Getting the Most out of Wheatnet-IP Navigator

Wheatnet-IP Navigator is the Control Center for your Wheatnet AoIP network. Through Navigator, you can make audio connections, set up logic signals and connect both physical and virtual LIO inputs to outputs, fire salvos, set up AES67 signals, associated connections, view meters, update your blades and much more. While some system functions can be accomplished via the front panel of one of your I/O blades, it's impossible to push your Wheatnet system to the limits without Navigator.

The basic functions of the Navigator program, including installation and setup, are covered in the Blade-3 and Blade-4 technical manuals and won't be repeated here. Rather, this document is intended to cover some lesser-known Navigator features that some of our customers may not even realize exist in the software. It is assumed that readers of this document have already mastered the basics of the Navigator program.

For the purposes of this guide, we are using Navigator version 4.0.90, the current version of the software at the time of this writing. Navigator 4.x has been in use for over a year, but originally was only certified for use with our Blade-4 I/O blades. As of January 1, 2024 it has become the official version of Navigator for use with all blades, regardless of the software running on the blades.

We'll be covering the following Navigator features in this document:

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Advanced Controls	**Aliases**
Ctrl/Click	**Long Names/Locations**
XPoint Grid Right-Click Menu	**Signal Notes**
System Colors	**Set Up View**
System View	**Associated Connections**
Location Settings	**Attributes**
Bookmarks	

Advanced Controls

The *Enable Advanced Controls* checkbox in the General section of the System | Preferences page turns on some features that can be very helpful in setting up and troubleshooting your system.

This box is unchecked by default. To enable Advanced Options, check the box and you will be asked to restart Navigator. When enabled, you will see the following in addition to the default Navigator tabs and functions:
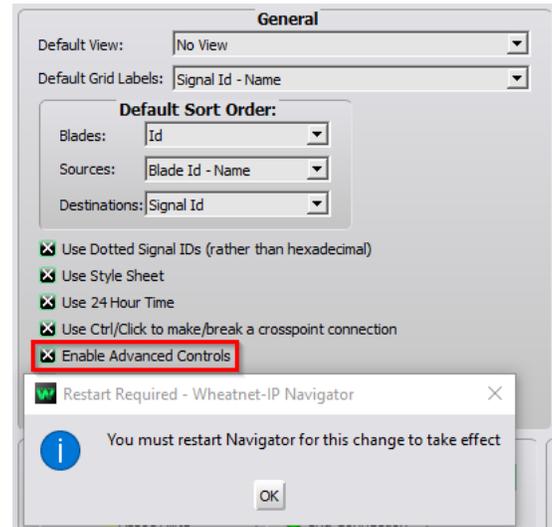
- Locator tab
  - o The *Locator* tab allows you to see every device in your system, the type of device, IP addresses, software versions and more at a glance. A *Refresh* button is provided to ensure the displayed information is correct and up-to-date. Locator tab will be the last tab on the right and is visible when you have clicked on **System** at the top of the System tree.
- Logger options on System | Preferences tab
  - o When *Enable Advanced Options* is active, you will see some additional options related to the system logger. You'll be able to control the number of files and the size of the files saved for both the system log and the LIO log. You can also change the location where the log files are saved if desired.
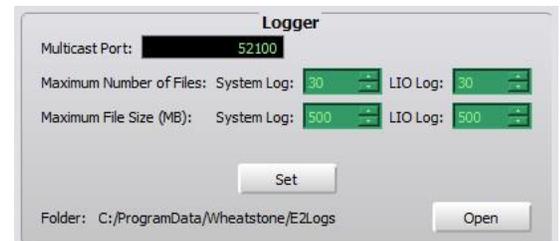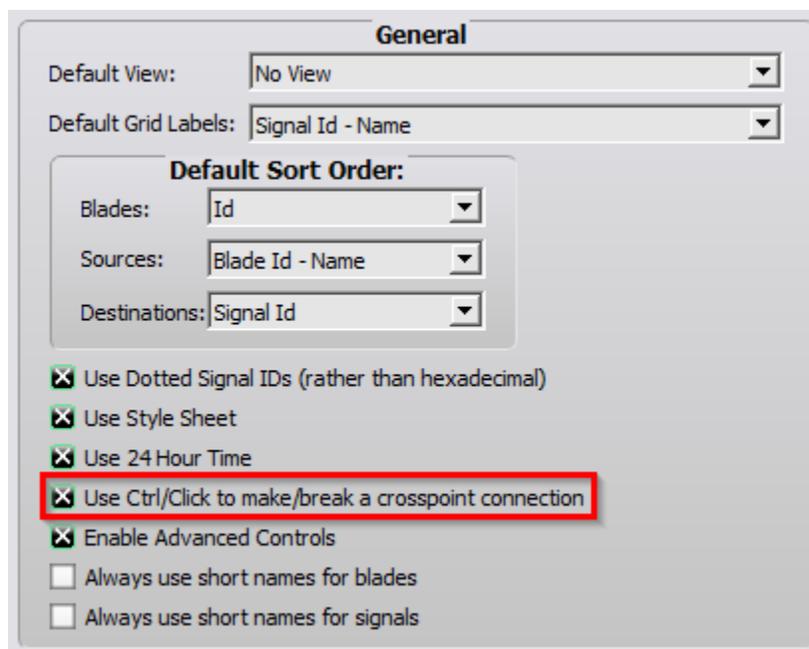

