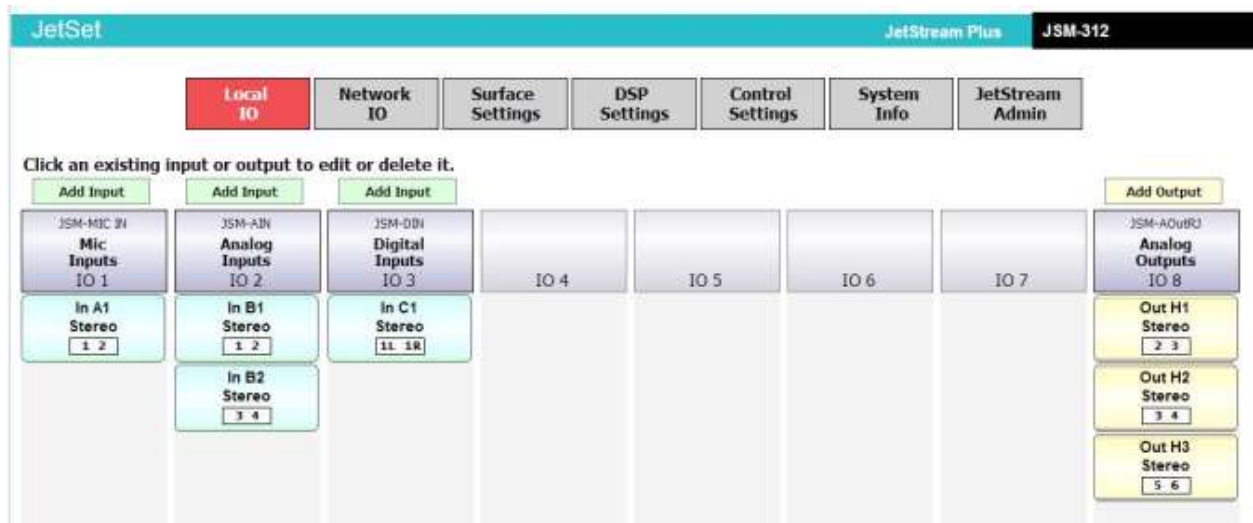


## Logitek Electronic Systems

### *JetSet Reference Manual*



*Includes JetStream Server Manual*

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May 2014	1.0	John Davis	Added JetStream Server Section
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February 2015	1.2	John Davis	Flagged features not fully implemented

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# 1. Introduction

## About this Manual

This manual describes how to use the **Logitek JetSet** configuration system for the JetStream MINI and JetStream PLUS audio routers.

### Intended Audience

This manual is aimed at Engineers and Technical Operators responsible for installing, configuring and supporting a **Logitek Networked Console System**.

In the context of a system installation, or to become familiar with the entire **Logitek Networked Console System**, the reader should also reference:

- Surface Reference Manual for each surface you are installing
- JetStream MINI or JetStream PLUS Reference Manual

It is assumed the person responsible for installing and configuring any PC application has a solid understanding of Microsoft Windows desktop operating systems, or has ready access to IT support.

### Manual Conventions

The following conventions are used in this manual:

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*This text indicates a menu choice to be made, with an arrow separating a multi-level selection, eg Control Panel ➤ Users & Passwords. This can be a menu choice in a Logitek application, or within Windows.*



*Indicates a "see-also" section in this manual, or another Logitek manual.*



The exclamation symbol signifies an important note or critical information.

This text represents a command, script block example, instruction to be typed, or directory path.

 **TIP:** A useful tip from our knowledge base!

## About JetSet

JetSet is Logitek's web-based configuration system for the JetStream MINI and JetStream PLUS audio routers.

Designed for and tested with desktop, laptop, tablet, and mobile phone browsers, JetSet is written in HTML-5 to be compatible with Internet Explorer, Firefox, Chrome, and Safari browsers and optimized for speed and simplicity.

## About JetStream

JetStream is Logitek's brand of dense Audio over IP nodes and integrated audio router and mix engines. The JetStream MINI handles up to 128 audio channels in 2 rack units and is capable of mixing up to 36 faders spread across up to 4 consoles. The JetStream PLUS is capable of handling up to 240 audio channels and mixing up to 36 faders spread across up to 4 consoles in as few as 4 rack units.

The process of setting up a JetStream MINI and JetStream PLUS are the same using JetSet. The only difference is the number of audio cards; the MINI has 8 slots and the PLUS has 16 slots.

When you log into the JetStream, JetSet will tell you what kinds of cards are installed and how many slots are available.

Because both the MINI and PLUS operate on the same system architecture, when this manual refers to a "JetStream" you should assume that what is being discussed applies to both models. Any features that are exclusive to either the MINI or the PLUS will be designated as such.

## Differences Between JetSet and AE Config

If you're used to using AE Config with the Logitek Audio Engine or with older versions of the JetStream, the primary difference is when you create a new input or output or if you're editing an existing input or output, you are just changing that one component at that moment. AE Config required you to compile all of your changes and push them into the engine at once, resetting the engine to read the changes. JetSet edits or creates that input or output directly without requiring a reset to make it active.

So the big difference now is when you hit Save, you've just made a real change to the live system. You're not saving a file and pushing through multiple changes later, you're making changes and saving on a live system as you go. It's a whole new world.

## Key Concepts To Understand

Whether this is the first time you've installed a digital or Audio over IP console, or if this is one of many you've done in your career, Logitek approaches some things differently than you may be used to.

### The JetStream Is An Audio Router

At its core, the JetStream is an audio router first and an Audio over IP appliance second. Your console is a control head for the router.

### The JetStream Is A Hybrid of TDM and AoIP

We take a best of both world approach: the JetStream is a TDM audio router that mixes signals with extremely low latency. If the audio needs to leave the room, we use Audio over IP to send it to another device. However, if the audio doesn't have to leave the JetStream it stays within the device. This simplifies the network, eliminating the need for edge and core switches to connect nodes and mix engines; we can accomplish the same thing with one core switch. [If you have no idea what an edge or core switch is, then you can appreciate why we opted for a simpler approach.]

### Mixing Buses

In a traditional analog or digital console, you have a smattering of mix buses such as program, audition, control room monitor, cue, studio monitor, headphones, and a clean feed from a phone module going to dedicated outputs. One of the first calls our support department gets from a new customer usually begins with the question "Where do I plug in the monitor speakers?"

Because the JetStream is an audio router, we create the mix buses internally in DSP. Then you route the bus you want to the output that you want. And because it's a router, you can send the same mix or any combination of different mixes anywhere you want. Here's a list of all of the mixes we create for you on a Mosaic, ROC, or Pilot:

Program	Studio/Guest Headphones	Router 3	Mix Minus 9	Mix Minus 18
Aux 1	Control Room Monitor	Mix Minus 1	Mix Minus 10	Mix Minus 19
Aux 2	Headphones	Mix Minus 2	Mix Minus 11	Mix Minus 20
Aux 3	Tone Generator	Mix Minus 3	Mix Minus 12	Mix Minus 21
Aux 4	Talkback Return	Mix Minus 4	Mix Minus 13	Mix Minus 22
Aux 5	Cue	Mix Minus 5	Mix Minus 14	Mix Minus 23
Aux 6	Mixer A (3 chan submixer)	Mix Minus 6	Mix Minus 15	Mix Minus 24
Aux 7	Router 1	Mix Minus 7	Mix Minus 16	Mono Program
Aux 8	Router 2	Mix Minus 8	Mix Minus 17	Mono Aux 1

Where will you route these things? That's what we're about to cover.



## 2. Network Setup

### Administrative Network vs Audio Network

On a JetStream, there are three network ports for three different LANs:

- Administrative (labeled ADMIN NET)
- Audio LAN 1 (labeled AUDIO NET 1 or LIVEWIRE 1)
- Audio LAN 2 (labeled AUDIO NET 2 or LIVEWIRE 2)

The administrative network is controlled by the embedded microprocessor and is located near the USB and VGA ports. The audio network ports are located on the DSP card (also labeled SURFACE).

JetSet runs on the administrative network. When the JetStream leaves the factory, this network card is set up to automatically obtain an IP address via DHCP. If no DHCP server is available, the embedded PC will set its own IP address via AutoIP.

The audio networks operate on a different microprocessor that is mounted to the DSP card. While the administrative network informs the audio network microprocessor how you wish to do things, the audio data remains on a separate LAN.



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*As of press time, all networked audio runs on AUDIO NET 2. AUDIO NET 1 is not currently used. Contact Technical Support for updated information.*

---

Because audio is not carried on the administrative network, this port can be connected to the same LAN used in your business office without needing to worry about flooding the office network with extra data.

### Using the Embedded PC

Built into every JetStream is a small computer running on an Intel Atom processor, operating either Windows Embedded Standard 7 or Windows Embedded Standard XP. By connecting a monitor, keyboard, and mouse to the JetStream you will have full control of the embedded PC.

The Windows Embedded operating system is nearly identical to its desktop counterpart. Changing the IP address of the administrative network port is the same process in Windows Embedded as in the full version of Windows. If you operate in an Active Directory environment, you can add the embedded PC to your corporate domain if you choose, or you can leave it outside of the domain.

You will have the same experience with JetSet on a web browser using a keyboard, monitor, and mouse connected to the JetStream as you will on another computer connected to the administrative

network. If your JetStream uses Windows Embedded Standard XP, we strongly suggest that you download and use the Chrome browser instead of Internet Explorer.

## JetStream Server

JetStream Server is a utility program that launches when Windows Embedded starts and should always be left running. Functions of JetStream Server include:

- Logging channel on/off commands and routes
- Logging network connections
- Interfacing with third party automation and ELC systems
- operating macros and salvos
- powering IP client software such as vMix+
- providing a GUI on the JetStream State page that allows for administrative control
- Administers client setup
- Serves web pages for JetSet

### JetSet Functions Handled by JetStream Server

On The **Administrator** page, the **User Setup** tab defines the usernames and passwords that are valid in JetSet.

The default user is “user” with no password. You can change this and/or create new users and passwords by entering the desired user name and password on this page and checking “JS Config” as an allowed client for that user. Then click Save.

If the open Internet can see port 80 of your JetStream, we strongly suggest using something more secure than “user” and no password. We also strongly suggest that you not leave your JetStream wide open like that on the Internet. Put it behind a firewall with the rest of your mission critical machines and set up a Virtual Private Network if you want remote access. You have a computer embedded into your audio router. Always follow good network security practices.

### Other Useful Information in JetStream Server

On the **Administrator** page, the **System Setup** page will list the IP address of the admin network port and the JetStream name on the left side towards the bottom. This information is useful when logging into the JetStream from a remote web browser.

Additional information about JetStream Server is in Appendix C.

---

## 3. How To Log In

Now that we have given you a brief overview of the different LANs, the embedded PC, and the JetStream Sever software, it's time to put this all together and use it.

Whether you plan to configure the unit by working directly on the embedded computer or whether you ultimately wish to remotely work on the JetStream across the administrative LAN you need to complete these steps.

### What You Need To Do Before Launching The Browser

1. Connect a monitor, keyboard, and mouse to the JetStream
2. Know the administrative IP address of the JetStream. The default is that the PC gets its address via DHCP. If you have a DHCP server on the admin network, it will get its address and you will be able to find the address either by running IPCONFIG from a command prompt or by looking on the **System Setup** tab in **JetStream Server** on the **Administrator** page.

If you do not have a DHCP server on your LAN, the embedded computer will assign itself an address via AutoIP. You then can optionally assign a fixed IP address to the embedded computer's network card by going into the Windows control panel and adjusting the settings of the network card.

You also have the option of adding the embedded computer to your office's Active Directory if that is present in your office and part of your networking plans.

If you are going to log in to JetSet from the web browser on the same embedded PC, regardless of how the IP address is set, you can always access JetSet by typing in the loopback address into the address bar of the web browser: 127.0.0.1

3. Optionally, know the name of the embedded PC. The default name when the JetStream leaves the factory is the serial number. This may be changed by right-clicking on *Computer* in the Windows *Start Menu* and then selecting *Properties*.

If you are in an Active Directory environment, you could put the name of the embedded PC into the web browser and reach the JetSet web page. Outside of a domain environment, it is best to use the IP address instead.

4. Know the username and password set up on the **User Setup** tab in **JetStream Server** on the **Administrator** page. The default is user with no password. To change this or to set up additional users, go to that tab in **JetStream Server**, edit the user information making sure that **JS Config** is checked on the desired user's line, and click Save.

## Logging In From The Embedded PC

Launch a web browser window. On the address bar, enter one of the following and hit Enter:

- The loopback address: 127.0.0.1
- The IP address of the admin network port: (example: 192.168.3.34)
- The computer name of the embedded PC [if in a domain network environment] (example: JSM-312)

## Logging In From Another Computer on the LAN

Launch a web browser window. On the address bar, enter one of the following and hit Enter:

- The IP address of the admin network port: (example: 192.168.3.34)
- The computer name of the embedded PC [if in a domain network environment] (example: JSM-312)

If you are successful, you will reach this Login page:



Enter the username and password that are valid for the JetStream and click Connect.

## Troubleshooting

If you cannot reach the login page from the embedded PC

- Make sure JetStream Server is running (it's okay if it's minimized, but it must run to serve web pages.)

- Make sure you have entered in the correct IP address into the web browser. Try the loopback address (127.0.0.1) if you are using something different. To check to see what address the computer thinks it is, go to JetStream Server, select Administrator, and look at the left side of the System Setup screen. The entry for JetSet Address is what you want.
- Ensure that the Windows Firewall isn't blocking JetStream Server.

### **If you cannot reach the login page from another computer on the LAN**

- Make sure JetStream Server is running (it's okay if it's minimized, but it must run to serve web pages.)
- Make sure you are connected to the administrative LAN and that your computer is on the same subnet as the JetStream admin port.
- Make sure you have entered in the correct IP address into the web browser. To check to see what address the computer thinks it is, go to JetStream Server, select Administrator, and look at the left side of the System Setup screen. The entry for JetSet Address is what you want.
- Ensure that the Windows Firewall isn't blocking JetStream Server on the embedded PC

## **Frequently Asked Questions**

### **My computer is a MacBook/I run Ubuntu Linux. Can I use JetSet?**

Yes. While JetStream Server runs in an Embedded Windows environment, because this is a web-based system you can connect to the JetStream using Chrome, Safari, or Firefox without an issue. We're just another web page to you.

### **Can I connect to the JetStream using an iPad, Android tablet, or mobile phone?**

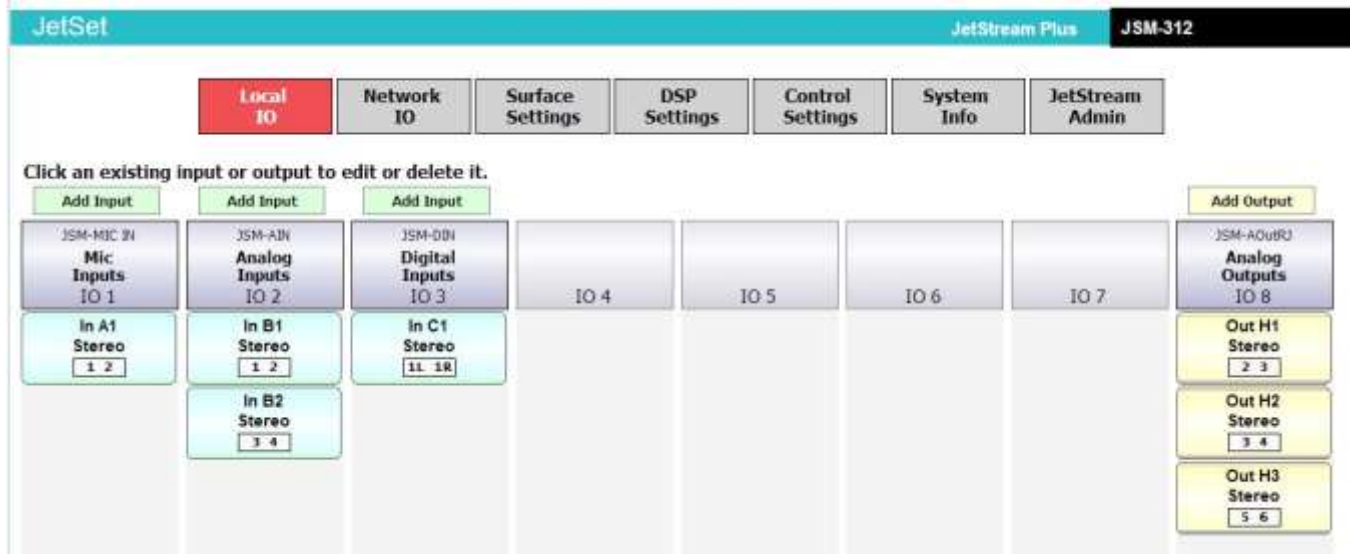
Yes. We have tested JetSet with numerous mobile devices. Again, we're just a web page. You will need a wireless access point on your LAN in order for your mobile device to see these wired devices, of course. Follow good security practices and incorporate encryption on your wireless networks, please.

