you can click the button and respond to the request (see the following scenario).

## Scenario

Following is a sample scenario using the Connection button in various states:

1. You open the Vision application and start setting up your procedure. You see there are no viewers.



*No viewer:*

2. You know your colleague, Dr. Agamemnon, is planning to view the procedure from his office. Dr. A launches Cinema in his office and requests permission to view your procedure. The Viewer button turns yellow, indicating at least one pending viewer.

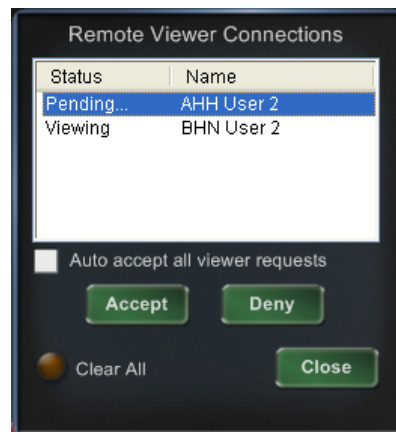


*At least one viewer is pending:*


3. You click the Connection button and the Remote Viewer Connections dialog displays with Dr. A's name listed as Pending.
4. Select Dr. A's name and click **Accept**. Now the Connection button shows a connected user:

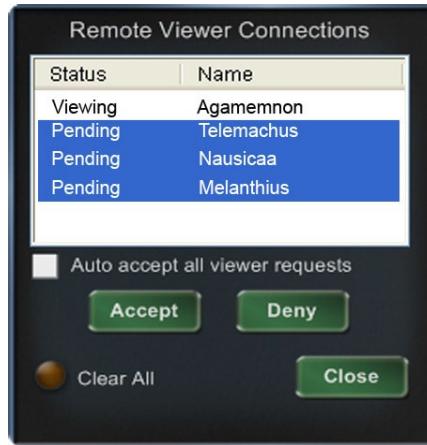


*One or more viewers are connected:*



**Figure 41: Remote Viewer Connections dialog – Viewer connected**


 **Note:** If another potential viewer requests a connection, the Viewer button will again turn yellow.



**Figure 42: Remote Viewer Connections dialog – One viewer, multiple pending**

The Remote Viewer Connections dialog (**Figures 41 and 42**) offers four options:

- **Auto accept all viewer requests checkbox.** If you check this box, all listed viewers (pending and connected) are able to automatically connect and disconnect at any time during the current procedure (until you close the procedure). Any qualified user may connect and disconnect at will during a procedure.

 **Note:** How to know if the viewer disconnected or reconnected:







If Dr. A is the only viewer, and he disconnects, the Connection button changes from Viewer connected to No viewer. However, if more than one viewer is connected, you see no change in the Connection button if only one viewer disconnects. The Viewer connected button is still displayed. The Connection button shows a connected viewer until there are no more connected viewers.

- **Accept button.** Select the pending viewer's name and click **Accept**. This is a one-time action; in other words, if you accepted a viewer, he disconnects, and then he wants to reconnect, you need to Accept or Deny his request again.
- **Deny button.** Select the pending viewer's name and click **Deny**. This is also a one-time action; if a viewer's request is denied and he tries to connect again, you need to Accept or Deny his request again.
- **Clear All.** This button is similar to the emergency act of clearing the room. If you click **Clear All**, several things happen:
  1. All connected viewers are immediately disconnected.
  2. All pending viewers are immediately denied.
  3. All user names in the list are cleared.
  4. The **Auto Accept All** checkbox is cleared (if it is checked).

To reconnect, each viewer must submit a new request, and you may respond to their requests with one of the choices above.

## Record / Pause Buttons

Cinema has the ability to record procedures for future reference. The Record and Pause buttons are toggles; when one is on, the other is off.

Recording paused; Record button available		Recording paused; Record button pressed		Record button disabled	
Recording in progress (red light appears lit); Pause button available		Recording in progress (red light appears lit); Pause button available		Pause button disabled	

### Scenario 1

For example:

1. To start recording a procedure, click the Record button.



*Paused / Record available:*

After clicking, the button changes (toggles) to Recording / Pause available. A bright red dot (the “record light”) displays in the upper-right corner when recording.