- Master Preference options on Blade Admin tab
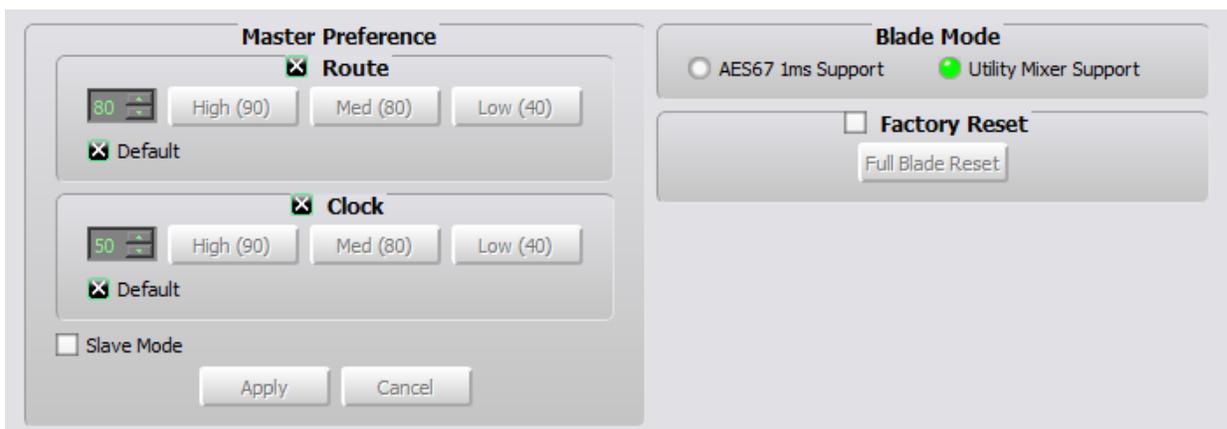
- *Master Preference* options allow you to take control of which blades will have the role of Clock Master and Route Master. By default, all blades that are added to the system have certain Priority settings that come into play when a new master is needed for the system. It's helpful to set these priorities in such a way as to ensure your preferred blade(s) take on these roles when a master election occurs in the system. To learn how the priority settings work in conjunction with other criteria, see the Blade-4 Technical Manual or email Tech Support for more information.
- Factory Reset option on Blade Admin tab
  - Seldom required but occasionally necessary or desirable is the *Factory Reset* option for Blades. A Blade can always be Factory Reset from the front panel (provided no password has been set or you know the password) but when *Enable Advanced Controls* is active, you can reset a blade through Navigator using this function.
- Send Mark to System Logger
  - Allows you to send a marker to the system logger that will save the text you type in the box to the log. Helpful if you are trying to troubleshoot an issue and you want to mark the log at the point where you have made some changes.