## 4. How To Configure Inputs and Outputs

### The Local IO Page



The JetStream MINI Local IO page



The JetStream PLUS Local IO page

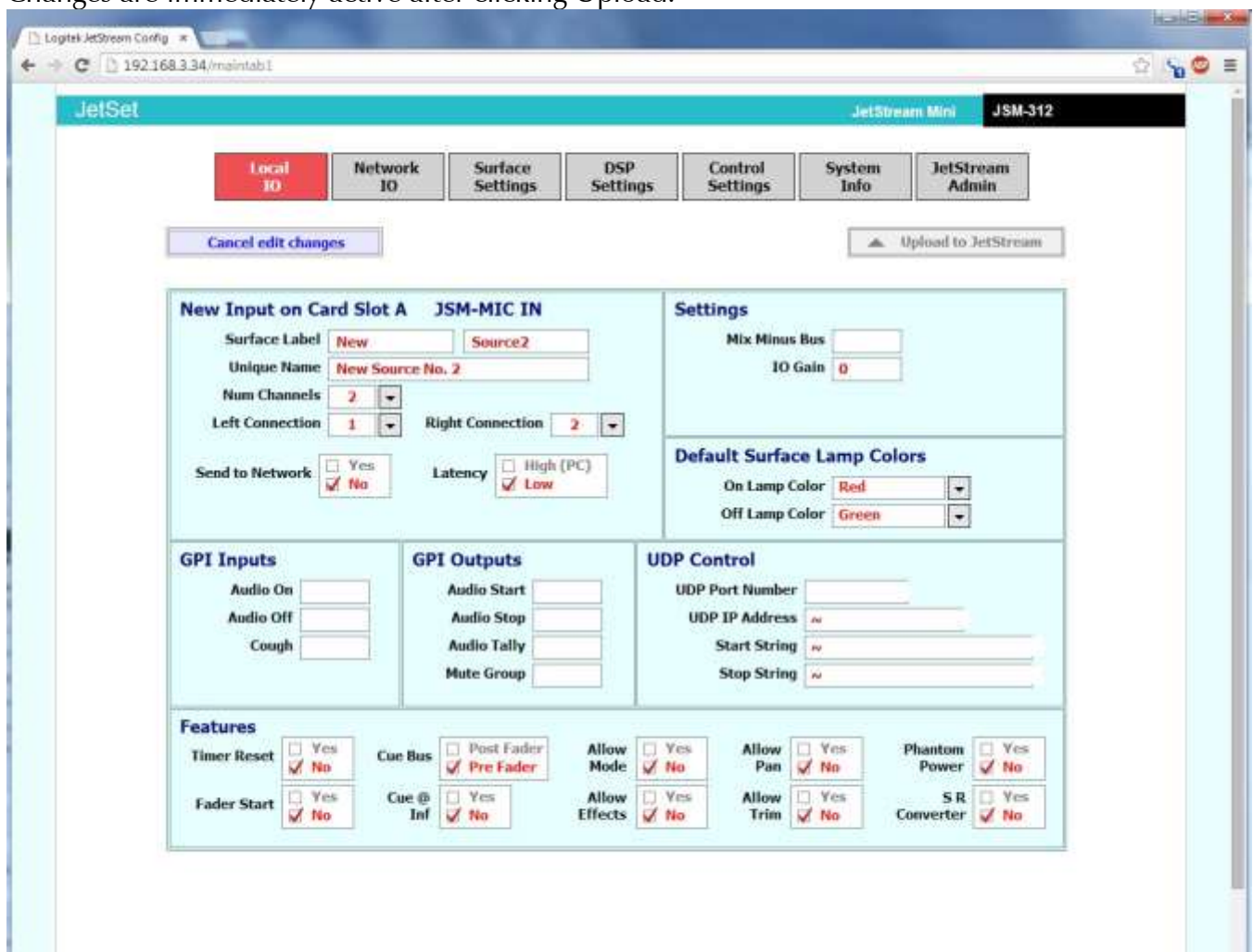
After logging in, the Local IO page is the first thing you will see. You can navigate to this page from anywhere else in JetSet by clicking the Local IO button.

A JetStream MINI has 8 card slots for local inputs and outputs. A JetStream PLUS has 15 card slots for local inputs and outputs. JetSet will show 8 slots at a time; to navigate back and forth between the first 8 and second 8 slots on the PLUS, scroll to the bottom of the page and click on the left and right arrows.

JetSet will show what kind of cards are installed in each slot or if no card is installed. This is automatically updated by JetStream Server as cards are installed.

## Adding Inputs

To add an input, click the **Add Input** button at the top of the slot's column. The input editor will appear. To save your work, click **Upload to JetStream**. To abandon any changes, click **cancel**. Changes are immediately active after clicking Upload.



The screenshot shows the Logitek JetSet configuration interface for a JetStream Mini JSM-312. The interface is divided into several sections:

- Navigation Tabs:** Local IO (selected), Network IO, Surface Settings, DSP Settings, Control Settings, System Info, and JetStream Admin.
- Buttons:** Cancel edit changes and Upload to JetStream.
- New Input on Card Slot A JSM-MIC IN:**
  - Surface Label:** New Source2
  - Unique Name:** New Source No. 2
  - Num Channels:** 2
  - Left Connection:** 1
  - Right Connection:** 2
  - Send to Network:** Yes (unchecked), No (checked)
  - Latency:** High (PC) (unchecked), Low (checked)
- Settings:**
  - Mix Minus Bus:** (empty)
  - IO Gain:** 0
- Default Surface Lamp Colors:**
  - On Lamp Color:** Red
  - Off Lamp Color:** Green
- GPI Inputs:**
  - Audio On: (empty)
  - Audio Off: (empty)
  - Cough: (empty)
- GPI Outputs:**
  - Audio Start: (empty)
  - Audio Stop: (empty)
  - Audio Tally: (empty)
  - Mute Group: (empty)
- UDP Control:**
  - UDP Port Number: (empty)
  - UDP IP Address: (empty)
  - Start String: (empty)
  - Stop String: (empty)
- Features:**
  - Timer Reset: Yes (unchecked), No (checked)
  - Fader Start: Yes (unchecked), No (checked)
  - Cue Bus: Post Fader (unchecked), Pre Fader (checked)
  - Cue @ Inf: Yes (unchecked), No (checked)
  - Allow Mode: Yes (unchecked), No (checked)
  - Allow Effects: Yes (unchecked), No (checked)
  - Allow Pan: Yes (unchecked), No (checked)
  - Allow Trim: Yes (unchecked), No (checked)
  - Phantom Power: Yes (unchecked), No (checked)
  - S R Converter: Yes (unchecked), No (checked)

## Mandatory Fields

**Surface Label:** 2 fields of 8 characters. This text appears on the console for the operator. In television router parlance, these fields are the mnemonics.



**Unique Name:** This field is only seen in JetSet and in Logitek Command Builder. As the name implies, this text should be unique to the source so you can identify it and know it is different from another source. For example, you may have two sources where the surface label reads “Mic 1” but in the unique name one might say “Studio A Mic 1” and the other would say “Studio B Mic 1.”

**Num Channels:** The number of channels used by the source. Valid entries are 1 for mono, 2 for stereo, and 6 for 5.1.

**Left Connection, Right Connection:** These fields change dynamically as the number of channels is set. Choose from the drop-down box which input should be assigned to left or right. [If 5.1, the labels will read Left, Right, Center, LFE, Ls, Rs.]



*Note: Using the same input pin is allowed. You can also create multiple inputs with different unique names that use the same input pins if you need to. Example: you might create a stereo version of a source and a left only and right only version.*

**Send To Network:** Check Yes to send this source to other JetNet devices via Ethernet. Check No to keep this source local to this JetStream only.

**Latency:** If set to low, many small Ethernet packets will be used to create a low latency stream. If set to high, fewer, larger Ethernet packets will be used to network the audio. Logitek recommends always using Low latency for best results, unless this audio is to be received by a PC using the JetNet Windows audio driver.

This feature has not been implemented yet. To send an input to the network, it is necessary to go to the Network IO page, create an output to the network, and route the input to that network output. We will implement this feature after some DSP changes are made in 2015.

## Optional Fields

**Mix Minus Bus:** Enter the number of the mix minus bus that this source should be subtracted from. See the DSP Settings chapter for more information on this feature.

**IO Gain:** Enter a number in this box to raise or lower the gain of the source. Negative numbers lower the gain, positive numbers raise the gain. 0 makes no change to the level. Valid numbers are -20 to 20.

**Default Surface Lamp Colors:** Changes the default color of the on/off switch for this input on consoles that support changing the on/off lamp color. The default color will follow the source wherever the input is routed. Surfaces that support this feature are Mosaic and ROC. Leaving this set to “Mixed” will result in the surface following the color defaults set in Surface Settings. This feature has not been implemented yet.

**GPI Inputs:** Enter the desired GPI number. For **Audio On**, when the incoming GPI turns on the fader will turn on. For **Audio Off**, when the incoming GPI turns on, the fader will turn off. For **Cough**, when the incoming GPI turns on, the source will mute without turning the fader on or off; when the incoming GPI turns off the source will un-mute. See note below about GPI numbers.

**GPI Outputs:** Enter the desired GPI number for the following functions: For **Audio Start**, the GPI output will momentarily pulse when the fader is turned on. For **Audio Stop**, the GPI output will



momentarily pulse when the fader is turned off. For **Audio Tally**, the GPI input will latch on when the fader turns on and turn off when the fader is turned off. For **Mute Group**, enter the mute group number this microphone should be associated with. [See the *Control Settings* chapter for mute group setup.]

---

*Logitek addresses its GPIs as follows in JetSet:*

*1-xx denotes the GPI inputs or outputs on the JetStream chassis.*

*101-1xx denotes the GPI inputs or outputs on the console connected to surface 1.*



*201-2xx denotes the GPI inputs or outputs on the console connected to surface 2.*

*301-3xx denotes the GPI inputs or outputs on the console connected to surface 3.*

*401-4xx denotes the GPI inputs or outputs on the console connected to surface 4.*

*The number of GPI inputs and outputs will vary with each piece of equipment. See the users manual for the JetStream or console for the number of GPI inputs and outputs available on each piece of equipment. This addressing scheme will follow no matter how many GPI inputs or outputs exist on the hardware.*

---

**UDP Control:** Used to send UDP text strings when the fader turns on and off to send commands to automation computers without GPI connections. For **UDP Port Number**, enter the port number where we will send the text. For **UDP IP Address**, enter the IP Address where we will direct the UDP packets. For **Start String** enter the ASCII text that will be sent when the fader turns on. For **Stop String**, enter the ASCII text that will be sent when the fader turns off. UDP packets are sent on the AUDIO network. This feature has not been implemented yet.

**Timer Reset:** Check Yes to reset the timer on the surface when this source's fader turns on. Check No to not reset the timer when the source's fader is turned on.

**Fader Start:** Check Yes to turn the fader on when the fader knob is raised from zero and turn the fader off when the knob is returned to zero. This feature should always be set to yes when setting up a console in the UK or with the Ross Overdrive television automation system; otherwise, use as desired.

**Cue Bus:** Set to Pre-Fader to always send audio at unity gain to the cue bus for this source. Set to Post Fader to respect the fader level before being sent to the cue bus. The default is pre-fader. Logitek recommends leaving this at the default setting.

**Cue @ Inf:** (Cue At Infinity) When the fader is brought all the way to zero, turn on the cue bus. Turn the cue bus off when the fader is raised from zero. The default is No.

**Allow Mode:** When enabled, the operator will be able to change the mode on consoles that support changing the mode between stereo, mono, phase inversion, right/right, left/left, silence/right, left/silence, blend, and 5.1. If set to No, this feature is locked out from the console but can still be accessed by an administrator via JetStream Server.

**Allow Effects:** When enabled, an operator can change the EQ and dynamics for this source on consoles that have effects controls. If set to No, this feature is locked out from the console but still can be accessed by an administrator via JetStream Server.

**Allow Pan:** When enabled, an operator can change the pan for this source on consoles that have a pan control. When set to no, the feature is locked out from the console but can still be accessed by an administrator via JetStream Server.

**Allow Trim:** When enabled, allows the operator to adjust the gain of the fader from -10 to +10 dB

**Phantom Power:** If this input is a microphone preamp card, phantom power is enabled for this input's channels when set to Yes. If the card associated with this input is not a microphone preamp, the JetStream ignores this tick mark. This feature has not been implemented yet.

**SR Converter:** (Sample Rate Converter) When set to yes, the digital input uses the onboard sample rate converter to resample the AES signal to match the sample rate set on the JetStream Admin page. When set to no, incoming AES audio does not pass through the onboard sample rate converter; care must be taken to ensure that all sample rates match. Used to maintain precise timing in television systems. If the input is analog or microphone, this tick mark is ignored. This feature has not been implemented yet.

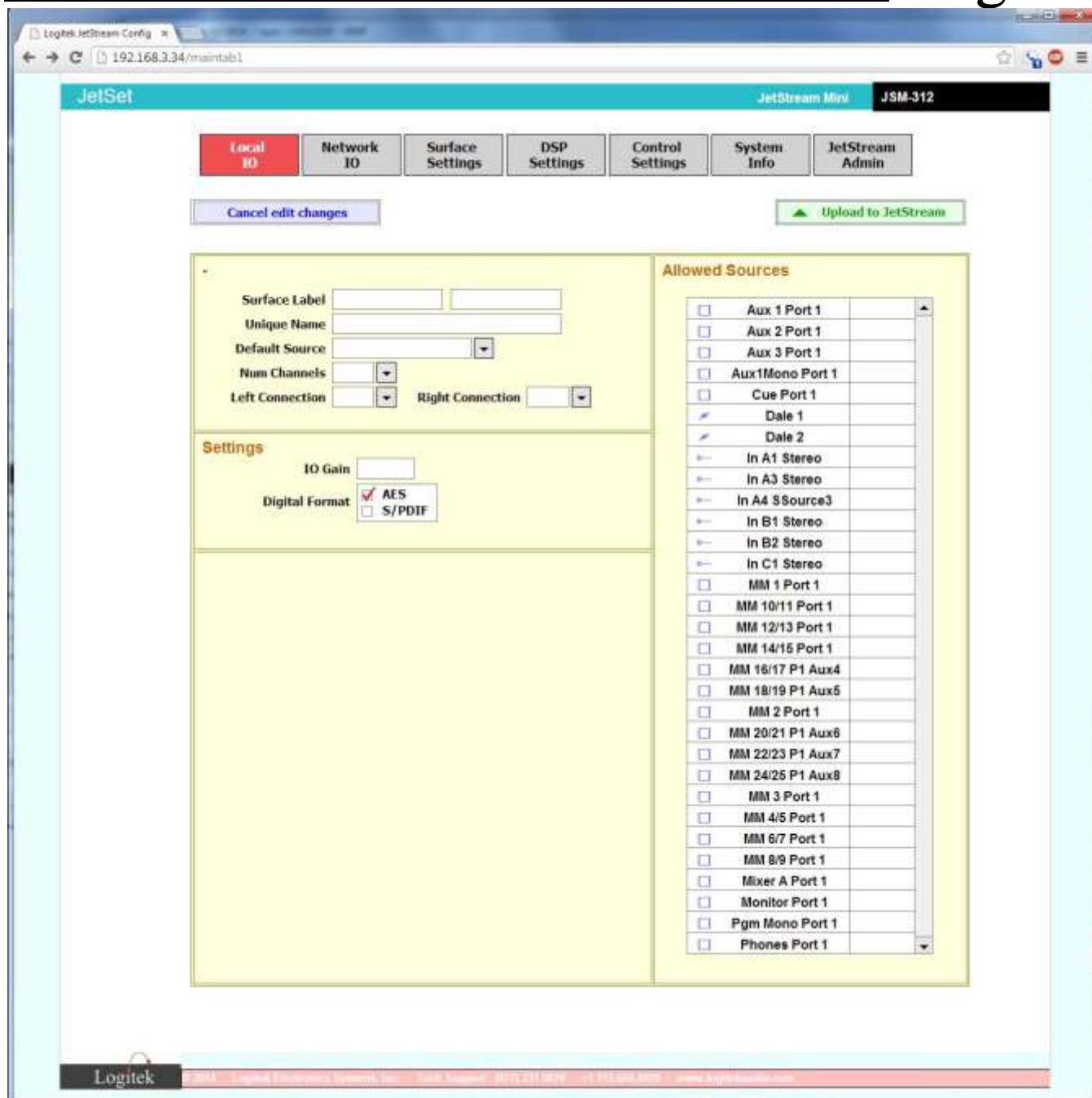
When you're finished, don't forget to **Upload to JetStream!**

## Editing Outputs

Click on the input on the Local IO page and edit using the same parameters as above.

## Adding Outputs

To add an output, click the **Add Output** button over the slot where you wish to add an output. You will be taken to the output editor.



How to edit an output:

### Mandatory Fields:

**Surface Label:** 2 fields of 8 characters. This label appears in JetStream Server and on some router control panels.

**Unique Name:** As it implies, the text in this field should be unique from all other outputs. It will appear in some Logitek software, so make it as descriptive of a definition about the output as possible.

**Default Source:** This dropdown list shows every available mix bus created by the DSP (program, monitor, aux, mix minus, etc.) as well as every available input on the JetStream. Click to select what audio you want to be routed to this output by default.



*If no output is chosen, your output will be silent by default!*  
*When you first create the output and set the default source, the route for that source will be sent to the JetStream. If you edit this setting later and upload, your routing change will not automatically be sent to the output; if you want to change the route live on the system you will need to do it via JetStream Server.*

**Num Channels:** Select the number of channels. 1 for mono, 2 for stereo, 6 for 5.1.  
**Left Connection/Right Connection:** These fields will react dynamically to the number of channels selection above. Use the drop down to choose which output pin should be assigned to the appropriate channel.



*Unlike the inputs, you cannot duplicate output numbers.*

## Optional Fields:

**IO Gain:** Enter a number in this box to raise or lower the gain of the output. Negative numbers lower the gain, positive numbers raise the gain. 0 makes no change to the level. Valid numbers are -20 to 20.

**Digital Format:** Options are AES and S/PDIF. If S/PDIF is selected, certain copy protection flags used by consumer grade digital recorders are ignored. The rule of thumb is to set this checkbox to AES and move the tick mark to S/PDIF if you are unable to record. Most modern equipment doesn't need this flag, but if you are using an old prosumer DAT recorder in your studio it comes in handy. If your output is analog, this tick box is ignored.

**Allowed Sources:** If a router will be hung on this output, in addition to the default source, use this grid to assign check marks in the box to the right of the source. Any source with a check mark will be considered available by the router. On the left side of the label is an icon showing the type of source it is. The box icon shows it is local to the JetStream. A lightning bolt shows it comes from a JetNet PC driver. A dot with a dashed line shows it is networked from another JetStream.



*Allow a second or two for the checkbox to appear after you click.*

When you're finished, don't forget to click **Upload to JetStream**.

## Frequently Asked Questions

**What do I click to add an output to the network?**

That is covered in the next chapter, Network IO.