2. If the procedure is delayed, click the Pause button to pause recording.



*Recording / Pause available:*

3. The button now toggles back to the Record available state.



*Paused / Record available:*



**Note:** Recording can take several seconds to start.

## Bookmark Button

While recording, bookmarks may be added and annotated. The bookmarks will be stored with the recorded procedure.



## Scenario 2

Another scenario using the Bookmark button:

1. While recording a procedure, an unusual arrhythmia occurs.
2. Click the Bookmark button to mark the exact time of the arrhythmia.



*Bookmark selected:*

3. The Archiver Bookmark dialog (**Figure 43**) displays with a blank space for annotations. Type an identifying note in the space. You may add as many bookmarks as desired.



**Figure 43: Archiver Bookmark dialog**



### Notes:

When playing back the recording in Cinema, a bookmark symbol appears on the timeline. Hold the cursor over the bookmark symbol to display the annotation. Click the bookmark symbol to move the video playback to that bookmark's position.



See the *Odyssey Cinema* Client User Guide for more information.

The bookmark time in the video marks the time the Bookmark button was clicked, not the time when **OK** on the Archiver Bookmark dialog was clicked.

# Section 6: System Information

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## Companion Systems

The *Odyssey* Vision platform supports importation of VGA, DVI, and RGB component video on each port with up to 3840 x 2160 pixels of resolution. The Vision system is compatible with:

- Stereotaxis *Navigant* versions 4.2 and newer
- Stereotaxis *Niobe* versions 4.1 and newer
- Lab equipment that uses USB-compatible mice and keyboards within the context of Microsoft Windows 2000 or newer Windows operating systems

## Optional Vision control

The user has the option of using the native display, keyboard, and mouse controls of any of the systems connected to the Vision platform instead of, or simultaneously with, the Vision controls.

## Monitors

The *Odyssey* Vision setup has two monitors: one in the Control Room and one in the Procedure Room. The output on the two monitors may vary. Sometimes, one monitor will display the *Navigant* window only. Monitors can display up to 16 video streams (input from the *Navigant* system and 15 non-*Navigant* sources, such as ECG and fluoro). Each video stream appears in its own window on the Vision display. The window that contains a video stream on the Vision display is called a video window.

## Resolution signal

Vision QHD monitors have a signal resolution of 3840 x 2160.