Ctrl/Click

A very useful feature that arguably should be set as a default setting in Navigator is the *Use Ctrl/Click to make/break a crosspoint connection* option. Also found in the General section of the Navigator | Preferences tab, this option causes Navigator to ignore any clicks on the crosspoint grid that aren't accompanied by holding down either the left or right CTRL buttons.

Have you ever been dragging your mouse across your computer screen and your index finger gets a little lazy and pushes the left mouse button when you didn't intend to click? This can make or break a critical crosspoint on the XPoint grid that can create unintended consequences, and can be hard to troubleshoot if you don't notice that you made an accidental click. The use of this option eliminates the possibility of accidentally making or breaking a crosspoint in this manner.

This option is not enabled by default because it is confusing to a new user who finds that they cannot make a crosspoint no matter how many times they click. But it is highly recommended to enable this option.

CrossPoint Grid Right-Click Menu

When viewing the crosspoint grid, you will of course see all your system sources across the top of the screen and your destinations along the left-hand side of the grid. A number of very useful functions can be set or enabled from right-clicking on a source or destination. When you right-click on a destination signal, you will see a pop-up context menu like the one to the right. Many functions are slightly different if you right-click a source.
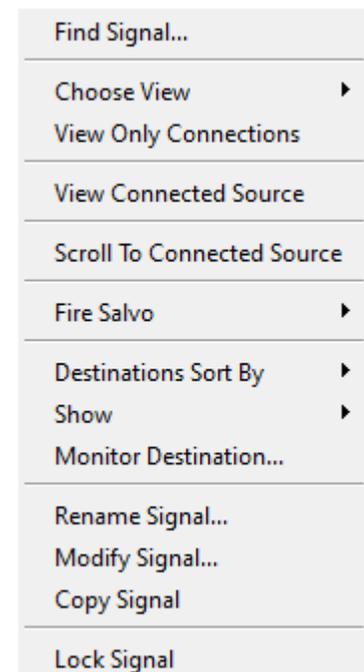
Find Signal opens a search box at the bottom of your screen that you can use to quickly find any source or destination in the system. Navigator will highlight in yellow the first and subsequent occurrences of the signal name or portion thereof that you enter in the search box. Search is case sensitive.

Choose View allows you to select a different crosspoint grid view, from those you have set up using the *Set Up View* window, discussed later in this document.

View Only Connections can make it easier to find what you're looking for when you have a large system. This option removes all sources and destinations that are not connected to anything from the current crosspoint view. To restore the normal view, right-click and unselect this function.

View Connected Source shrinks the crosspoint grid to show only the source connected to the destination which you have just right-clicked. For Sources, the option is called *View Connected Destinations* and it will show only the destinations connected to the selected Source.

Scroll to Connected Source will scroll the current view to put the connected source in view. It will be as far to the left as is allowed by the sorting order of the listed sources. The source will be highlighted with a dotted box around it. The function works similarly for *Scroll to Connected Destinations* when you right-click a Source.

Fire Salvo gives you another way to quickly fire a system salvo without having to actually enter the Salvo tab of Navigator. You will be presented with a list of all system salvos, in order of the Salvo Number. This means they most likely won't be in alphabetical order.

Destinations (or Sources) Sort By gives you a number of different options to sort your signals that determine the order in which they appear on the grid's X and Y axes.

Show gives you some choices on what you'd like to see for the signal names. You can have Navigator show you the Signal ID (or not) the signal width (Stereo, Mono, 5.1), Location (see the section *Location Settings*) etc.