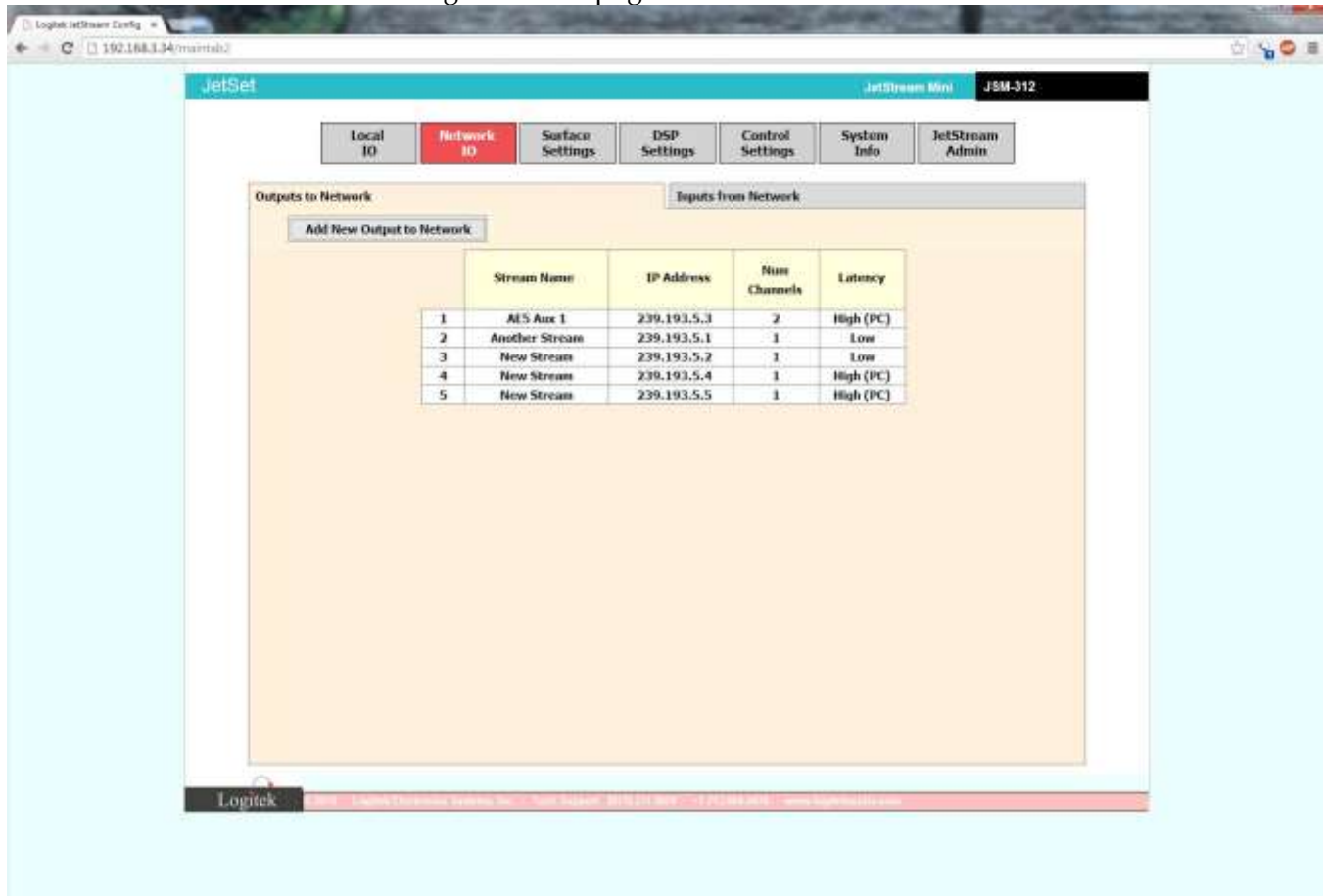
**How is the IO Gain different from Normal Signal Level in the old AE Config system?**

The whole idea of Normal Signal Level confused a lot of people. Think of the new system this way: whether you are on an input or an output, it's the same. To make something louder, put in a positive number. To make it softer, put in a negative number. To make no change, leave it at zero.

## 5. How To Assign Outputs To The Network

### The Network IO Page

Click the Network IO box to navigate to this page.



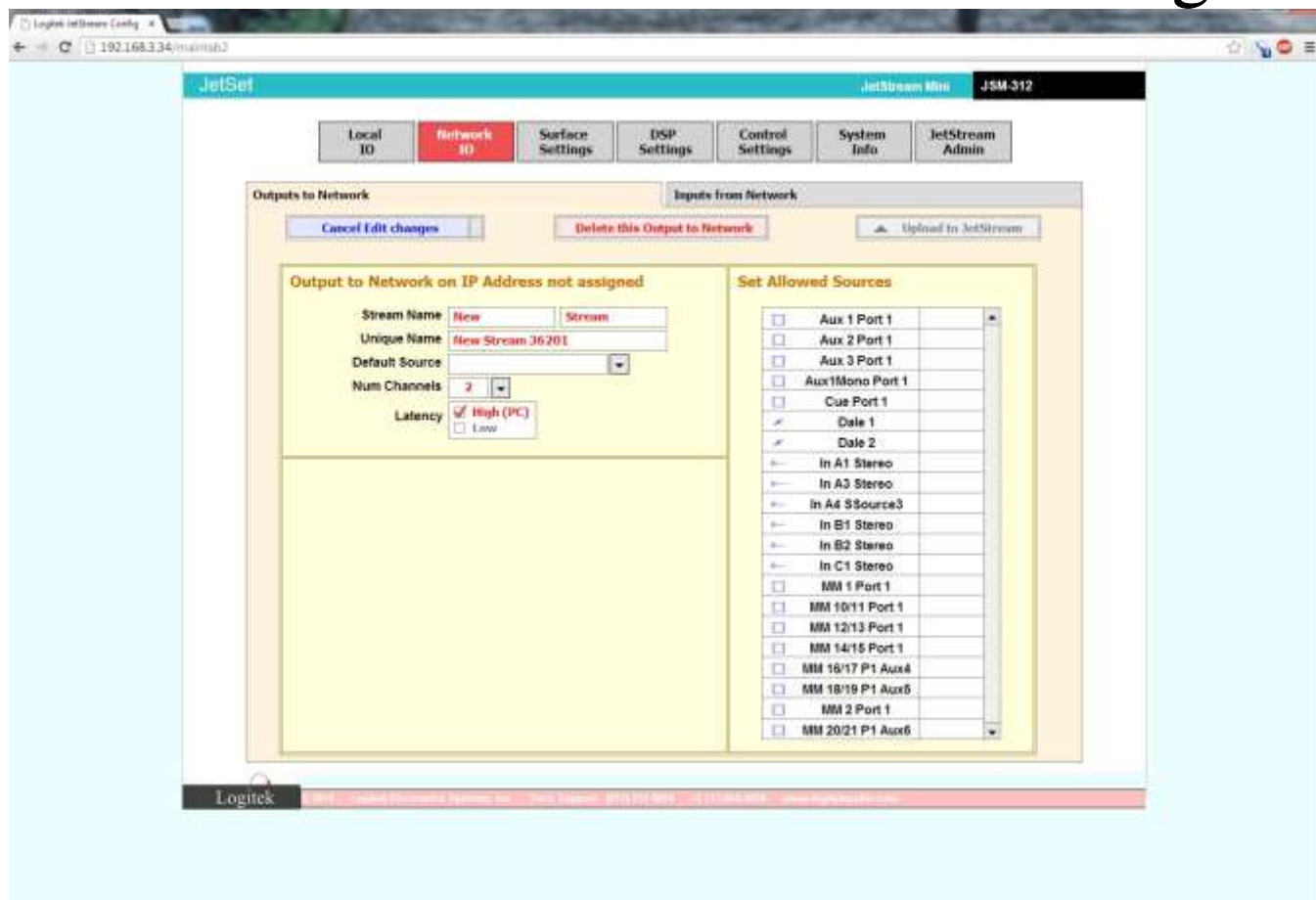
There are two tabs on this page. The **Outputs to Network** tab shows what streams are being sent from this JetStream to the network. The **Inputs from Network** tab lists the streams that the JetStream has found on the network from other devices.

You will notice that inputs that you tagged to add to the network on the **Local IO** page will appear as streams on the **Outputs to Network** tab. JetSet lists them here after it has put that audio on the network.

### How To Add an Output To The Network

Console outputs such as mix buses (Program, Aux, Monitor, Mix Minus) can be added to the audio network by clicking the Add New Output to Network button.

The output editor will open.

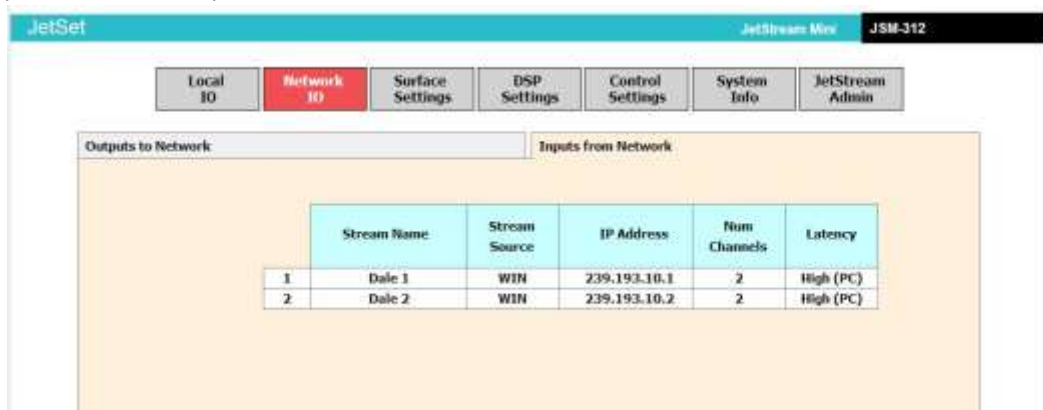


1. Name the stream in **Stream Name**. There are 2 fields of 8 characters. This is what the operator will see on the console or router panel.
2. Give it a **Unique Name**. This field appears in Logitek software.
3. Set the **Default Source**. This is the audio that will be sent to the network.
4. Set the **number of channels**. 1 = mono, 2 = stereo,
5. Set the **latency**. If this audio is going to be used by another JetStream, we recommend Low. If this audio is going to be used by a PC using JetNet audio drivers, we recommend High (PC).
6. If this output is routable (i.e. there is a virtual or physical router panel that will change what is routed to this output, add checkmarks to **Set Allowed Sources**. To add or remove a checkmark, click in the box to the right of the source description. If this output is not routable and only one source will be routed to the output, make no marks in this section and use the Default Source setting instead. You may need to allow for a second or two for the checkmarks to appear.
7. Click **Upload to JetStream** to create the output. The system will assign an IP address to the output during the upload process.

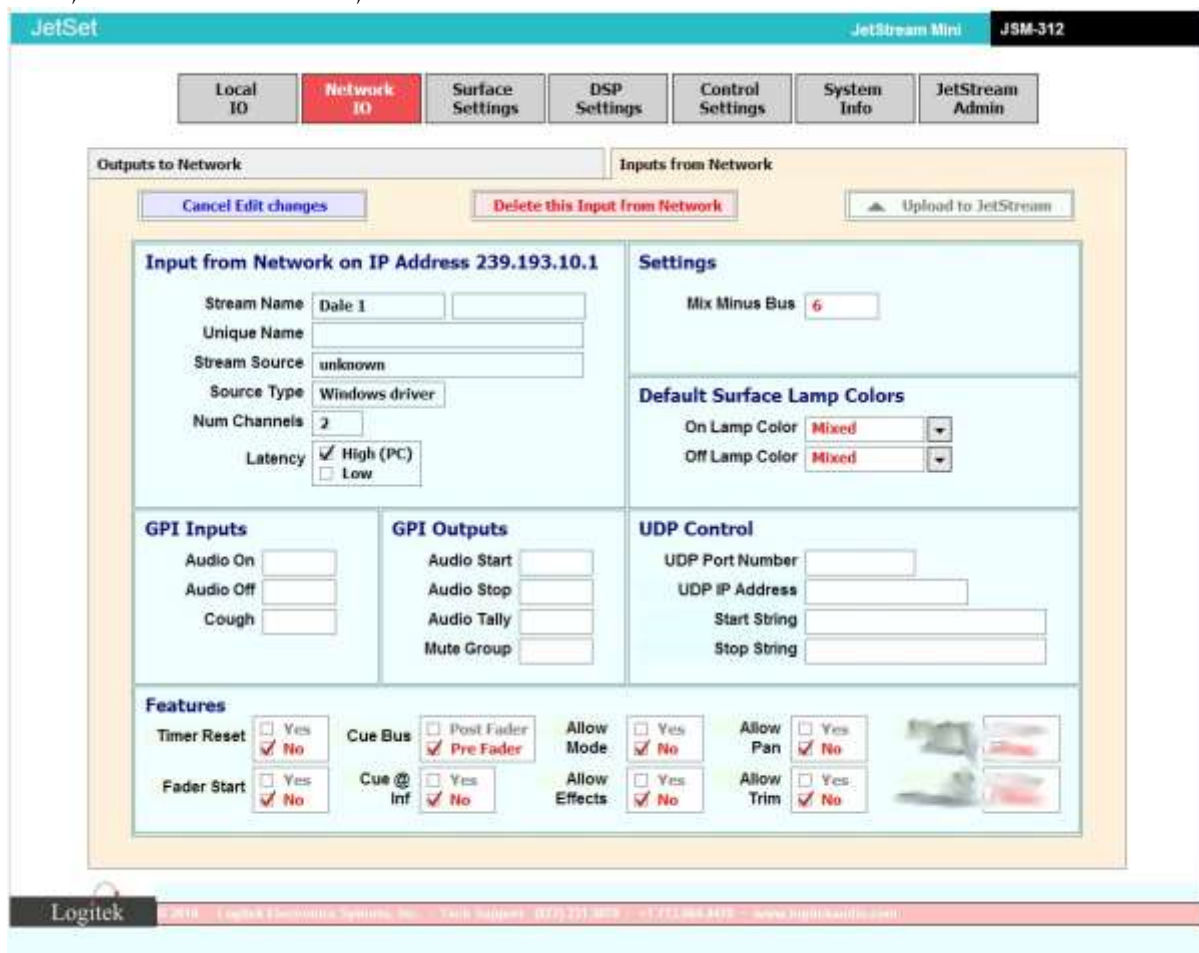


## Editing Inputs From The Network

Click on the **Inputs From Network Tab**. You will see a list of the streams that come from other JetStreams and JetNet devices.



These inputs may be edited to assign functions such as mix minus bus assignments, GPI assignments, essentially anything you can do with a Local input over on the Local IO page. The primary difference between this editor and the one on the Local IO page is you cannot change the label, number of channels, or the address over here.





**Mix Minus Bus:** Enter the number of the mix minus bus that this source should be subtracted from. See the DSP Settings chapter for more information on this feature.

**IO Gain:** Enter a number in this box to raise or lower the gain of the source. Negative numbers lower the gain, positive numbers raise the gain. 0 makes no change to the level. Valid numbers are -20 to 20.

**Default Surface Lamp Colors:** Changes the default color of the on/off switch for this input on consoles that support changing the on/off lamp color. The default color will follow the source wherever the input is routed. Surfaces that support this feature are Mosaic and ROC. Leaving this set to “Mixed” will result in the surface following the color defaults set in Surface Settings. This feature is not currently implemented.

**GPI Inputs:** Enter the desired GPI number. For **Audio On**, when the incoming GPI turns on the fader will turn on. For **Audio Off**, when the incoming GPI turns on, the fader will turn off. For **Cough**, when the incoming GPI turns on, the source will mute without turning the fader on or off; when the incoming GPI turns off the source will un-mute. See note below about GPI numbers.

**GPI Outputs:** Enter the desired GPI number for the following functions: For **Audio Start**, the GPI output will momentarily pulse when the fader is turned on. For **Audio Stop**, the GPI output will momentarily pulse when the fader is turned off. For **Audio Tally**, the GPI input will latch on when the fader turns on and turn off when the fader is turned off. For **Mute Group**, enter the mute group number this microphone should be associated with. [See the *Control Settings* chapter for mute group setup.]

---

*Logitek addresses its GPIs as follows in JetSet:*

*1-xx denotes the GPI inputs or outputs on the JetStream chassis.*

*101-1xx denotes the GPI inputs or outputs on the console connected to surface 1.*

*201-2xx denotes the GPI inputs or outputs on the console connected to surface 2.*

*301-3xx denotes the GPI inputs or outputs on the console connected to surface 3.*

*401-4xx denotes the GPI inputs or outputs on the console connected to surface 4.*

*The number of GPI inputs and outputs will vary with each piece of equipment. See the users manual for the JetStream or console for the number of GPI inputs and outputs available on each piece of equipment. This addressing scheme will follow no matter how many GPI inputs or outputs exist on the hardware.*

---



**UDP Control:** Used to send UDP text strings when the fader turns on and off to send commands to automation computers without GPI connections. For **UDP Port Number**, enter the port number where we will send the text. For **UDP IP Address**, enter the IP Address where we will direct the UDP packets. For **Start String** enter the ASCII text that will be sent when the fader turns on. For **Stop String**, enter the ASCII text that will be sent when the fader turns off. UDP packets are sent on the AUDIO network. This feature is not currently implemented.

**Timer Reset:** Check Yes to reset the timer on the surface when this source’s fader turns on. Check No to not reset the timer when the source’s fader is turned on.

**Fader Start:** Check Yes to turn the fader on when the fader knob is raised from zero and turn the fader off when the knob is returned to zero. This feature should always be set to yes when setting up a console in the UK or with the Ross Overdrive television automation system; otherwise, use as desired.

**Cue Bus:** Set to Pre-Fader to always send audio at unity gain to the cue bus for this source. Set to Post Fader to respect the fader level before being sent to the cue bus. The default is pre-fader. Logitek recommends leaving this at the default setting.

**Cue @ Inf:** (Cue At Infinity) When the fader is brought all the way to zero, turn on the cue bus. Turn the cue bus off when the fader is raised from zero. The default is No.

**Allow Mode:** When enabled, the operator will be able to change the mode on consoles that support changing the mode between stereo, mono, phase inversion, right/right, left/left, silence/right, left/silence, blend, and 5.1. If set to No, this feature is locked out from the console but can still be accessed by an administrator via JetStream Server.

**Allow Effects:** When enabled, an operator can change the EQ and dynamics for this source on consoles that have effects controls. If set to No, this feature is locked out from the console but still can be accessed by an administrator via JetStream Server.

**Allow Pan:** When enabled, an operator can change the pan for this source on consoles that have a pan control. When set to no, the feature is locked out from the console but can still be accessed by an administrator via JetStream Server.

**Allow Trim:** When enabled, allows the operator to adjust the gain of the fader from -10 to +10 dB

## 6. Setting Up Consoles

The Logitek JetStream supports up to 36 faders divided across multiple ports.

Despite their outward appearance, most consoles look identical to the JetStream. The Mosaic, ROC, and Pilot share the same addresses and the JetStream communicates with them identically.

The Artisan console has a different mixing architecture from the other consoles and is treated differently.

### Fader Assignment Rules

For the Artisan console, the following rule applies:

The Jetstream supports one Artisan console with up to 32 faders on port 1 Not currently supported.

For all other consoles (Mosaic, ROC, Pilot) the following rules apply:

Port 1 may be set up with 24 faders and Port 2 may be set up with 12 faders

OR

Port 1 may be set up with 18 faders, Port 2 may be set up with 6 faders, Port 3 may be set up with 6 faders, and Port 4 may be set up with 6 faders Not currently supported.

OR

One mixer grid may be set up for routing purposes. See Appendix A.