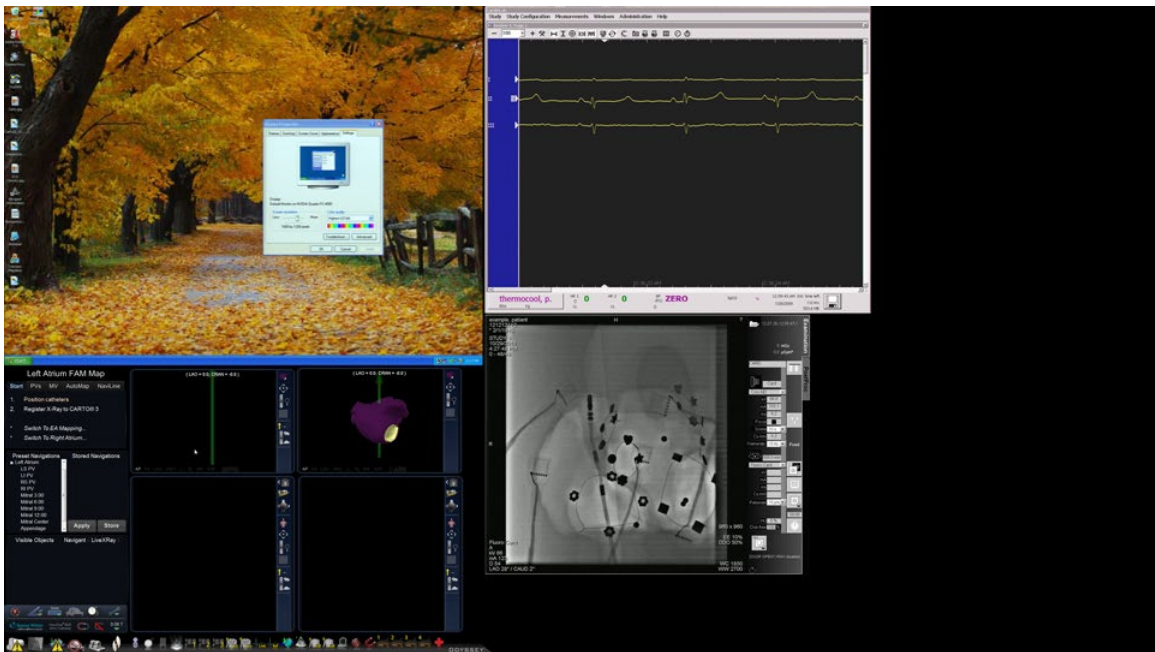


## Auto-resolution

The Auto-resolution feature of the *Odyssey* Vision system automatically detects the input resolution of a video source. This input resolution depends on the system connected.

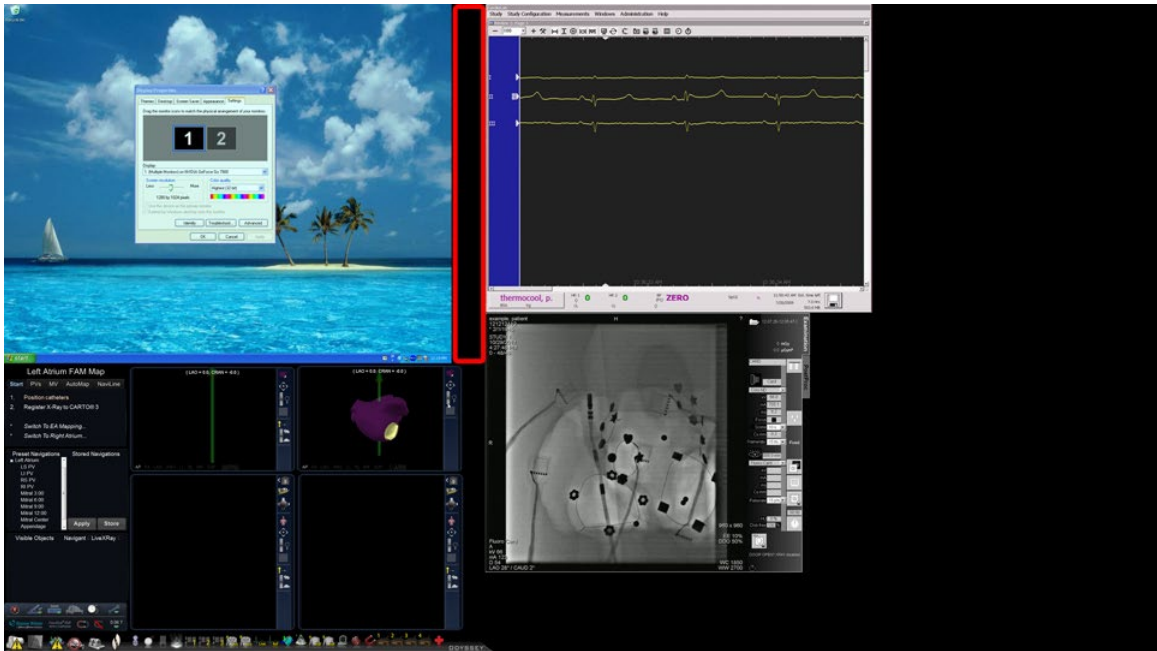
When a device or system is hooked up to the Procedure Room hub, Auto-resolution detects its resolution and allows the video to “grow” or scale up inside the device’s designated window on the display while maintaining aspect ratio integrity. When adding a window to the display using the Layout Editor, the video source’s native resolution is used to calculate the Preferred Size, Maximum Size, and Minimum Size allowed.

**Figure 44** is an example of a display whose layout was created when the video source connected to the Procedure Room hub had a native resolution of **1600 x 1200**.