Monitor Destination (or Source), when selected, gives you a popup window with a set of meters showing audio levels for the selected destination. Same for sources. There is a *Start Listening* button for supported signals that will feed that source's audio to the Navigator computer's speakers, if installed.
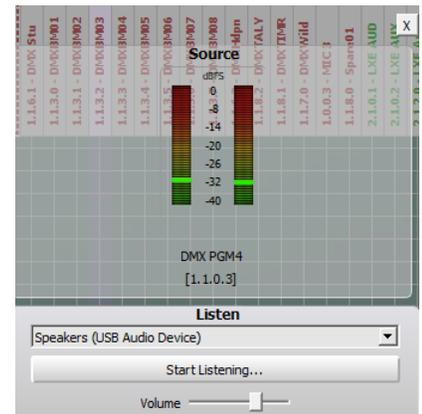
Rename Signal gives you another method for renaming a signal.

Modify Signal will bring up the Source or Destination Signal window so that you can edit the signal.

Copy Signal provides the ability to copy information about the selected signal to certain other Wheatnet applications. This is a seldom-used function.

Lock Signal (Destination signals only) locks the destination signal so that it cannot be changed. When the signal is already locked, the option changes to **Unlock Signal** and allows you to manually unlock the destination.

Show SDP (Source signals only) shows the **S**ession **D**escription **P**rotocol information. You will need some of this information for a source when you are interfacing it with an AES67-compliant external device.

In addition to the right-click menus for Sources and Destinations, there is a right-click menu for crosspoints. If you right-click on an actual crosspoint you will see the option to monitor both source and destination, and to add a "bookmark," which simply places a white square around the crosspoint symbol to make it easier to find as you scroll around the grid.

System Colors

The System | Preferences tab has options you can change which will customize the look of your Navigator installation. You can change the following system colors on this page:

- Blade Preferences
  - Change the color the signals of each blade will appear in on the Crosspoint grid. Using different colors for each blade visually groups all signals from that one blade together as one color to aid you when searching for a specific source or destination
- Crosspoint Preferences
  - Change the color of the various symbols used on crosspoints including the High and No audio symbols, basic connection and logic-only connection and highlight bars
  - Change the logo and background of the intersection of X and Y axes on crosspoint grid. Default is Wheatnet logo on a black background

- Salvos
  - Change colors of the highlight bars and connection points
  - Change the logo and background of the intersection of X and Y axes on salvo grid

System View

The System View menu button is located on the black bar at the very top of the Navigator screen. It provides a detailed look at various parts of your system and has several very important screens of information.

The most helpful options on the System View screen are *Blades, Blade Status, and Source Streams*. Feel free to take a look at the other options as all have valuable information about your system.

- Blades
  - Lists all your blades (including PC drivers) along with Blade ID, IP information, Master Preferences and software versions. Some info might not be present depending on the state of the "Enable Advanced Controls" checkbox.
- Blade Status
  - Contains some of the same information as Blades but also displays the blade's current system time, internal temperature, CPU usage, Free Memory and Uptime.
- Source Streams
  - This menu option is invaluable when working directly with multicast streams. If you're setting up AES67 devices, need to know the width, packet rate or IP address of a multicast stream, this is where you can see this information in one convenient list, sortable by any displayed field.

Location Settings

The Location setting defaults to the same name as the default Blade name. It does not change when you rename the Blade. This value is for your reference and does not affect any connections or signals in the system other than helping you to organize your installation.

Some customers leave the value as is to help them remember which blade the signal resides on. But a good use for this field might be to designate certain signals as part of a studio, control room, TOC or other location. Or maybe it would make more sense to you to indicate which Radio or TV station the signal in question is associated with. Maybe you want to designate that the signal is part of an air chain or is located in a remote location.

The use of the Location field is completely up to you, but if you choose to use it, it will come in handy when we talk about the *Set Up View* menu and the *Choose View* option later.