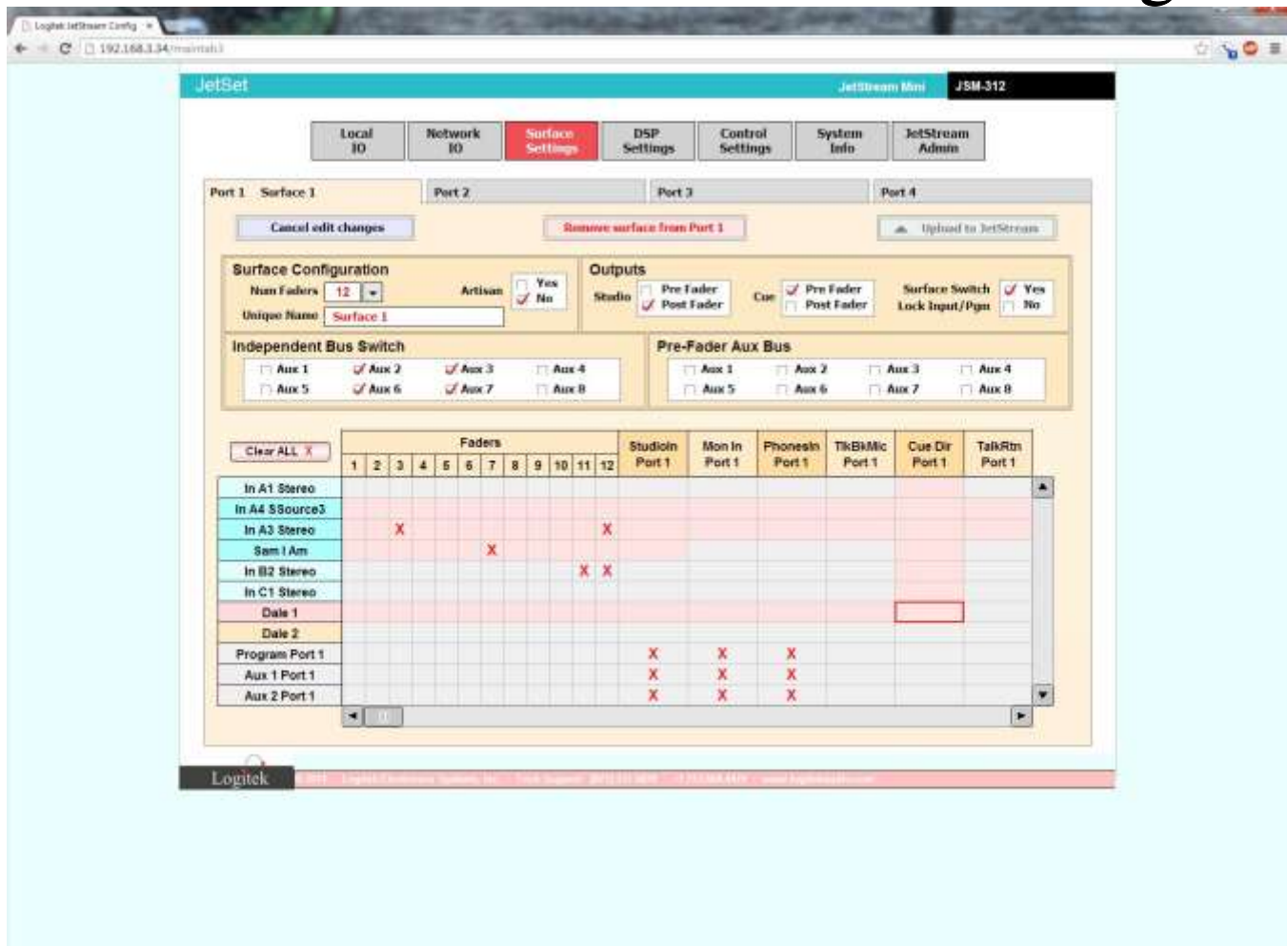
---

*It is permissible to set up the console in the JetStream with more faders than physically exist on a console and control the excess faders virtually or just not assign anything to the excess faders. For example, you could configure port 1 as 24 faders and port 2 as 12 faders but plug in 12 fader Mosaic consoles to both COM ports.*

---

### The Surface Settings Page

All surfaces are defined on the Surface Settings page. There are 4 tabs, one for each port. You must save your changes before leaving the tab, or else your changes will be discarded. Changes take effect immediately after saving.



## Surface Configuration

Use the **Num Faders** drop down box to choose the maximum number of faders allowed on the port. Keep in mind the fader assignment rules at the beginning of the chapter. Set the check box Yes or No depending upon whether this console is an **Artisan** or not. You may give the console a **Unique Name** to help you identify the studio within the software.

## Outputs

The Pre Fader/Post Fader **Studio** checkmark sets whether the Studio/Guest Headphones mix output will respect or ignore the Studio/Guest Headphones volume knob on the console. If set to pre-fader, the source that feeds Studio/Guest Headphones audio will still be controlled by the source select knob on the console but the level of the output will be at unity gain.

The Pre Fader/Post Fader **Cue** checkmark sets whether the Cue mix output will respect or ignore the Cue volume knob on the console. If set to Pre Fader, the cue volume will be at unity gain. Note that the volume control only changes the cue speaker on the console; if you assign cue to an output on the JetStream, that output will always be at unity gain. Also, monitor muting only mutes the console cue speaker and not the cue mix assigned to a JetStream output.

The **Surface Switch Lock Input/Pgm** checkbox controls whether a fader can be taken out of program or if an input can be changed while the fader is on. If set to Yes, when the fader is turned on the operator is blocked from turning the program switch off or changing the route to the fader until bus zero (the main fader on/off switch) turns off. This prevents an operator from accidentally taking something off the air. If set to No, this interlock is defeated.

### Independent Bus Switch

This feature instructs the JetStream to ignore the state of bus zero (the main fader on/off switch) for any fader where the checked auxiliary bus is turned on. For example, if Aux 1 is checked, any source where Aux 1 is turned on will feed that aux bus, even if the main fader is off. This is used in creating offline mixes.

### Pre Fader Aux Bus

This feature instructs the JetStream to ignore the state of the console fader level for any fader where the checked auxiliary bus is turned on and instead feed that aux bus at unity gain. This is used in creating offline mixes.

---

*Using both Independent Bus Switching and Pre-Fader Aux bus on the same aux bus creates a mix where any source where the aux bus is pressed will always feed at unity gain to that mix bus' output. Using those two features together with the Talkback Mic feature creates a very simple way for operators to punch microphones and sources in and out of an offline telephone recording mix. See Appendix B, Mix Minus Setup Guide for more information.*

---

## Assigning Sources To Faders

The source assignment grid gives you the ability to choose what sources appear on what faders. There are two types of marks on this grid: x and I.

The x (check mark, tick mark) shows that the source is allowed on that fader. Make this mark by clicking in the box.

The I mark (I bar, Initial Route) is the initial route or default route made upon a full reset of the JetStream. Make this mark by DOUBLE CLICKING in the box. If no I mark is made in a column, the JetStream will take the first x in the column as the default route.

The lines in the grid are made up of three things: local sources, network sources, and mix buses.

The columns in the grid are the faders and these router crosspoints:

**StudioIn:** Items checked in this column will be choices available in the console studio/guest headphone selector.

**MonIn:** Items checked in this column will be choices available in the console control room monitor selector.

**PhonesIn:** Items checked in this column will be choices available in the console headphones selector.

**TlkBkMic:** Whatever is checked in this column will be considered the talkback microphone for the console. Only one line should be checked in this column. The Talkback Mic is routed to a mix minus when the TB button is pressed over the fader. It is also routed to the caller when the *Add Mic When Off* feature is enabled in Mix Minus setup. Usually this is set to the main host microphone, the output of Mixer A, or to an Aux bus set with *Independent Bus Switching* and *Pre Fader Aux Bus enabled*.

**CueDir:** Cue Direct is a feature where a source may be routed directly into the cue speaker without being brought up on the console. (Bus 0 for the Cue Direct crosspoint must be turned on in order for the audio to appear in the cue speaker.) Example: an automation system has a dedicated preview output. This can be always available via Cue Direct.

**TalkRtn:** The Talk Return is used as part of the studio intercom system. When certain buses are turned on, the audio in Talk Return is put into the monitors and headphones.

**Mon Mtr:** Certain consoles have a switchable monitor meter. Assign sources and mixes in this column to change what is displayed on the monitor meter when the switched meter is turned on.

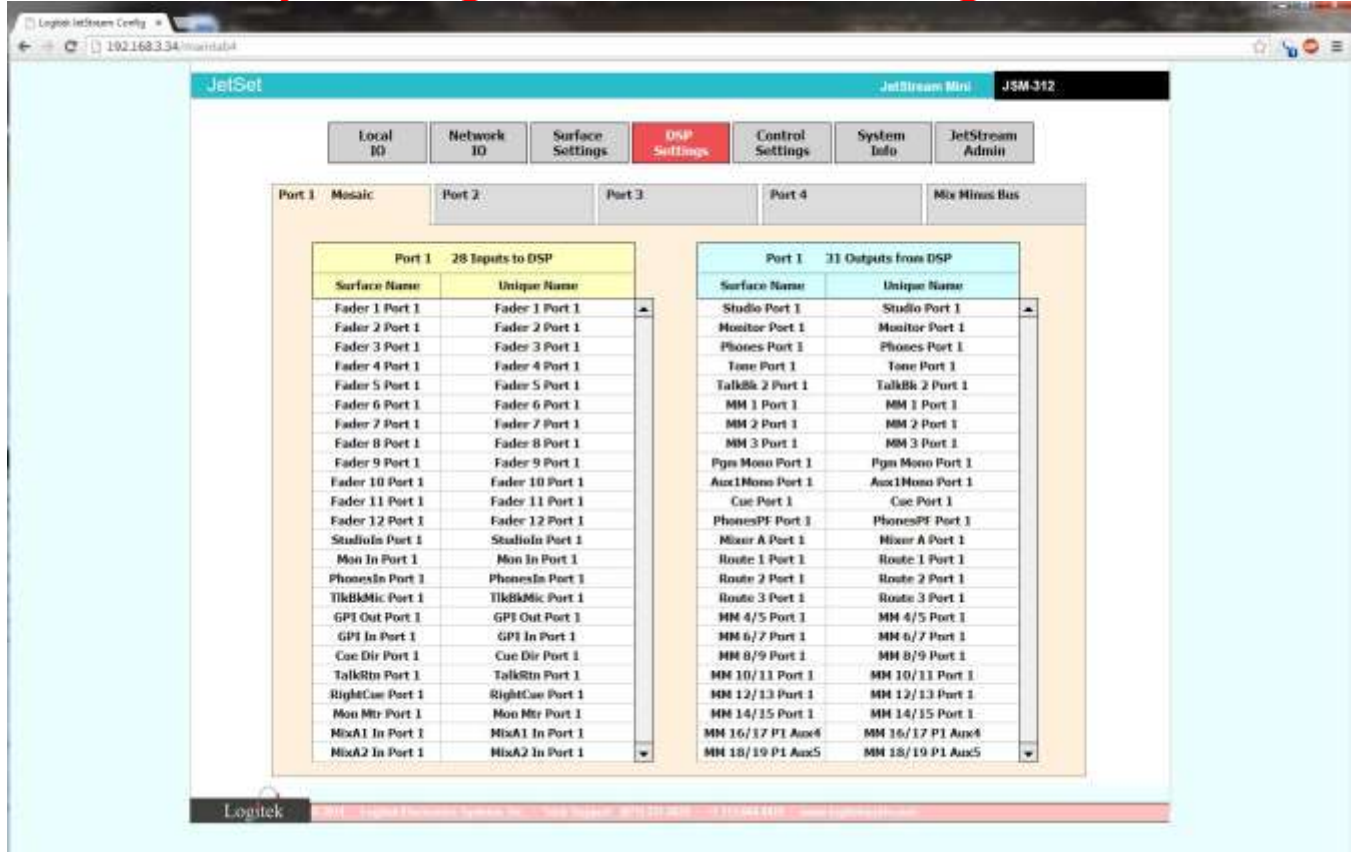
**MixA1, MixA2, MixA3:** These three columns make up MixerA. One source can be selected in MixA1, one source in MixA2, and one source in MixA3. Those three sources will then be summed together as Mixer A Out. Commonly used to sum three microphones together and then sent to the Talkback Mic, this utility mixer can be used in a variety of offline mixing applications.

**Router 1:** A router crosspoint with DSP control. Profanity delay can be assigned to this router. If program out is routed to Router 1 In and delay is applied to Router 1, then the output of Router 1 will be post-delay program audio.

**Router 2:** Functions the same as Router 1.

**Router 3:** Functions the same as Router 1.

## 7. Adjusting the DSP Settings

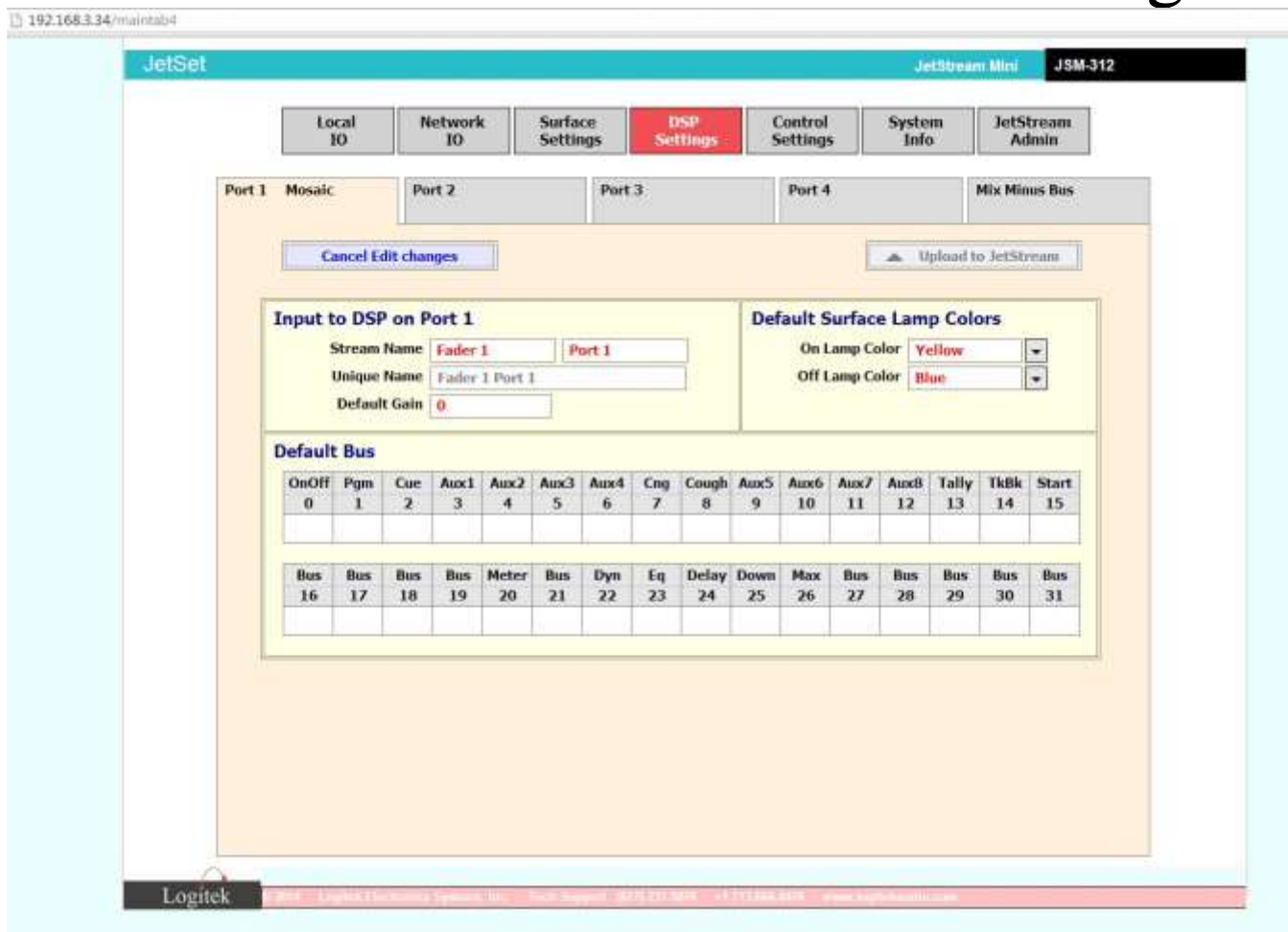


Within every console are fixed positions where the “magic happens.” The DSP settings page is the central place to edit the default behaviors of the console, control the mix minus system, and rename the mix buses.

### How to adjust the default settings of each fader

Navigate to the tab for the port you wish to edit. In the Input column on the left, click on the desired fader. An editor opens.





## How To Change The Label Name of the Fader

Edit the **Stream Name** fields.

## How To Change The Default Fader Level

Edit the **Default Gain**. Valid numbers are 0 – 255. In the UK, the default is 255. Outside of the UK, the default is 195 (-20 dBFS).

---

*The International Setting (US/UK) on the JetStream Admin page will set this globally; the setting on this page lets you adjust each fader individually if desired.*

---

## How To Change The Default Bus Settings

The grid shows which buses will be turned on by default; any bus with a checkmark in the box will be turned on at reset. The setting on this page lets you adjust each fader individually if desired.

## How To Change The Default Lamp Settings

For consoles that support changing on/off lamp colors, this setting lets you choose the on/off color by fader.



*The console will have its own color settings for each fader by default. This page lets you change the color by fader number. The setting on the input page lets you change the color by input. If you set no default color at the input, the JetStream will look to see if you have set a default color here. If you have not set a default color here, it will use the default set by the console.*

You must click the **Upload To JetStream** button for the changes to take effect.

## How To Change The Name Of A Mix Bus Output

By default, we name the mix buses in the JetStream by the name of the mix and the port. But what if you want it to read “Program Studio A” instead of “Program Port 1”?

Click on the desired mix bus in the output column on the right. An editor opens.



Change the **Stream Name**. Click **Upload to JetStream**.

## How To Set Up A Mix Minus Bus

Click the Mix Minus tab. Click on the mix minus bus you wish to work with from the list. An editor opens.



Name the mix minus in the **Stream Name** fields. The default is the mix minus number. You may find it helpful to note the device and/or studio the mix minus is associated with for easier routing. The Unique Name cannot be changed.

In the **Source Bus** drop-down, choose the bus that this mix minus will be derived from. This is the root of the mix minus bus. For example, if the caller on a phone hybrid is to hear program minus the phone hybrid, choose the appropriate program bus from the list.

**Bus Always On:** When checked, the JetStream will always feed mix minus audio, whether the source associated with the mix minus is on or not. If unchecked, audio will be present on the mix minus bus when a fader with the input tagged with this mix minus number is turned on.

**Add Mic When Off:** When checked, the JetStream will route the talkback mic to the mix minus bus output when the input tagged with this mix minus number is turned off on the console. When the fader is turned on, the JetStream will switch to feeding the mix minus bus (normally program minus the tagged input).

---

*If you check both Bus Always On and Add Mic When Off, Bus Always On will win the conflict, as the bus never will be off.*

---

**Bus is Stereo:** When checked, the mix minus is a stereo bus. Otherwise it's mono.

For further discussion of the Mix Minus System, see Appendix B.