**Figure 44: Right upper left – Video source with native resolution of 1600 x 1200 connected to Procedure Room hub**

**Figure 45** is an example of the same layout on the display but with a video source connected with a native resolution of **1280 x 1024**. If the connected video source’s native resolution has an aspect ratio differing from the window size on the display, a black band (encased by a red rectangular outline in Figure 45 for illustrative purposes) appears on a side of the video source window to maintain the correct ratio.



**Figure 45: Right upper left – Video source with native resolution of 1280 x 1024 connected to Procedure Room hub, resulting in black band on right end (emphasized by application of red rectangular outline)**

## Start Panel Utilities

As shown previously, the start window, or panel (**Figure 46**), contains the entry point for starting a new procedure. The start panel also contains the **Utilities** option, discussed next.



**Figure 46: Start panel with Utilities button**

Clicking the **Utilities** button on the start panel displays a dialog pertaining to one of the following tabs at the top:

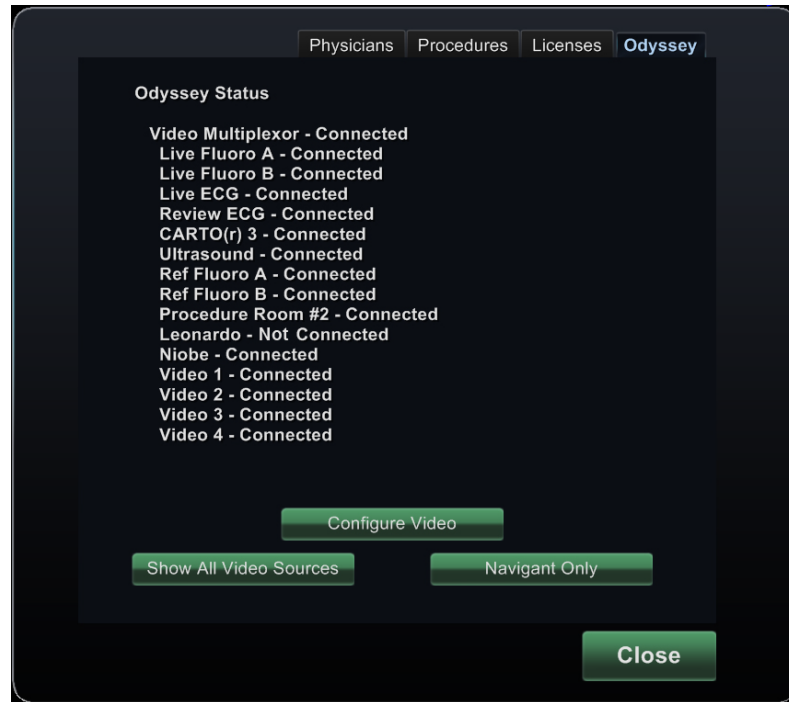
- **Physicians**
- **Procedures**
- **Licenses**
- **Odyssey**



See the *Niobe* ES User Guide for information on the **Physicians**, **Procedures**, and **Licenses** tabs.

Clicking the *Odyssey* tab reveals an initial screen showing the status of connections, as shown in **Figure 47**. These connection statuses, which are for mouse and keyboard only, are categorized as follows:

- Connected
- Not Connected



**Figure 47: Odyssey Status tab**

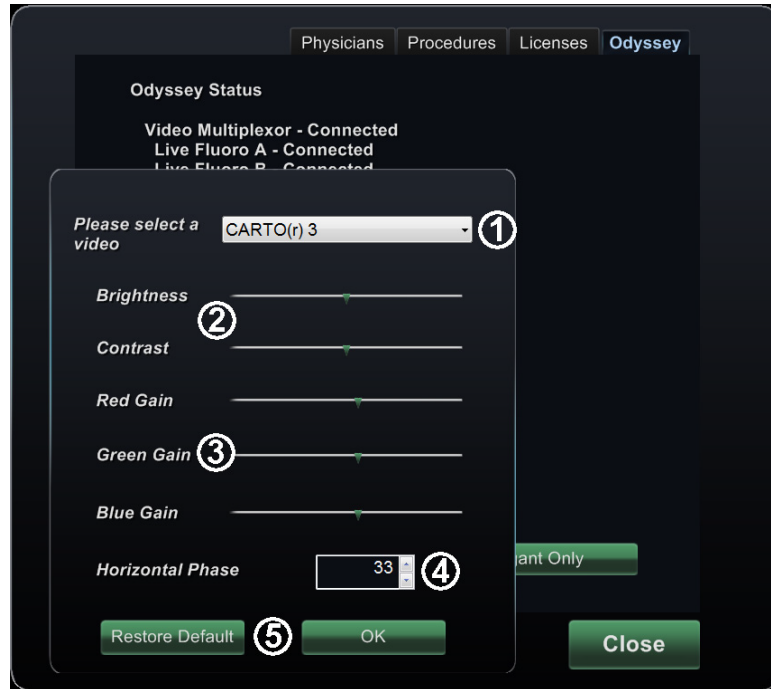
Figure 47 shows the top-level “Video Multiplexor” category, under which any mouse and keyboard system connection statuses appear. Note that, in this case, all systems are connected except for the Siemens Leonardo®.