Bookmarks

Sometimes you need to remove one or more crosspoints in Navigator temporarily. For example, if you need to modify the signal(s) or to add/change logic settings. Wouldn't it be handy if you could somehow *mark your place* so you could easily go back and re-make any crosspoints you have to break to make your changes? Well, as luck would have it, there is a way to do this.
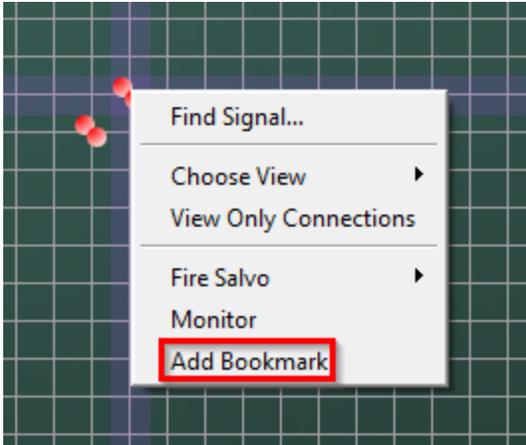
Right-click on any crosspoint and at the bottom of the pop-up context menu, you will see the option "Add Bookmark." Clicking this option will add a white square around the grid intersection at the crosspoint. This bookmark will remain after the crosspoint has been disconnected, and won't disappear until you right-click again and remove it, or you restart Navigator.
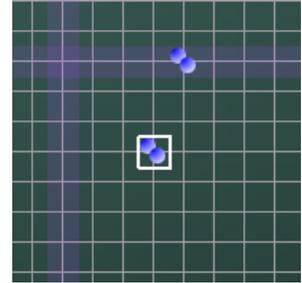
You can add as many bookmarks as you need to in order be able to more easily restore your crosspoints after you are finished with your reconfiguration.

Aliases

Most sources and destinations in your Wheatnet system can be given an "alias," or a second name that refers to the same signal. (Notable exceptions include PC drivers, Utility Mixer destinations and processor signals.) Possible uses for this include:

- The microphone source called "Bob" can have the alias "Pete" so that Bob sees his name on the console for the morning show, and Pete sees his name in afternoon drive.
- A signal with audio-associated logic can be given one name, and an alias for the same signal without logic can have a different name to avoid LIO Control issues (if a source is routed to multiple destinations, the first one it's routed to has LIO control—logic for that source won't work with the destinations it was connected to subsequently).
- If you need a mono version of a stereo source or destination, create an alias of that signal and make it mono. It can have the same name as the original signal, or a different name to easily differentiate it. The signal ID will change.
- You can create an alias of a signal that you can use in Events so that in one event, the original signal can appear on Fader 7 with AUD as the base mix for its bus minus feed, and in another event it can appear on Fader 7 with OL as the base mix for its bus minus feed. Different backfeeds but same audio signal.

Long Names/Locations

The Long Name option is available for both signal names and locations, but be aware that long names and locations will only appear inside the Navigator program. LCD and LED readouts, as well as OLEDs on our surfaces don't display long names.

Signal Notes

Signal Notes is a great place to keep notes about each signal such as details of what it is used for, any specific settings it has, backup signals you may have created in the system, cabling issues related to the signal; just about anything you can think of. These notes are not stored in the database kept by each blade, but rather are stored only on the Navigator computer. Also, they will not appear on all Navigator computers, just the one you used to create the Notes.
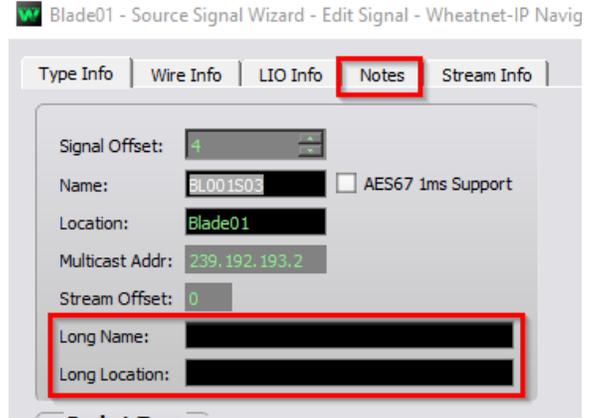
Set Up View