## 8. Adjusting The Control Settings

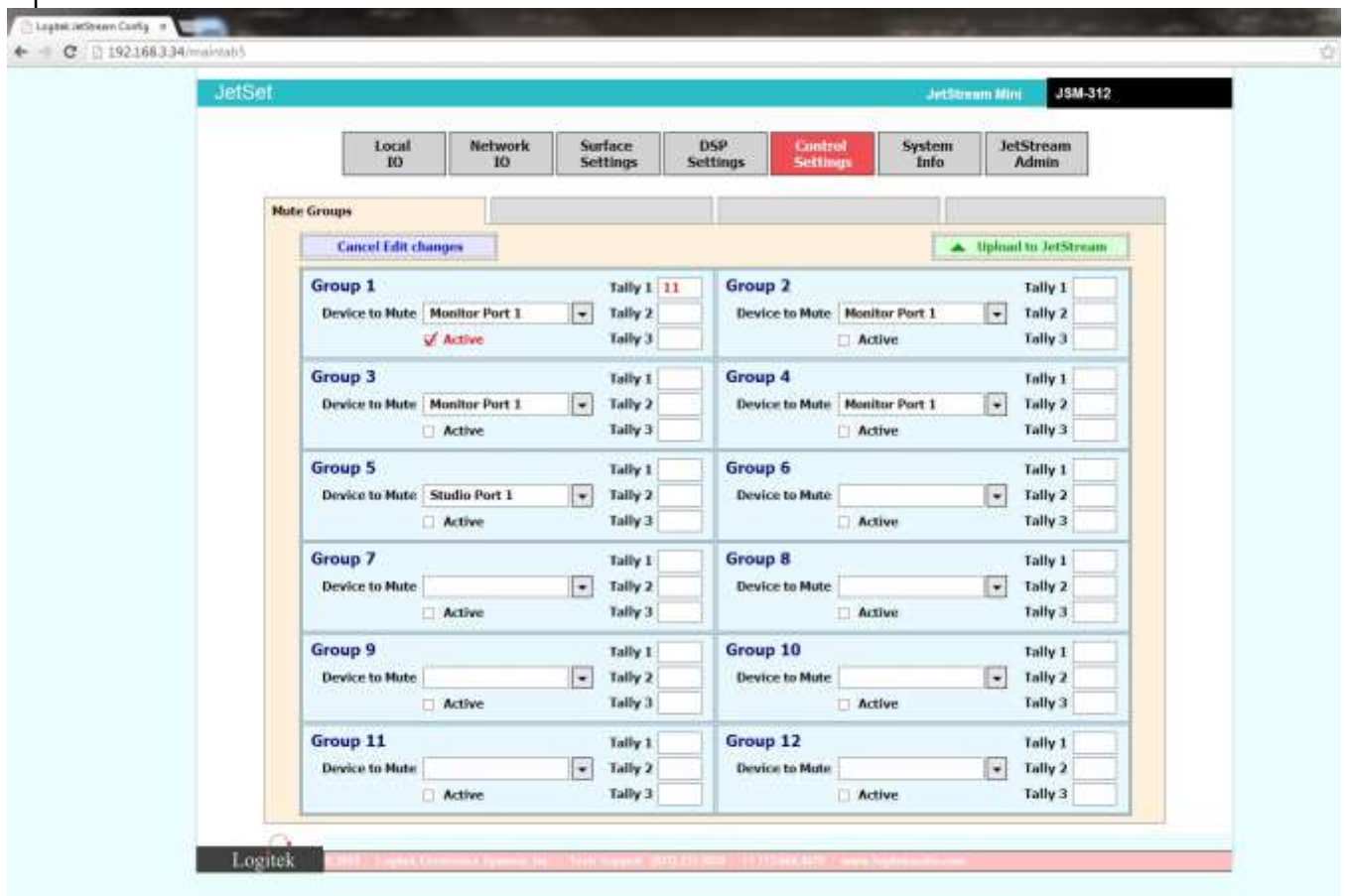
Click on the Control Settings button.

### Setting Up Mute Groups

A Mute Group tells the JetStream which monitor bus to mute and what relays to turn on when microphones are on.

Microphones are assigned to Mute Groups on the Local IO page or on the Network IO Page when you edit the source.

The Mute Group setup tab on the Control Settings page sets what monitor bus to mute and what relays to turn on when the microphone calls for the group number tagged with the local or network input.



Each group has the option to mute one monitor bus and turn on up to 3 GPIs. The multiple tallies allow for connecting multiple on air lights and record skimmers as needed. Check the **Active** box to engage the group. If this box is not checked, the JetStream will ignore the mute group.

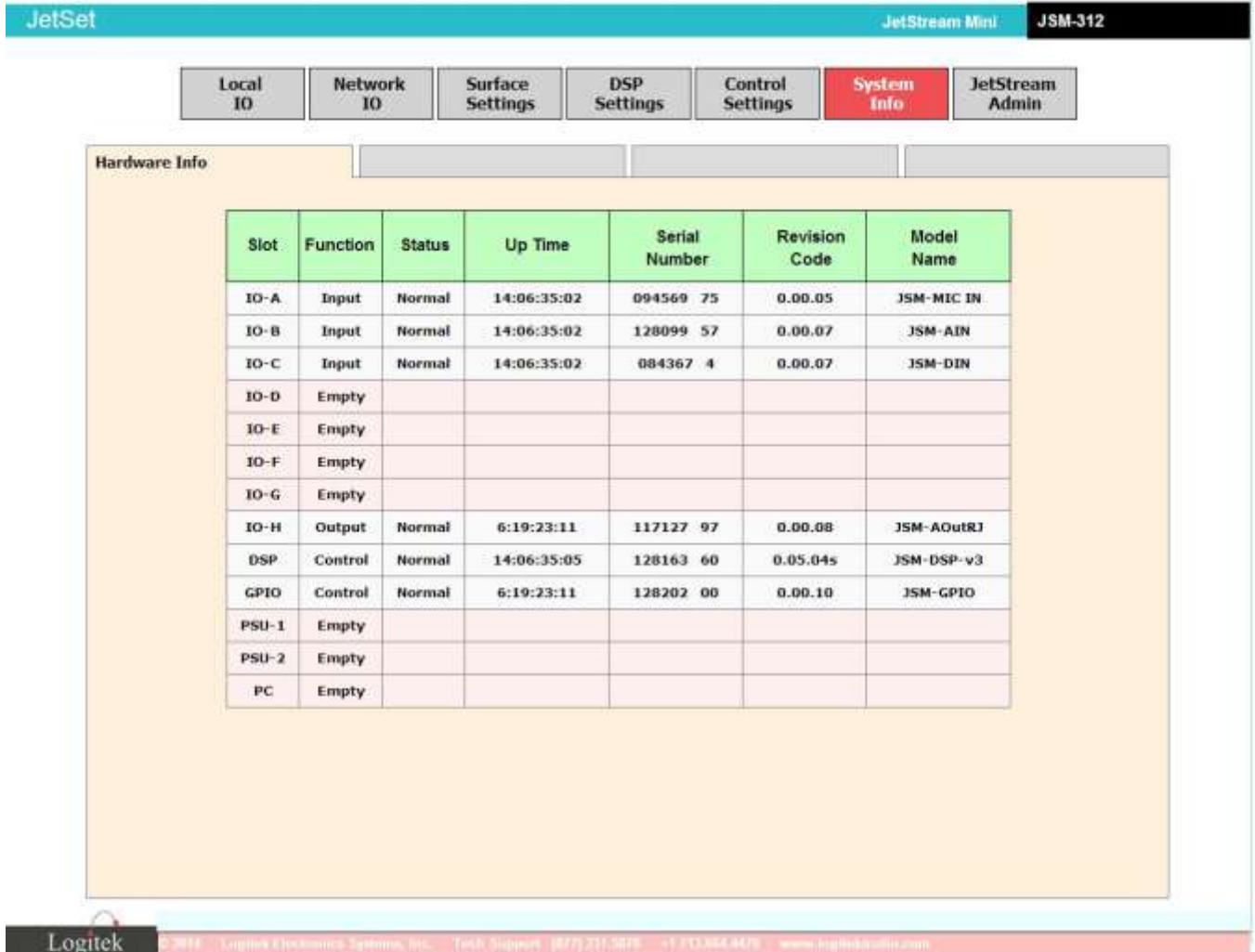
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For example, a main studio has 8 microphones, while the news booth has only one. The main studio monitors Port 1 Monitor Out. The news booth monitors Port 2 Monitor Out. The main studio's on air light is connected to GPI out 1 and the news booth's on air light is connected to GPI out 2.

You would set up mute group 1 to mute port 1 monitor out and turn on GPI 1. You would set up mute group 2 to mute port 2 monitor out and turn on GPI 2. On each microphone input for the main studio you would put a 1 in the mute group box. On the news booth mic you would put a 2 in the mute group box.

## 9. The System Information Page

Click on the **System Info** box to navigate to this page.



The screenshot shows the JetSet web interface. At the top, there's a header bar with "JetSet" on the left, "JetStream Mini" in the center, and "JSM-312" on the right. Below the header is a navigation menu with buttons for "Local IO", "Network IO", "Surface Settings", "DSP Settings", "Control Settings", "System Info" (which is highlighted in red), and "JetStream Admin".

The main content area is titled "Hardware Info" and contains a table with the following data:

Slot	Function	Status	Up Time	Serial Number	Revision Code	Model Name
IO-A	Input	Normal	14:06:35:02	094569 75	0.00.05	JSM-MIC IN
IO-B	Input	Normal	14:06:35:02	128099 57	0.00.07	JSM-AIN
IO-C	Input	Normal	14:06:35:02	084367 4	0.00.07	JSM-DIN
IO-D	Empty					
IO-E	Empty					
IO-F	Empty					
IO-G	Empty					
IO-H	Output	Normal	6:19:23:11	117127 97	0.00.08	JSM-AOutRJ
DSP	Control	Normal	14:06:35:05	128163 60	0.05.04s	JSM-DSP-v3
GPIO	Control	Normal	6:19:23:11	128202 00	0.00.10	JSM-GPIO
PSU-1	Empty					
PSU-2	Empty					
PC	Empty					

At the bottom of the page, there's a footer bar with the Logitek logo on the left and contact information on the right: "© 2014 Logitek Electronics Systems, Inc. Tech Support: (877) 231-3025 • (415) 854-8476 • www.logitekaudio.com".

This page displays what cards the JetStream sees installed, the serial number, and the software revision.

## 10. Administrative Settings

Click on the JetStream Admin button.



The screenshot shows the JetSet JetStream Admin interface. At the top, there is a navigation bar with buttons for Local IO, Network IO, Surface Settings, DSP Settings, Control Settings, System Info, and JetStream Admin (which is highlighted in red). Below the navigation bar, there are two main sections: Local JetStream and JetStream Settings. The Local JetStream section contains fields for Computer Name (JSM-312), JetNet Number (5), Multicast Base Address (239.193.0.0), Local IP Address (192.168.3.34), Net 1 IP Address (192.168.87.51), Net 2 IP Address (192.168.87.52), Base TCP Port (10200), TCP Port Range (10200 - 10212), vGuest TCP Port (10212), and Multicast Port (10202). The JetStream Settings section contains checkboxes for Sampling Rate (32.0, 44.1, 48.0), External Sync (None, Network, AES, Video, PPS), and International Setting (UK, USA). Below these sections, there are fields for Active JetFile and Sim Buffer JetFile, and buttons for Save JetStream to JetFile, Read JetFile to Sim Buffer, and Upload Sim Buffer to JetStream. At the bottom, there is a footer with the Logitek logo and contact information.

### Local JetStream Information

Displays settings regarding the audio network system.

#### Computer Name

The name of the embedded PC. This cannot be changed from JetSet.

#### JetNet Number

Each Jetstream device has a unique JetNet number from 1 – 255. A JetStream device is an audio router such as a PLUS or MINI or a Windows PC with the JetNet Audio Driver. If more than one device is assigned the same JetNet Number, the network will not function properly on either device.

*0 is not a valid JetNet number.*

---

## **Multicast Base Address**

The base address used by the multicast system. Most customers should keep the default 239.193.0.0 address, but if the addresses used by JetStream conflict with other AoIP or multicast equipment it may be adjusted.

---

*The range 239.0.0.0 – 239.255.255.255 is considered an Administratively Scoped Block and is reserved for private use by the IANA so it will not conflict with any public networks. In most cases JetStreams will not conflict with other AoIP equipment on your LAN, but in large corporate environments the potential to conflict with videoconferencing and other equipment exists if we both happen to choose the same addresses. Generally speaking, Logitek devices operate as 239.193.jn.sn (where jn = the JetNet number set above and sn is the stream number that is assigned by the software) and 239.193.0.0 is used as the “announce channel” for the JetStreams to announce streams and changes to each other. If our addresses will conflict with something else on your network, contact support and we will help you choose the correct base address.*

---

## **Local IP Address**

This is the address of the ADMIN NET port. It cannot be changed from within the JetSet interface.

## **Net 1 IP Address**

This is the address of the AUDIO NET 1 port. It should be set to a unique IP address on the network.

## **Net 2 IP Address**

This is the address of the AUDIO NET 2 port. It should be set to a unique IP address on the network.

---

*Logitek’s standard is to set these addresses to 192.168.87.jnx and 192.168.87.jny, where jnx = Jet Net number 1 for NET 1 and jny = Jet Net number 2. Example: JetNet 5 is 192.168.87.51 and 192.168.87.52; JetNet 1 is 192.168.87.11 and 192.168.87.12. The reality is they can pretty much be anything as long as they are unique and in the same subnet. Try not to overthink it, as once they are set you rarely will ever need to look at them again.*

---

---

### Base TCP Port

The TCP/IP port used by Logitek IP clients. This is set to 10200 as default. If this address conflicts with something else on your network, you will need to change the Base TCP port in all JetStreams and all Logitek IP clients to match your new value.

### TCP Port Range

You cannot edit this field. Logitek reserves 12 TCP ports so we can do our thing. The range field will show what ports we are using based on the Base TCP Port.

### vGuest TCP Port

You cannot edit this field. Logitek uses base port + 12 (normally 10212) for guest connections to third party systems.

### Multicast Port

You cannot edit this field. Logitek uses base port + 2 (normally 10202) for its RTP over UDP multicast packets.

---

*Logitek's IP clients such as vMix+ also use the base port (10200 by default) to communicate. If you change the base port, you will need to adjust the base port in the clients to match.*

---

## JetStream Settings

### Sample Rate

This is the sample rate that the JetStream will use for networking as well as what it will use for its outputs. If SR converters are turned on at the inputs, they will resample to this rate.

### External Sync

Chooses how this JetStream will lock its sample rate clock.

None: Does not rate-lock; operates on its internal sample rate clock only

Network: rate locks to the master across the LAN

AES: Locks to AES silence on the Ext. Sync input

Video: Tri-level sync on the BNC Video Sync input

Word Clock: Word clock on the BNC Video Sync Input

PPS: Pulse per second sync from a GPS clock

### Master Mode

Chooses how to handle being the master clock on the network. Options are **Cannot Be Master**, **Preferred Master**, **Allowed To Be Master**



---

## Network Protocol

Chooses which network protocol to follow. When this feature is made active, the options will be JetNet, Livewire, and AES 67.

## International Setting

Chooses the metering standard and default behavior of the console. UK customers used to doing things the British way with UK model consoles should check the UK box. Customers in other countries should check the US box.

USA: Zero is -20 dbFS. Unity gain is -10. On/Off switches control bus 0. Metering is a mix of average and PPM.

UK: Unity gain is full scale. Fader start controls bus 0. On switch turns on machine start (bus 15). Off switch engages PFL (bus 2). Metering is PPM (peak) only.

## Save JetStream To JetFile

This feature will export the configuration to a spreadsheet using Microsoft Excel .xls format.

The exported information can then be read by *Command Builder 5* for scripting in conjunction with *JetStream Server*. Command Builder 5 compiles a list of sources and destinations along with their respective addresses and provides for writing triggers calling for their unique name as opposed to their address.

In addition, the configuration can be edited within a spreadsheet editor that reads and writes .xls format to manually configure the JetStream away from the web browser. This could be useful when deploying many JetStreams to different locations using a common configuration.

The spreadsheet is detailed under **Appendix D** of this manual.

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## A. Using The Mixing Grid

This is a new utility feature that is intended for transmission switching.

This is a new feature still under development; this section will be completed accordingly.

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## **B. Understanding Mix Minus**

The concept of Mix Minus has been with us for years. Sometimes you just need a clean feed to send to the field where the person on remote hears everything but their own voice to avoid getting caught up in a transmission delay.

In this chapter, we'll teach you everything you ever wanted to know about mix minus but were afraid to ask.

### **Mix Minus, Defined**

A mix minus bus is what you get when you take a mixing bus like program and subtract one or more things from that bus.

A crude way of accomplishing mix minus is to put everything on the console in both program and auxiliary 1 except for the remote source which only goes in program. Then you send program to air and aux 1 to the remote. Program hears everything and the remote hears everything but the audio they're sending to the studio.

### **Logitek's Approach**

At Logitek we try to take the need to think away from the operator. We want the operator to concentrate on putting the remote on the air and not have to think about how to create the clean feed, so we create the mix minus off of the console automatically.

We accomplish this by tagging inputs with the number of the mix minus bus that input should be removed from. An input can only be added to one mix minus bus. Example: if the mix minus bus feeding the phone hybrid is 1, then a 1 should be entered into the mix minus bus box in input settings. Only one number can be entered into the mix minus bus box. However, you can tag multiple inputs with the same mix minus bus.

For example, the Comrex STAC phone system has two inputs to the JetStream, one for each hybrid but only one output from the JetStream sends mix minus audio to the phone system. Therefore, both hybrid inputs would be tagged with the same mix minus number so the hybrid gets program minus both callers. The STAC handles sending audio of one caller to the other if necessary. But a Telos dual hybrid phone system has two inputs (which receive two outputs from the JetStream). We would feed two mix minus busses to the Telos so each hybrid would hear each other but they wouldn't hear themselves in their mix.

### **Mix Minus in Television**

In television, mix minus is primarily used for IFB. The inputs where remote broadcasts come up on the console are the inputs that are tagged for mix minus. In most cases, these inputs are frame synchronizers, satellite receivers, and broadband (LiveU or similar) receivers.

In a perfect world, there's a dedicated output for each mix minus, and the clean feeds are assigned within the IFB system or the live trucks dial into dedicated numbers based upon the receiver they are feeding. However, television is rarely a perfect world and there are usually more ENG receivers than there are phone couplers. In these instances, a routing matrix is set up on the console or within Logitek vMix+ software to switch which mix minus bus is feeding each coupler on the fly. Support can help you create this.

In some stations, all studio microphones are tagged with the same mix minus number to create a clean feed without any studio microphones to feed IFB earpieces; in others mono program is routed to the IFB for the studio and everyone on the set hears everything. That's a matter of personal preference... or a matter of what everyone on the set is already used to.

Often in television we will also bring in a feed from master control as an input to the system and hook up a JetStream GPI input to the master control switcher. When the studio is off air, this would feed audio from master control to IFB and when the studio went to air it would then switch to the appropriate mix minus. This provides a confidence feed to the people in the field when they dial in before the show starts as well as lets them know that their IFB feed hasn't dropped during a commercial break. Contact support to learn how to set this up.