The *Odyssey* tab display also offers the following button options geared more toward video. These utilities are discussed in the following sections.

- **Configure Video**
- **Show All Video Sources**
- **Navigant Only**



## Configure Video

Clicking the **Configure Video** button displays the dialog shown in **Figure 48**.



**Figure 48: Configure Video dialog**

### Configure Video dialog guide

- ① **Please select a video.** Use the drop-down box to select the video source to configure. In the Figure 48 example, “CARTO(r) 3” was chosen. Always ensure the video source is visible on the screen. If necessary, first change the layout to display the source you wish to configure.
- ② **Brightness and Contrast options.** The green arrow (  ) appears on the line at the current settings for the source chosen. Move the arrow along the line as desired to change the designated feature. Moving left lessens; right increases. Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ③ **Gain (Red, Green, Blue) options** (*not available for NTSC or analog x-ray*). The green arrow (  ) appears on the line at the current settings for the source chosen. Move the arrow along the line as desired to change the designated feature. Moving left lessens; right increases. Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ④ **Horizontal phase** (*available for VGA or analog x-ray only*). Click or scroll the up or down arrow to change the video display’s pixel alignment if needed. Observe vertical lines while adjusting: Because the video source is displayed on the screen, changes are immediately visible and available for review.
- ⑤ **Save choice.** Review the chosen video source display, and then select **OK** to save changes, close the dialog, and return to the *Odyssey* tab. *Or*, click **Restore Default** to cancel current changes for the selected source and then review, change as necessary, and click **OK** to save changes, close the dialog, and return to the *Odyssey* tab.

To exit from the *Odyssey* tab, click the **Close** button. The start panel reappears.

## Show All Video Sources

Clicking the **Show All Video Sources** button from the *Odyssey* tab displays a screen similar to the one in **Figure 49**. By viewing this screen, you can ensure all desired video sources are active. You can move the mouse cursor into any video source window configured for global keyboard and mouse control (except *Navigant*). These windows respond to global keyboard and mouse input and are there to verify the third-party devices are working correctly.

The screen may show 11 or 15 video windows (and an **Exit** field) depending on the number of inputs purchased (Figure 49 shows 11). In the upper left corner of each video window is the name assigned to that channel in the *Odyssey* Vision configuration file. A black rectangle indicates no device is connected to that channel. A blue rectangle indicates a device is connected, but the corresponding channel(s) are emitting no signal.



**Note:** If your configuration varies from the default, the name below the panel may not match the device type that is plugged in. Because so many video sources are possible, a configuration differing from the default is common.



**Figure 49: Show All Video Sources screen**

To close the Show All Video Sources screen and return to the *Odyssey* tab, click **Exit**. To exit from the *Odyssey* tab, click the **Close** button. The start panel reappears.

## Navigant Only

The **Navigant Only** button displays *Navigant*-only video sources and the Vision toolbar in the main Vision window (which is in the bottom left corner of the screen, as shown in **Figure 50**).