Set Up View is used to allow you to customize the view you see when using the crosspoint grid. A large system may have hundreds of blades, drivers, surfaces and other devices and if you're only interested in a certain segment of your plant at the moment, you can set up a custom View to allow you to *only* see devices that are associated with that segment.
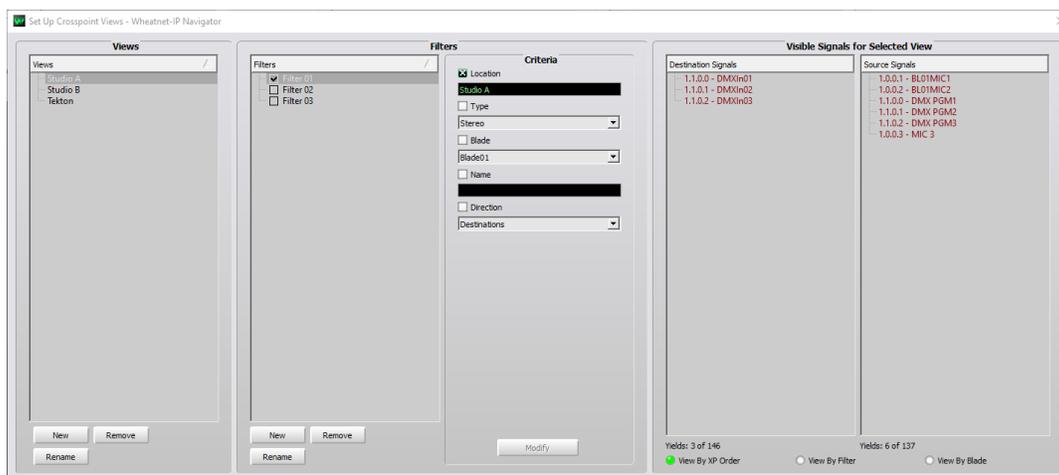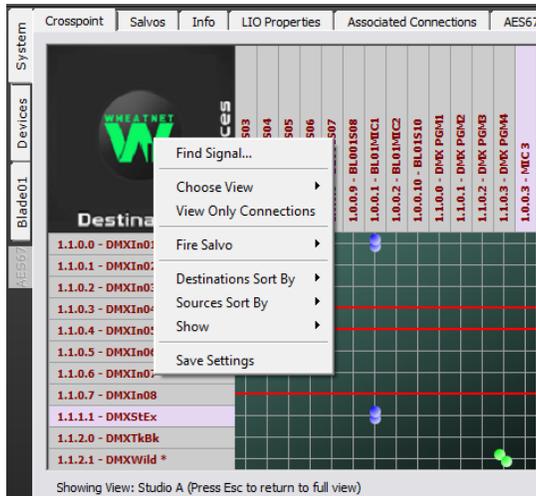
Let's say you are working on making some changes to Studio A. If you have populated the Location field (as mentioned above in the Location Settings section) then you can set up a custom view that will show you only devices that are associated with Studio A via the Location setting. To enable this custom view, right-click on the Wheatstone logo at the intersection of the X and Y Axes on the crosspoint screen. You will get a context menu as shown. Select the "Choose View" option and the custom views you have created will be available to choose. Choose the custom view Studio A (in our example) and you will see a small number of sources and destinations that have been set to Location "Studio A." Navigator will notify you that you are looking at a custom view. Press ESC to return to full view.

Associated Connections

This screen is where you can define associated connections, to take the hassle out of changing connections between locations, studios or announcers. Simply add a connection as the "Trigger," on the left side of the *Associated Connections* tab page, then add the associated connection on the right side. The associated connection will be automatically made by the system when the Route Master Blade detects that the trigger connection on the left side has been made.

The triggering connection can be a source connecting to a destination, or it can even be a source disconnecting from a destination. The same thing is true for the associated connection. There is also the option to override a destination lock on the associated connection.

Attributes

You can create various "Attributes" which can be assigned to a source and will follow that source around the Wheatnet-IP system. Such attributes might include EQ, destination gain, dynamics or backfeed settings. The attributes are defined on the Attributes tab and can be assigned to a source in the Source Signal Wizard. For more information on Attributes, see the Blade-4 manual. Attributes are a new feature and may not be supported on all blades or in all software versions. Contact Wheatstone Tech Support for more information on Attributes. More attributes will be added later.