## Mix Minus In Radio

Generally speaking, music radio needs two things:

1. Mix minus to the telephone hybrid that acts like a speaker phone when the caller is off the air (also allowing for easy recording of phone calls off-air to be edited and played back) and changes to feeding program minus the phone hybrid when the caller is placed live on the air.
2. Mix minus to remote codecs, Skype, ISDN, etc. that's always feeding program minus the remote

At most stations, there is a dedicated phone hybrid to the studio, but the remote codecs may be shared among many studios. Therefore a routing matrix is set up either in the rack room (technical operations center, TOC, engineering office) and/or each studio to switch which studio's mix minus feeds each device.

Talk radio isn't much different from music radio, other than they rarely will set up the speakerphone and offline recording feature. Like with the remote codecs, talk radio just feeds program minus phone down the line all the time; if the caller is spoken to off the air it's done on a handset and outside the scope of the networked console system.

## Mix Minus Bus Attributes

Each mix minus bus needs the following things defined. This is set up on the **Mix Minus Bus** tab of **DSP Settings**.

---

## The Root Mix Bus

What bus is the input being subtracted from? 99% of the time this is Program (or in television, Master 1). However, for creating mix minuses for record buses you could use an auxiliary bus or cue as the root to subtract the audio from. (Note that the input you are tagging will need to be assigned to this bus for any of this to work!)

### Add Mic When Off

When this feature is checked, audio from the Talkback Mic (as defined in Surface Settings) is routed to the mix minus when the tagged input's fader is turned off. When the fader turns on, the JetStream switches to mix minus (program minus source).

### Bus Always On

When this feature is checked, the root mix bus always feeds out the mix minus bus, and if the tagged input is turned on, that input is subtracted from the mix.

---

*If neither Add Mic When Off nor Bus Always On is checked, the mix minus bus will be silent until the tagged input fader is turned on (and the root mix bus is selected on that fader)*

*If both Add Mic When Off and Bus Always On are checked, Bus Always On will win the conflict and Add Mic When Off will be ignored*

*You must select a root mix bus for the mix minus to work.*

---

## Creating A Speakerphone

The speakerphone can be fed by a single microphone, multiple microphones, or selectable microphones.

1. **Set Up The Microphone** – Define the talkback microphone on the Surface Settings page. For a single microphone, assign the default route to the desired microphone in the Talkback Mic column. For multiple microphones, assign a default route to the first microphone in MixA1 In, assign a default route to the second microphone in MixA2 In, and assign a default route to the third microphone in MixA2 In; then assign the default route in the Talkback Mic column to MixerA Out for that console's port. For selectable microphones, choose an aux bus and enable Pre-Fader Aux Bus and Independent Bus Switching for that bus, then assign the output of that bus by assigning it as the default route in the Talkback Mic column.
2. **Assign The Phone Hybrid To A Mix Minus Bus** – Choose a mix minus bus and tag the phone hybrid input(s) with that mix minus number on the input under Local IO or Network IO (as applicable to where you wired the device).
3. **Route The Output Of The Mix Minus Bus To The Phone Hybrid** – This is done at the output that feeds the hybrid under Local IO. If the phone hybrid is connected to a different

---

JetStream, create a network output for the mix minus bus, then go to the JetStream where the hybrid is connected and route the mix minus audio from the network to the output under Local IO.

**Troubleshooting** If the feed to the caller is silent, you probably don't have anything routed to the Talkback Mic. Double-check step 1. If the feed to the caller never switches from the talkback mic feed to program minus telephone when the caller is taken live on air, the phone hybrid is either not assigned to a mix minus bus or it is assigned to the wrong one. Double-check steps 2 and 3.

## Creating A Split-Track Phone Recording

Often, stations will record calls using VoxPro or Adobe Audition in split-track mode. The caller is sent to one channel and the host/presenter/disc jockey is sent to the other channel. This gives your talent the opportunity to edit themselves out if they talk over the caller at an important moment. Here's how to make the magic happen:

1. Create a mono output and label it Phone Rec Host. Route the mix minus bus that the phone hybrid is tagged with to that output. As long as that mix minus bus is set up for Add Mic When Off, you will have a clean feed of your talent.
2. On the adjacent output pin, create another mono output and label it Phone Rec Caller. Route the phone hybrid input to this output. This sends a clean feed of the caller to the other channel

This may be done either with analog or digital outputs as necessary. If your phone recorder is located on a different JetStream from the console, on the console JetStream, make a network output for the mix minus bus, and also network the phone hybrid if necessary. Then create the split track output on the JetStream where the phone recorder is wired to as described above.

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*For proper playback, set the default mode for the console input of your VoxPro or Adobe Audition computer to mono.*

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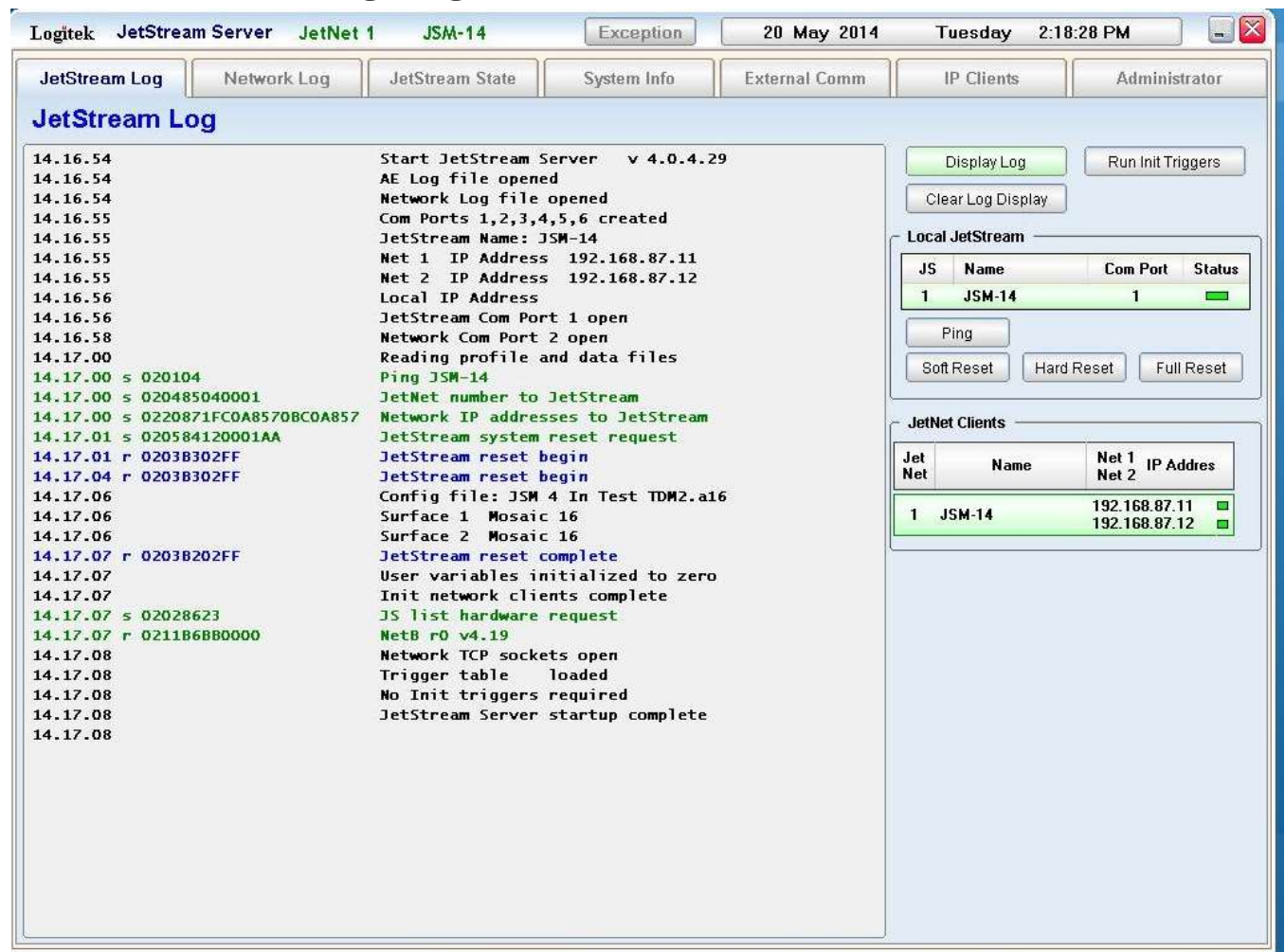
## C. JetStream Server

### Introduction

The JetStream Server application monitors everything that the JetStream does and runs the macros and salvos that you program it to perform. It also handles the back-end communication between units, making sure that every JetStream keeps track of what sources are available on the system. Finally, it is the engine for JetSet and serves as a mini webserver to drive its web pages.

JetStream Server launches when Embedded Windows starts and should always be left running, either maximized or minimized as you wish.

### The JetStream Log Page



The screenshot shows the JetStream Log Page interface. At the top, there's a status bar with 'Logitek JetStream Server JetNet 1 JSM-14' and a date/time display '20 May 2014 Tuesday 2:18:28 PM'. Below this is a tabbed interface with 'JetStream Log' selected. The main log area displays a running log of events, including server startup, network configuration, and system resets. On the right side, there are control buttons like 'Display Log', 'Run Init Triggers', and 'Clear Log Display'. Below these are two tables: 'Local JetStream' and 'JetNet Clients'.

**Local JetStream**

JS	Name	Com Port	Status
1	JSM-14	1	<span style="color: green;">■</span>

**JetNet Clients**

Jet Net	Name	Net 1 IP Address	Net 2 IP Address
1	JSM-14	192.168.87.11	192.168.87.12

This page displays a running log of every function on the JetStream. Every button press or route will be logged here.



## The Display Log button

The log page will show the last few events as they happen. It is possible to scroll back a limited number of events by turning off the Display Log button. This will freeze the display and show scroll bars along the side; you can then scroll back to check earlier entries. Turning the Display Log button back on resumes from the current time.

Even though you stop JetStream Server from displaying new entries when you click this button, Server will continue to log them in its daily log file. The daily log files are text documents stored in \Logitek\AECCommLog with a file name of AECCommLog\_YYYYMMDD.log. This is a text file that can be opened in Notepad or another text editor.

## The Run Init Triggers button

Init triggers are macros loaded into JetStream Server by Command Builder using the *trigger init* keywords. These triggers will run whenever JetStream Server starts. You can manually run the Init Triggers other times by clicking this button.

## The Clear Log Display button

This button will clear the log on the screen. The display will begin to fill again as new commands are processed unless Display Log is turned off. Note that this does not clear the text file that is stored in \Logitek\AECCommLog.

## The Local JetStream Display

This display will show the JetSet Number for this JetStream (this is a unique identifier for every JetStream device on the network). The name is defined by the computer name of the embedded PC. The COM Port is set by default to COM 1; this is the port that the embedded computer uses to chat with the DSP card inside the box. This COM port may be adjusted on the Administrator page, but all systems that leave the factory should properly function using the default port.

## The Ping button

Sends a ping command to the DSP card on the com port. If the status of the port is red, click this to test communication and reestablish the connection if the ribbon cable is properly connected.

## The Soft Reset button

Sends a command to the DSP card to perform a soft reset. A soft reset tells the JetStream to read the current routing table in memory and perform every route again. This does not interrupt audio. This also does not read the default route table, so whatever routes are stored in the current state memory will be routed again as-is and not return to defaults.



---

### **The Hard Reset button**

Sends a command to the DSP card to restart the DSP and every I/O card connected to the frame. Used to recover operations if any card is jammed up and not functioning. Pressing this button will interrupt audio for 1 to 2 seconds and create a brief popping sound, as it is briefly interrupting power to every card on the frame.

### **The Full Reset Button**

Sends a command to the DSP card to read the initial route table and return every route to its default. Fader channels that are on will turn off at full reset. Anything that isn't currently routed to its default will change back to what has been set in the config as the initial route (the I bar in the grid). Depending upon the state of your JetStream and its initial route table, this will interrupt audio, as the console faders will turn off and many routes could potentially change.

### **The JetNet Clients List**

This list will show the name, JetSet number, and IP Address of the network interface for every JetStream device on your Audio LAN. Items with green status boxes have recently responded to multicast pings on the network. If a client is on this list with a red status, it has failed to respond to a ping and may be down or its JetStream Server is not running. Clients who fail to respond to a ping may remain in this list up to a week before they are automatically purged; as soon as they come online and announce themselves they will turn green again.

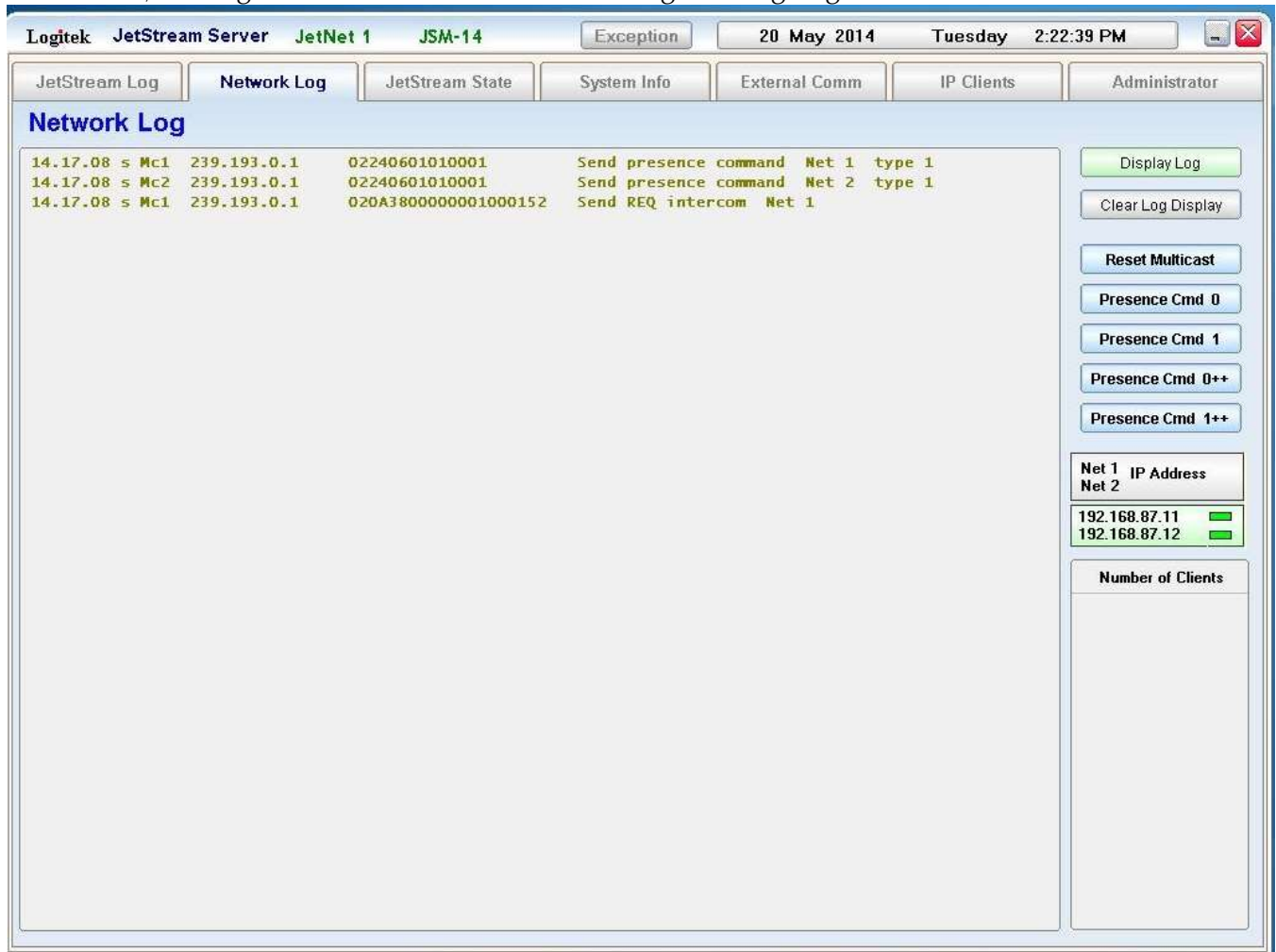
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*At the time of this manual's writing, it is permissible for JetStream interfaces to show the same IP Address in this list, as we are ignoring that part of the IP Stack. The real addresses we care about are the multicast addresses which are different from the interface address. Once the Livewire protocol is fully implemented, this will change, and the interface address will need to be unique. We recommend setting unique IP interface addresses now to avoid conflicts when the Livewire update is rolled out. This is done in JetStream Server on the Administrator page.*

---

## The Network Log Page

This page displays all of the audio network traffic between JetStreams. As devices announce themselves, this log will show the commands coming in and going out.



### The Display Log button

As with the JetStream Log page, the log will constantly scroll as new commands are processed. Clicking to turn off the Display Log will pause this function and put scroll bars on the screen and let you scroll back a limited number of entries. Clicking again to turn the log back on will take away the scroll bars and return to logging from the current time.

Even though the display may be turned off, Server will continue to write its log file in \Logitek\NetWorkLog with the file name NetworkLog\_YYYYMMDD.log. This is a text file that may be opened in Notepad or another text editor.

### The Clear Log Display button

This button clears the log buffer. Logging continues from the current time unless the display log is turned off. However, the log file being stored in \Logitek\NetworkLog continues to be written.

**The Reset Multicast button**

Used in troubleshooting by Logitek staff.

**The Presence Command 0 button**

Used in troubleshooting by Logitek staff

**The Presence Command 1 button**

Used in troubleshooting by Logitek staff.