The **Navigant Only** button is for use by Stereotaxis personnel only and **should not be used during a clinical procedure.**

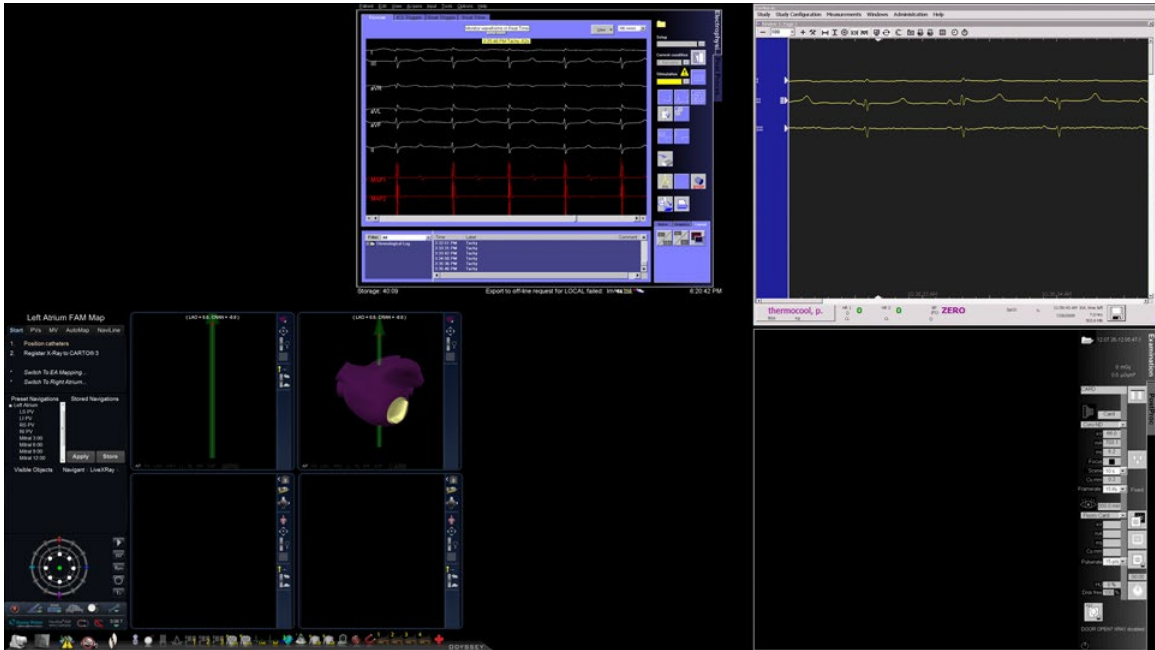


Figure 50: Sample screen when "Navigant Only" is selected

## Shutdown System

Click the **Shutdown System** button in the start panel (in red oval in **Figure 51**). This shuts down the *Odyssey Vision* and *Navigant* systems.