**The Presence Command 0++ button**

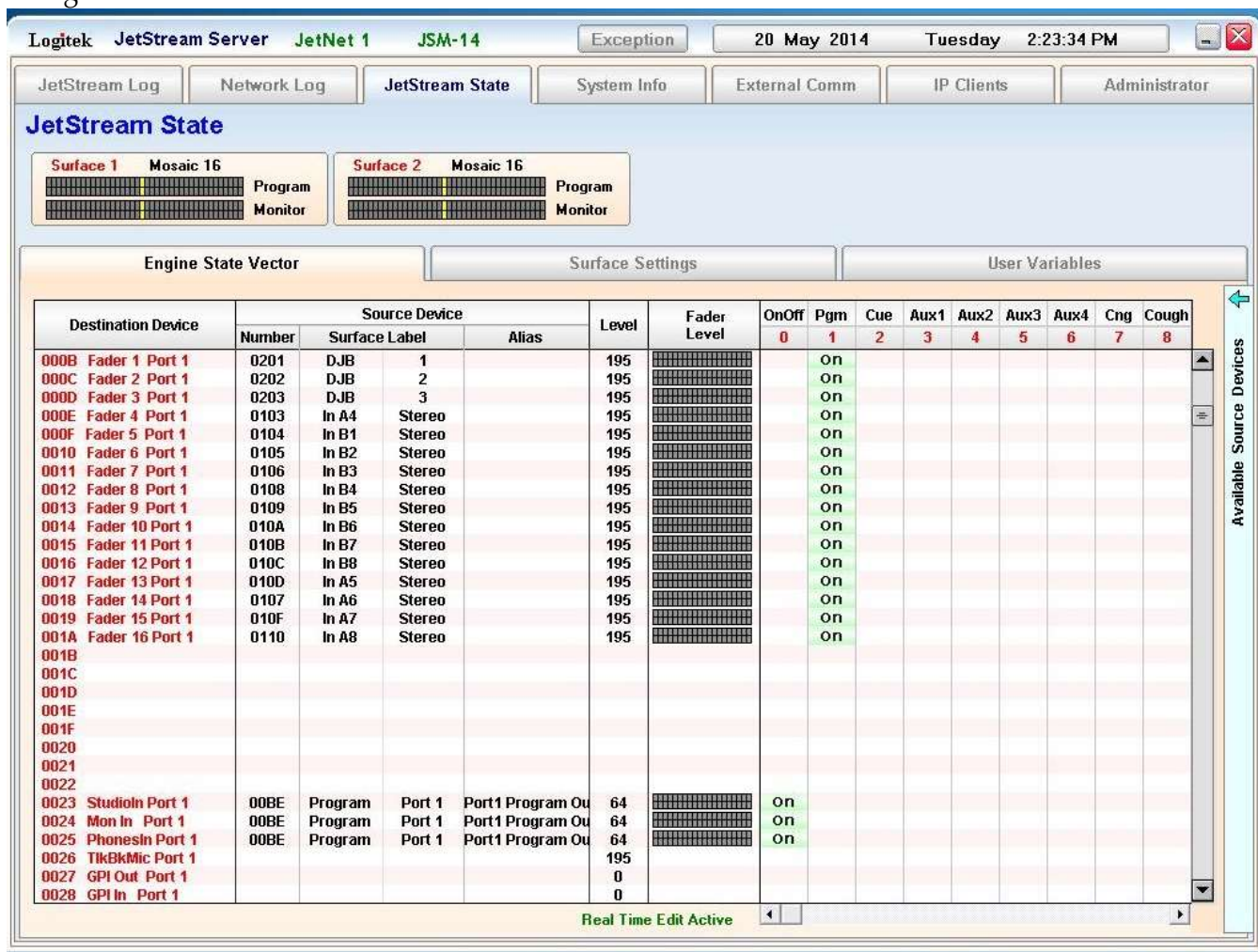
Used in troubleshooting by Logitek staff.

**The Presence Command 1++ button**

Used in troubleshooting by Logitek staff. This simulates the command that is sent when Server comes online for the first time.

## The JetStream State Page

This is a powerful page that lets you see exactly what the JetStream is doing and change what it is doing in real time.



Destination Device	Source Device			Level	Fader Level	OnOff	Pgm	Cue	Aux1	Aux2	Aux3	Aux4	Cng	Cough
	Number	Surface Label	Alias											
000B Fader 1 Port 1	0201	DJB	1	195			On							
000C Fader 2 Port 1	0202	DJB	2	195			On							
000D Fader 3 Port 1	0203	DJB	3	195			On							
000E Fader 4 Port 1	0103	In A4	Stereo	195			On							
000F Fader 5 Port 1	0104	In B1	Stereo	195			On							
0010 Fader 6 Port 1	0105	In B2	Stereo	195			On							
0011 Fader 7 Port 1	0106	In B3	Stereo	195			On							
0012 Fader 8 Port 1	0108	In B4	Stereo	195			On							
0013 Fader 9 Port 1	0109	In B5	Stereo	195			On							
0014 Fader 10 Port 1	010A	In B6	Stereo	195			On							
0015 Fader 11 Port 1	010B	In B7	Stereo	195			On							
0016 Fader 12 Port 1	010C	In B8	Stereo	195			On							
0017 Fader 13 Port 1	010D	In A5	Stereo	195			On							
0018 Fader 14 Port 1	0107	In A6	Stereo	195			On							
0019 Fader 15 Port 1	010F	In A7	Stereo	195			On							
001A Fader 16 Port 1	0110	In A8	Stereo	195			On							
001B														
001C														
001D														
001E														
001F														
0020														
0021														
0022														
0023 StudioIn Port 1	00BE	Program	Port 1	Port1 Program Ou	64		On							
0024 Mon In Port 1	00BE	Program	Port 1	Port1 Program Ou	64		On							
0025 PhonesIn Port 1	00BE	Program	Port 1	Port1 Program Ou	64		On							
0026 TlkBkMic Port 1					195									
0027 GPI Out Port 1					0									
0028 GPI In Port 1					0									

### How to read the JetStream State Page

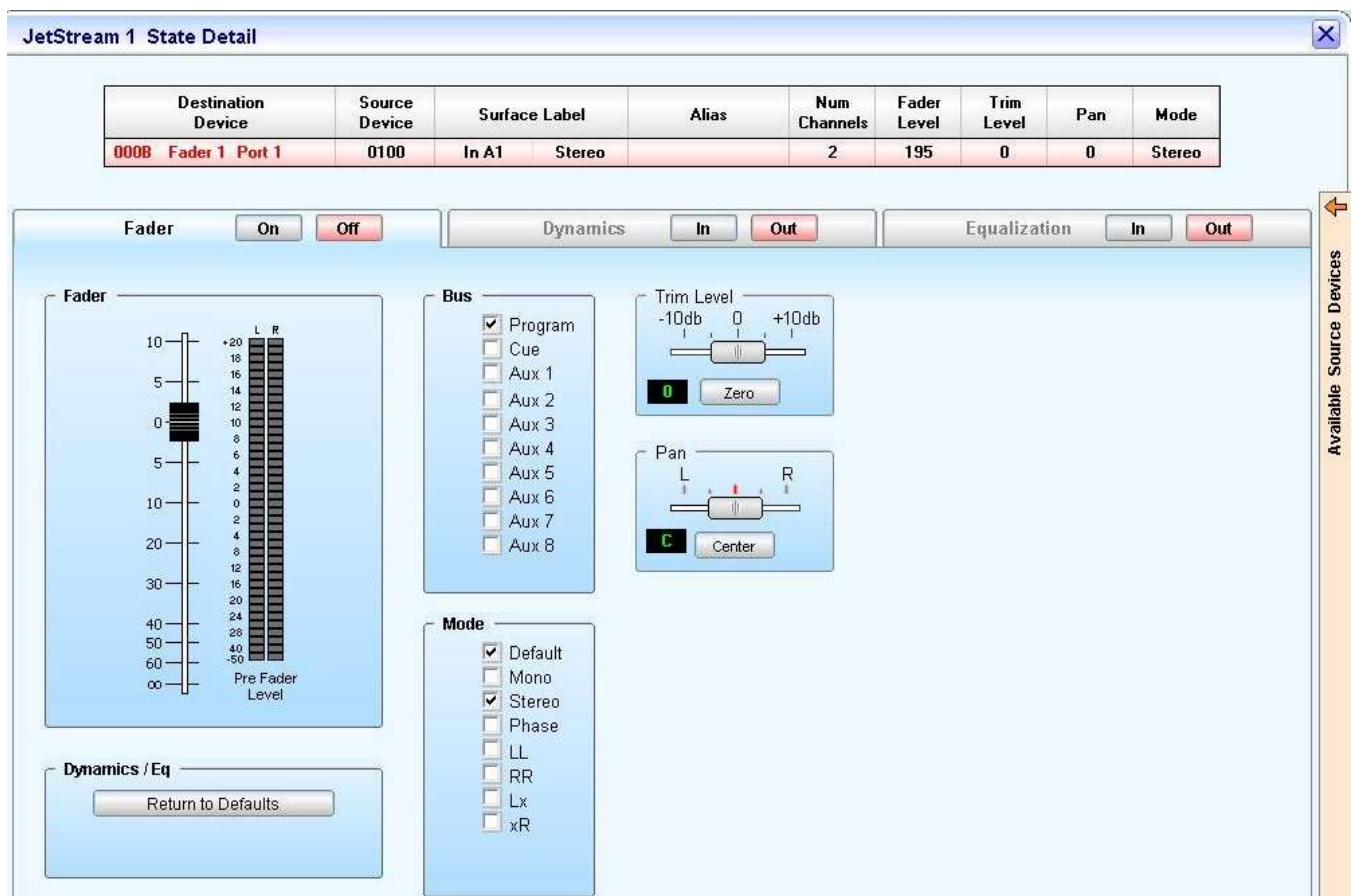
The Destination Device column lists the destinations on the JetStream in device number order. Generally speaking, the first surface (port 1) comes first, followed by ports 2, 3, and 4. The last set of devices in the list are the outputs assigned to the output cards on the frame.

The exact device numbers will vary with the firmware version your JetStream is running. If some ports are not defined in your configuration, expect to still scroll through a list of empty device numbers to get from port 1 to the outputs, as we reserve certain device numbers in case they are added later.

The columns under Source Device (number, surface label, alias) are filled in as sources are routed to destinations.

The level column shows the fader level for that destination. This level is from 0 – 255, with 195 being unity. If no console is currently connected, the level will default to 195 (or to the value set for that fader in JetSet). If a console is connected, the level shown will be current position of the fader. You can change a fader level from this screen by double-clicking the number in the box for the desired destination. This launches the State Detail Editor.

*The level function (and for that matter, bus assignments, EQ, dynamics, pre-fader meter etc) is valid only for the destinations tied to the consoles. When you get down to the destination devices for the physical outputs on the page, those connections are outside of the DSP's control. Therefore, the level will be zero and adjusting these controls will have no effect. The only thing you can do at the output stage is route something to the output.*



## The State Detail Editor

From this page, you can adjust the level by dragging the fader on screen. You can also change the mix bus assignment, mode, trim, and pan. Clicking on the tabs for dynamics and EQ will let you adjust those functions. All changes made in this editor are made in real time. Clicking the X will take you back to the state page.

## **The Pre-Fader Meter**

If the destination device supports a meter, Server will show a pre-fader meter in this column. Note that only console inputs and DSP crosspoints support meters.

## **The Bus 0 – 255 Grid**

This grid will show you which buses are turned on for each device. If a bus number has a function tied to it on the console, Server lists its function above the bus number. For example, bus 0 is the fader on/off switch; bus 1 is program, bus 2 is cue, and so on. This display will change in real time as the buttons are pressed on the console. Also, you can click in the appropriate box and turn a bus on or off from this page and it will turn the button mapped to that function on the console on or off in real time.

On some destinations, the function for the bus number will be different from what is written above the grid on the state page. For example, on the monitor and headphone in devices, turning on buses 1 and above are tied to different console and intercom functions. These functions are documented as part of Command Builder.

On output destinations (the outputs to the I/O cards) the buses have no defined purpose by the console or router and can be used as virtual switches in vMix+ and other Command Builder macros.

## **The Available Source Devices tab**

Hovering the mouse over the blue arrow on the Available Source Devices tab on the far right will make a list of sources pop out. These sources are mix buses created by the DSP, local inputs, and networked inputs.

The default view of this list is sorted by device number. To sort by surface label, double-click on the “Surface Label” heading. To change back to numeric sort, double-click on the “number” heading.

To retract the tab and make the bus grid visible again, hover the mouse pointer over the blue arrow.

## **Changing Routes In Real Time**

Click to highlight the desired Destination Device. This may be a local output or a console location such as a fader. The line will be highlighted in red. Then, with the available sources tab popped out, find the desired source and double-click it. The source will immediately be routed to the destination.

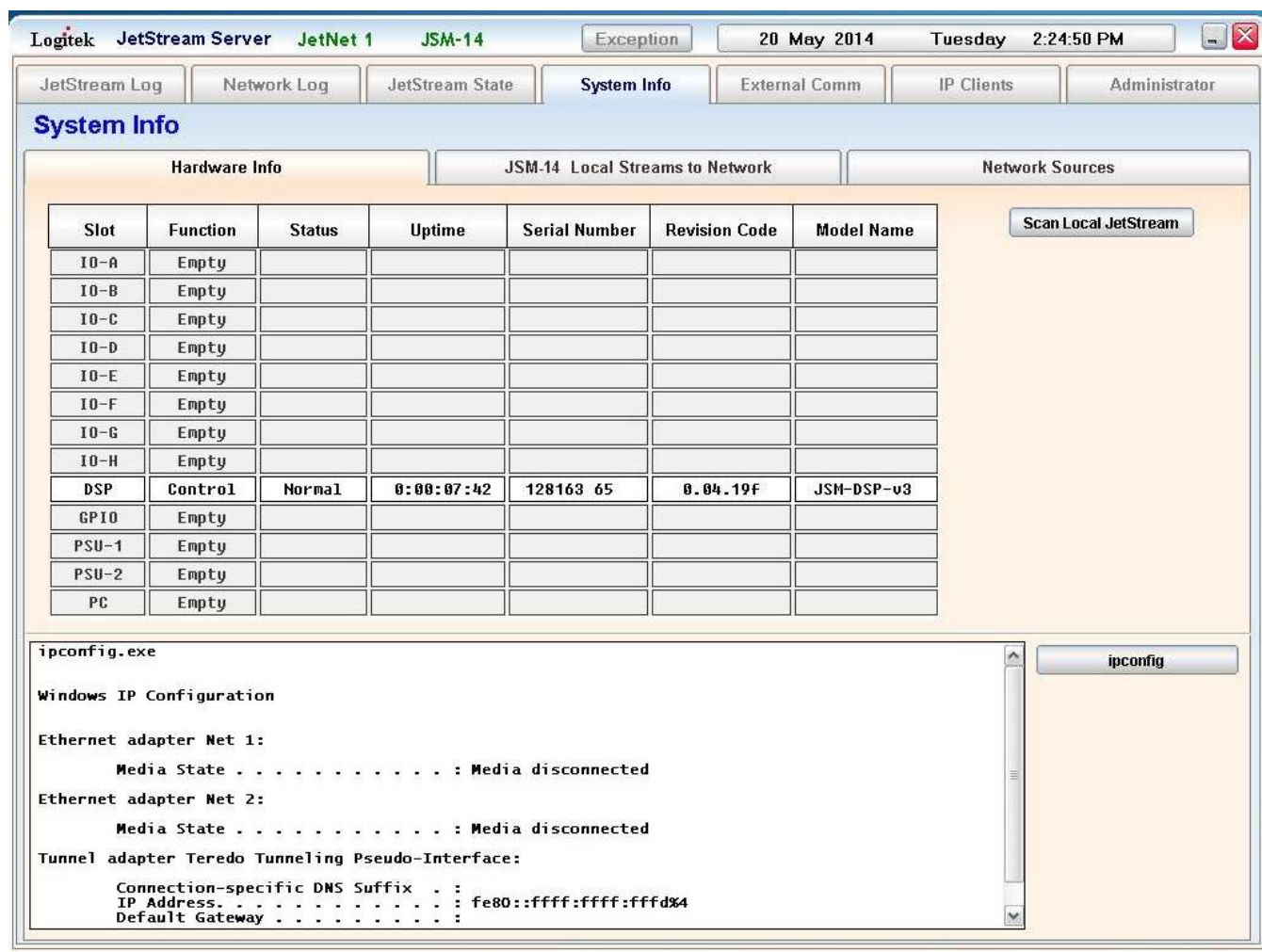
*Local Output Destinations do not have a DSP connection to drive a meter. Server will draw a meter when you force a route in real time as described above, but since there is no DSP connection the meter will not show data. If audio is present, it will be sent to the local (I/O card) output; we just don't have a way of metering it in this location.*

---



## The System Info Page

There are three tabs on this page: Hardware Info, Local Streams, and Network Sources



The screenshot shows the Logitek JetStream Server interface. The top bar includes the Logitek logo, server name (JetStream Server), status (JetNet 1), and model (JSM-14). The main navigation bar has tabs for JetStream Log, Network Log, JetStream State, System Info (selected), External Comm, IP Clients, and Administrator. The System Info page has three sub-tabs: Hardware Info (selected), JSM-14 Local Streams to Network, and Network Sources. The Hardware Info tab displays a table of hardware components.

Slot	Function	Status	Uptime	Serial Number	Revision Code	Model Name
I0-A	Empty					
I0-B	Empty					
I0-C	Empty					
I0-D	Empty					
I0-E	Empty					
I0-F	Empty					
I0-G	Empty					
I0-H	Empty					
DSP	Control	Normal	0:00:07:42	128163 65	0.04.19f	JSM-DSP-v3
GPIO	Empty					
PSU-1	Empty					
PSU-2	Empty					
PC	Empty					

Below the table is a terminal window titled 'ipconfig.exe' showing Windows IP Configuration details. A 'Scan Local JetStream' button is located to the right of the table, and an 'ipconfig' button is located to the right of the terminal window.

```

ipconfig.exe
Windows IP Configuration

Ethernet adapter Net 1:

    Media State . . . . . : Media disconnected

Ethernet adapter Net 2:

    Media State . . . . . : Media disconnected

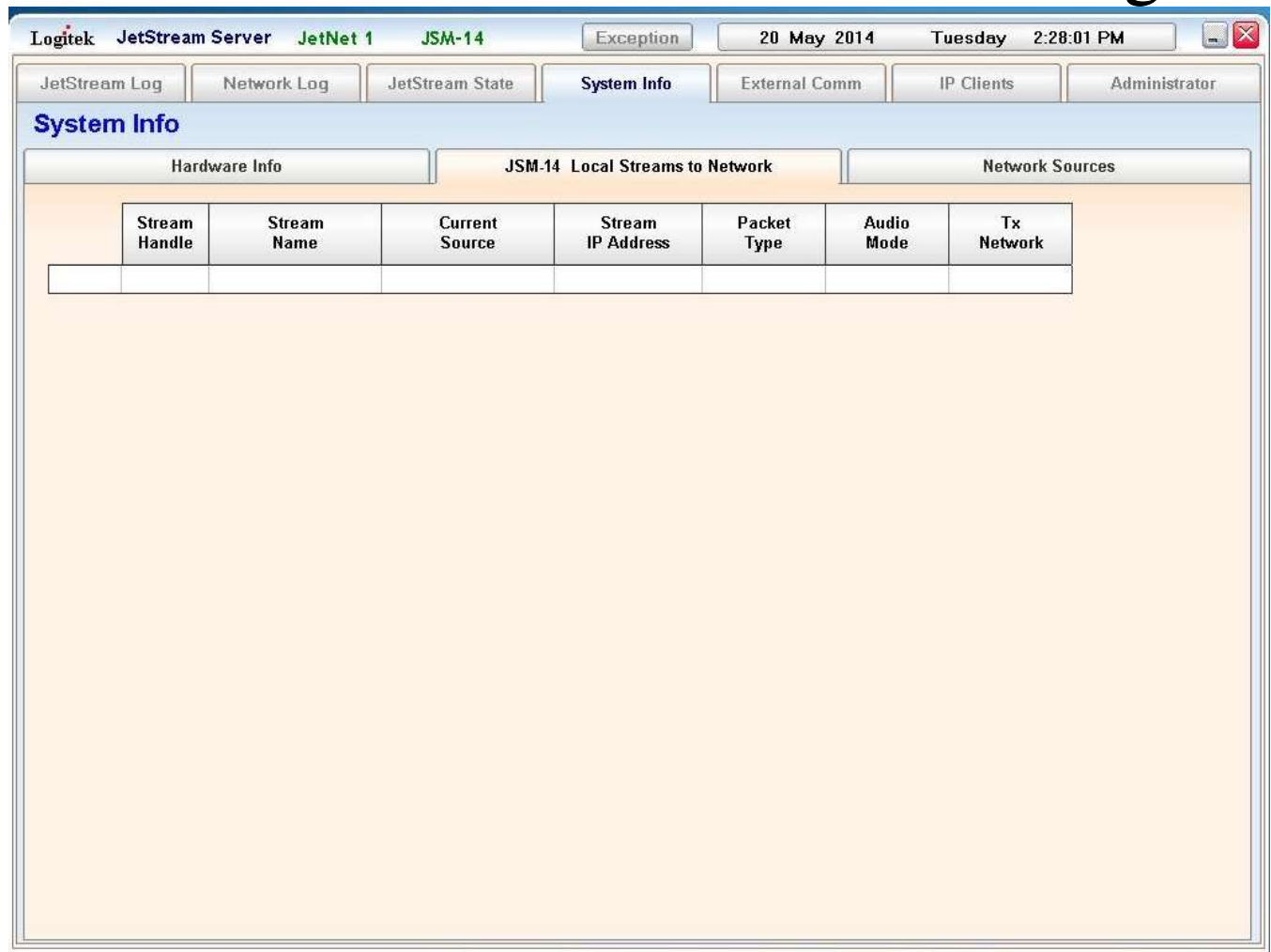
Tunnel adapter Teredo Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix  : 
    IP Address. . . . . : fe80::ffff:ffff:ffffd%4
    Default Gateway . . . . . :
  
```

### Hardware Info

This tab lists the I/O cards installed in the JetStream frame, their serial numbers, and the software revision number. To refresh the list, click the Scan Local JetStream button.