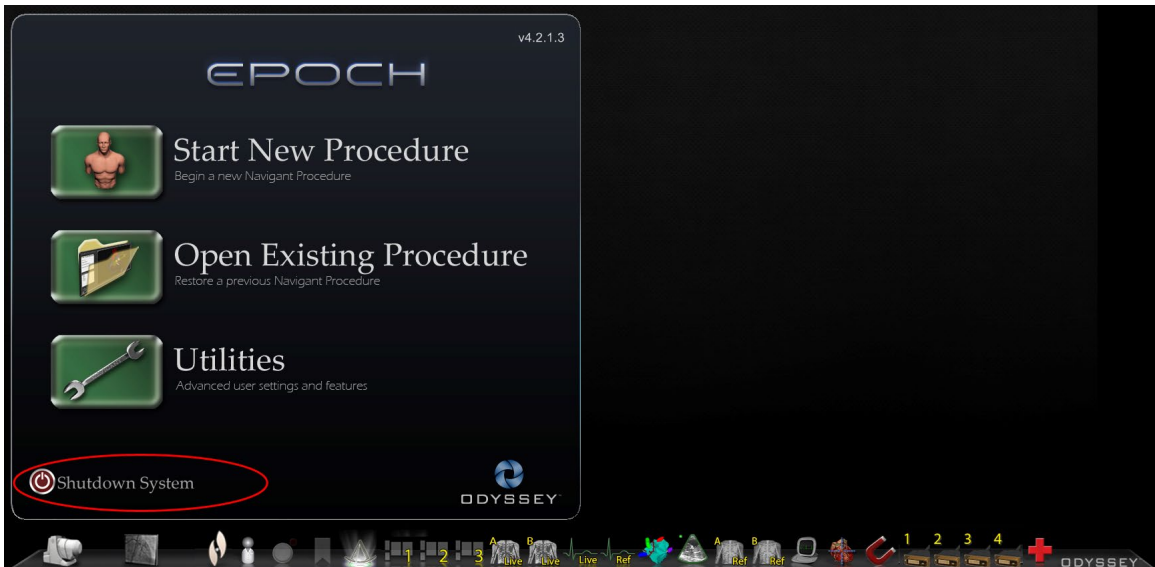


Figure 51: Start panel with Shutdown System button

The **Shutdown** button shuts down only the Vision application and computer. Click it to shut down only the Vision computer and all associated Vision hardware. Because it shuts down the Vision power supply, it also shuts down power to the monitors of the third-party devices in the Control Room.

## Primary Vision Components

A number of hardware and software components are required to achieve this level of device consolidation. The primary Vision components are listed in the following table.

Component	Description
<b>Odyssey cabinet</b>	The <i>Odyssey</i> cabinet contains video processing components, power supply, power transformer, routers, and circuitry for the Vision system, which allows for up to 16 inputs with potential for more.
<b>QuadHD display</b>	The QuadHD display has four times the resolution of an HD display (3840 x 2160).
<b>Procedure Room hub</b>	The user can connect up to two auxiliary systems at the same time to the Procedure Room hub. Auxiliary systems are systems that are not permanently installed in the Procedure Room, such as ultrasound machines or PV loop machines on carts.
<b>Third-Party Interface (TPI) boxes</b>	TPI boxes are used to connect all devices in the interventional lab. They route the video and USB keyboard/mouse signals of all devices connected to the Vision system, enabling video display and global keyboard and mouse control.

## Clinical Workflow Manager

The Clinical Workflow Manager runs within the *Navigant* application and has the ability to control the number, size, and location of the video windows on the Vision display.

## Customer Care Center

Stereotaxis offers a technical support package through the Customer Care Center.

Stereotaxis Customer Care Center representatives can view Vision video content and Vision displays at the installed site.



## Troubleshooting

If you need assistance with any of the solutions in the following table, call the Customer Care Center at 866-269-5268 (from the U.S.) or 314-678-6200.

Problem	Solution
Cannot connect to the Video Controller.	Click <b>OK</b> to shut down the system; restart. If the problem persists, call the Customer Care Center.
Connection to the <i>Navigant</i> computer was lost.	Wait 2 minutes for the connection to automatically restore. If the connection is not restored, shut down the system; restart. If the problem persists, call the Customer Care Center.
Error opening Odyssey.xml file.	Click <b>OK</b> to shut down the system; restart. If the problem persists, call the Customer Care Center.
Failed to initialize Layout Manager.	The layout directory is missing or a layout file is corrupted. Click <b>OK</b> to shut down the system; restart. If the problem persists, call the Customer Care Center.
Hourglass displays on the Vision main menu window for more than 2 minutes.	Call the Customer Care Center.
Non- <i>Navigant</i> window displays improper color or a noisy image.	Refer to the <a href="#">Configure Video</a> section. If the problem persists, call the Customer Care Center.
OAV connection is disabled.	Either the site has not purchased Cinema, or the connection between Vision and the Cinema server is down. If you are unable to restore the connection, call the Customer Care Center.
Received a message that “Only one instance can run at a time.”	Shut down the system; restart. If the problem persists, call the Customer Care Center.
Unable to connect to Power Shutdown hardware. Only shutting down <i>Navigant</i> computer.	Allow the system to shut down the <i>Navigant</i> computer. Then use the ODYSSEY switch on the Vision Remote Power box to turn off the other hardware. If the problem persists, call the Customer Care Center.
Unable to use the Vision mouse in the <i>Navigant</i> window.	Restart the system. If the problem persists, call the Customer Care Center.
Unexpected error occurred in opening required layout file.	A layout file is corrupt or has been removed. Shut down the system; restart. If the problem persists, call the Customer Care Center.

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