## Local Streams To Network

This tab lists the streams that are sent to the network by this particular JetStream, if any.

Logitek JetStream Server JetNet 1 JSM-14 Exception 20 May 2014 Tuesday 2:28:43 PM

JetStream Log Network Log JetStream State System Info External Comm IP Clients Administrator

### System Info

Hardware Info JSM-14 Local Streams to Network Network Sources

Right click on stream to set features

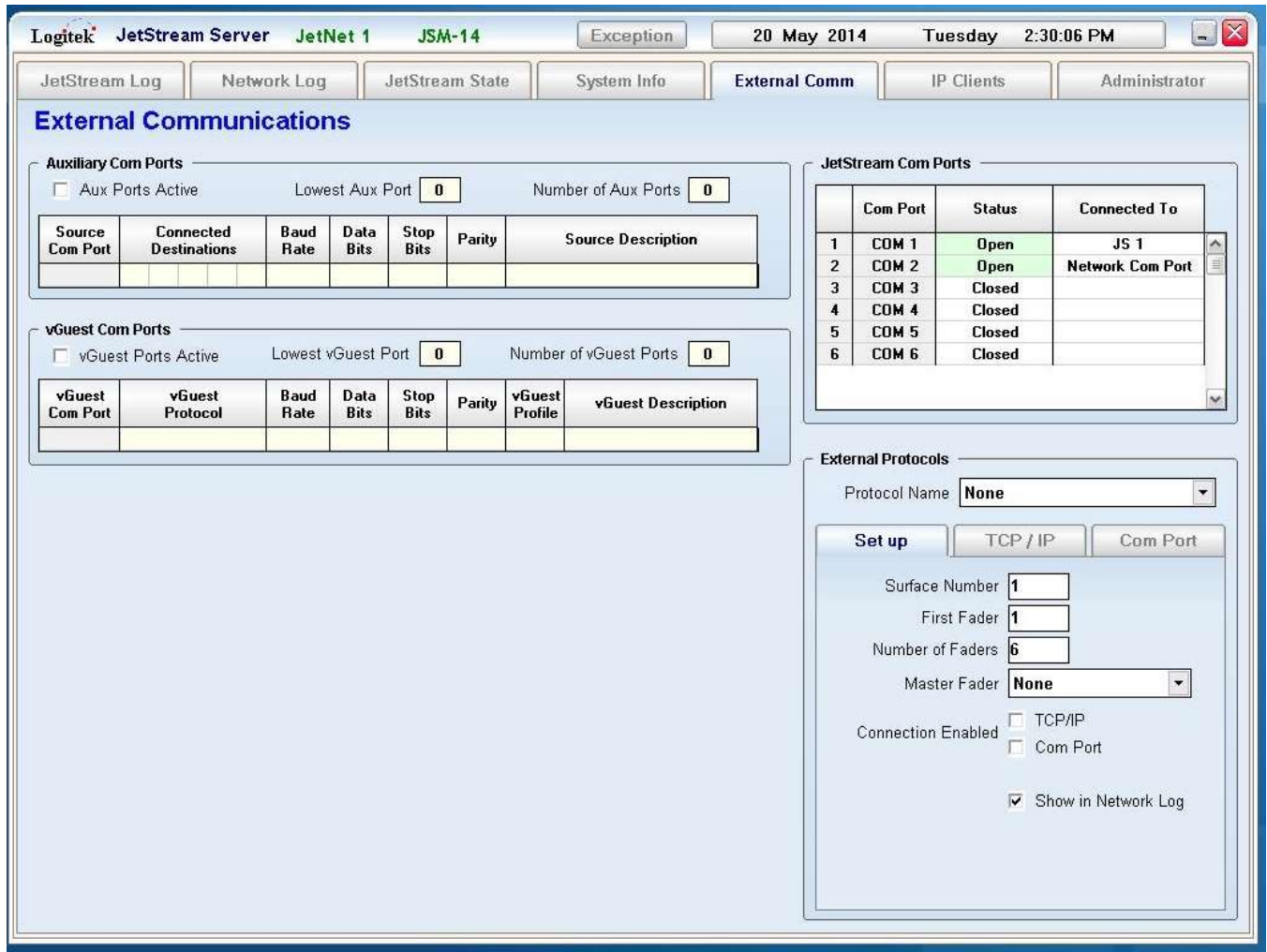
	Stream Handle	Stream Name	Stream Source	Source Type	Stream IP Address	Rx Network	Packet Type	Audio Mode	First Connect	Latest Update
1	0200	ENCO DAD 1		WIN	239.193.10.1	Net 1	stereo	slow	17 Feb 2014	17 Feb 2014
2	0201	DJB 1		WIN	239.193.13.1	Net 1	stereo	slow	17 March 2014	18 March 2014
3	0202	DJB 2		WIN	239.193.13.2	Net 1	stereo	slow	17 March 2014	18 March 2014
4	0203	DJB 3		WIN	239.193.13.3	Net 1	stereo	slow	17 March 2014	18 March 2014
5	0205	Quiet Music		WIN	239.193.11.1	Net 1	stereo	slow	17 Feb 2014	17 Feb 2014
6	0206	Audio Editor		WIN	239.193.11.2	Net 1	stereo	slow	17 Feb 2014	17 Feb 2014

## Network Sources

This tab shows the streams that this JetStream is receiving from other devices. Items in red are from JetStream devices that have not answered a ping from this JetStream and may not be currently available. Items in black are from devices that have recently answered a ping. If a stream does not check in for one week, Server will clear them from the list.

## The External Communications Page

This page is used to make guest connections via IP and serial to automation systems and other devices



**Logitek JetStream Server JetNet 1 JSM-14** Exception 20 May 2014 Tuesday 2:30:06 PM

JetStream Log Network Log JetStream State System Info **External Comm** IP Clients Administrator

### External Communications

**Auxiliary Com Ports**

☐ Aux Ports Active Lowest Aux Port  Number of Aux Ports

Source Com Port	Connected Destinations	Baud Rate	Data Bits	Stop Bits	Parity	Source Description

**vGuest Com Ports**

☐ vGuest Ports Active Lowest vGuest Port  Number of vGuest Ports

vGuest Com Port	vGuest Protocol	Baud Rate	Data Bits	Stop Bits	Parity	vGuest Profile	vGuest Description

**JetStream Com Ports**

	Com Port	Status	Connected To
1	COM 1	Open	JS 1
2	COM 2	Open	Network Com Port
3	COM 3	Closed	
4	COM 4	Closed	
5	COM 5	Closed	
6	COM 6	Closed	

**External Protocols**

Protocol Name **None**

**Set up** TCP / IP Com Port

Surface Number

First Fader

Number of Faders

Master Fader **None**

Connection Enabled ☐ TCP/IP ☐ Com Port

☒ Show in Network Log

### Auxiliary Com Ports

This is a legacy feature brought in from the Audio Engine Supervisor system for backward compatibility. Aux COM ports are used to send text out a serial port through a macro from Command Builder. To use an Aux port, enter the first Aux port number in the Lowest Aux Port box and enter the number of aux ports that will follow in the Number of Aux Ports box. (i.e. for one port, put a 1 in the box, if 3 ports will be used, put a 3 in the box. This will then populate the list of ports below; right-click on the port in the list to edit its baud rate, data bits, stop bits, and parity. Check the Aux Ports Active box to open the ports and make them ready for Server to use them.

## vGuest Com Ports

This is a legacy feature brought in from the Audio Engine Supervisor for backward compatibility. Automation systems that use the Logitek LP2 protocol make a vGuest connection. To set one up, enter the first COM port being used by vGuest in the Lowest vGuest Port box and then enter the number of ports being used. This populates the list of vGuest ports; right-click to edit the port settings. You must specify a vGuest profile number and set up a vGuest profile on the Administrator page to tell server what sources or destinations are permitted to be used by vGuest. Check the vGuest Ports Active box to open the ports and make them ready for use.

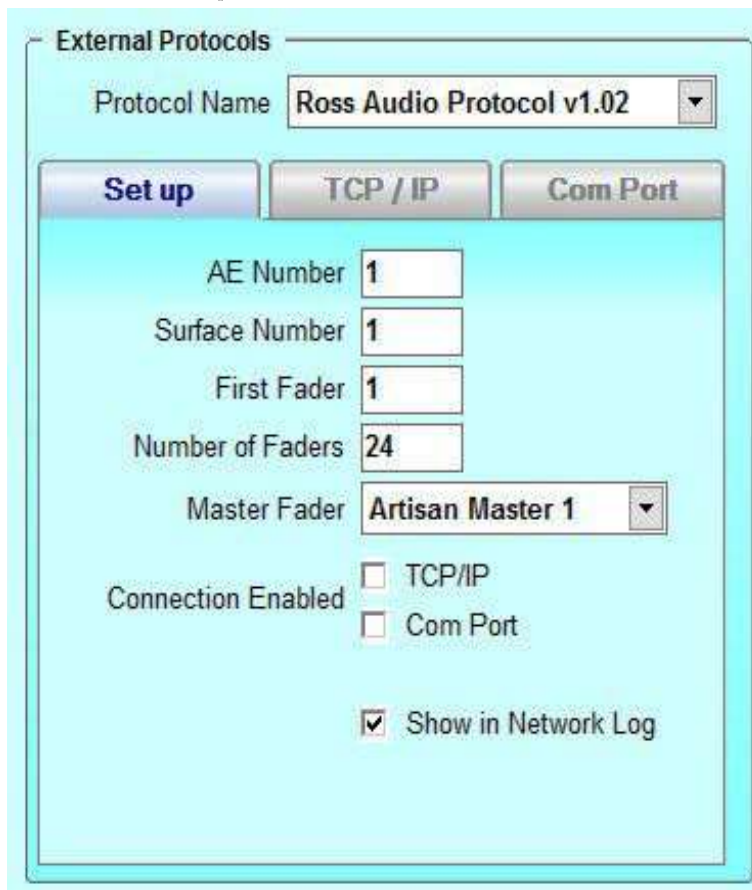
## JetStream Com Ports

This is a list of the COM ports being used by JetStream Server. You cannot edit this list; it displays what ports are available, whether they are open or closed, and what they are being used for.

## External Protocols

Used to set up connections via serial or TCP/IP to automation systems such as Sony ELC and Ross Overdrive.

## How To Set Up Ross Overdrive



The screenshot shows the 'External Protocols' dialog box with the 'Ross Audio Protocol v1.02' selected. The 'Set up' tab is active. The fields are as follows:

- Protocol Name: Ross Audio Protocol v1.02
- AE Number: 1
- Surface Number: 1
- First Fader: 1
- Number of Faders: 24
- Master Fader: Artisan Master 1
- Connection Enabled:
  - ☐ TCP/IP
  - ☐ Com Port
- ☒ Show in Network Log

1. Set the protocol to Ross Audio Protocol v1.02
2. On the Setup tab, define the surface by entering the surface number, the first fader number Ross is to control, and the number of faders that Ross is to control. Define the Master Fader; on Artisan consoles, choose either Artisan Master 1 or Artisan Master 2. On all other faders, choose Mosaic Route 1. Or, if no master fader control is desired, choose None.

The Show in Network Log box tells Server to log incoming data. This is helpful for troubleshooting.

3. Now connect Logitek to Ross. Click the TCP/IP tab and enter the IP address and port number of the Vision Switcher. Leave the Computer Name field blank.
4. Now make it active. Go back to the Setup tab and check TCP/IP Connection Enabled.

---

## How To Set Up Sony ELC.

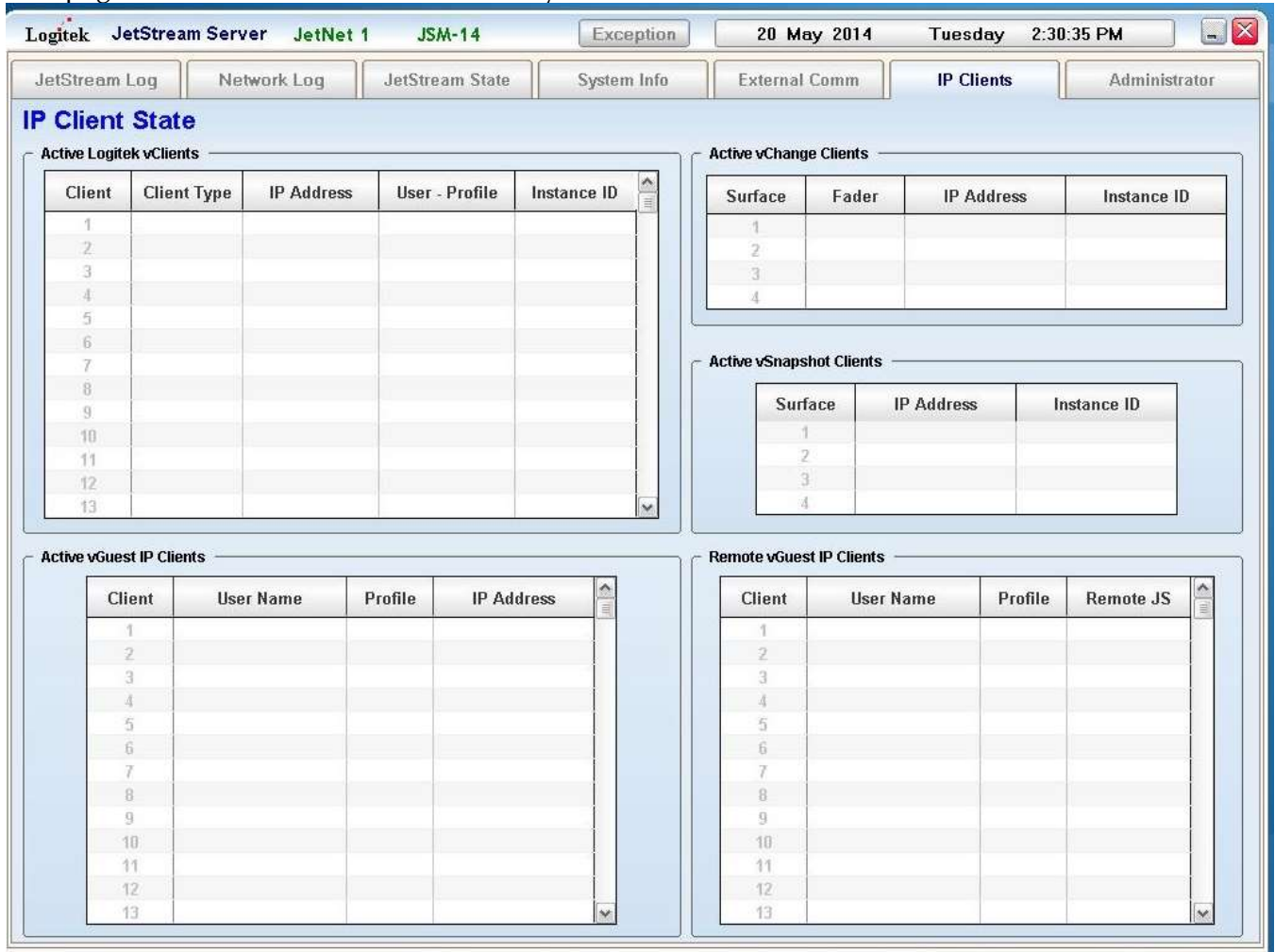
1. Set the protocol to Sony ELC.
2. On the Setup tab, define the surface by entering the surface number, the first fader number Sony is to control, and the number of faders that Sony is to control. Define the Master Fader; on Artisan consoles, choose either Artisan Master 1 or Artisan Master 2. On all other faders, choose Mosaic Route 1. Or, if no master fader control is desired, choose None.

The Show in Network Log box tells Server to log incoming data. This is helpful for troubleshooting.

3. Now connect Logitek to ELC. Click the TCP/IP tab and enter the IP address and port number of the Sony system. Leave the Computer Name field blank.
4. Now make it active. Go back to the Setup tab and check TCP/IP Connection Enabled.

## The IP Client State Page

This page lists which IP Clients are currently connected to Server.



**Logitek JetStream Server JetNet 1 JSM-14** Exception 20 May 2014 Tuesday 2:30:35 PM

JetStream Log Network Log JetStream State System Info External Comm **IP Clients** Administrator

### IP Client State

**Active Logitek vClients**

Client	Client Type	IP Address	User - Profile	Instance ID
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

**Active vChange Clients**

Surface	Fader	IP Address	Instance ID
1			
2			
3			
4			

**Active vSnapshot Clients**

Surface	IP Address	Instance ID
1		
2		
3		
4		

**Active vGuest IP Clients**

Client	User Name	Profile	IP Address
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

**Remote vGuest IP Clients**

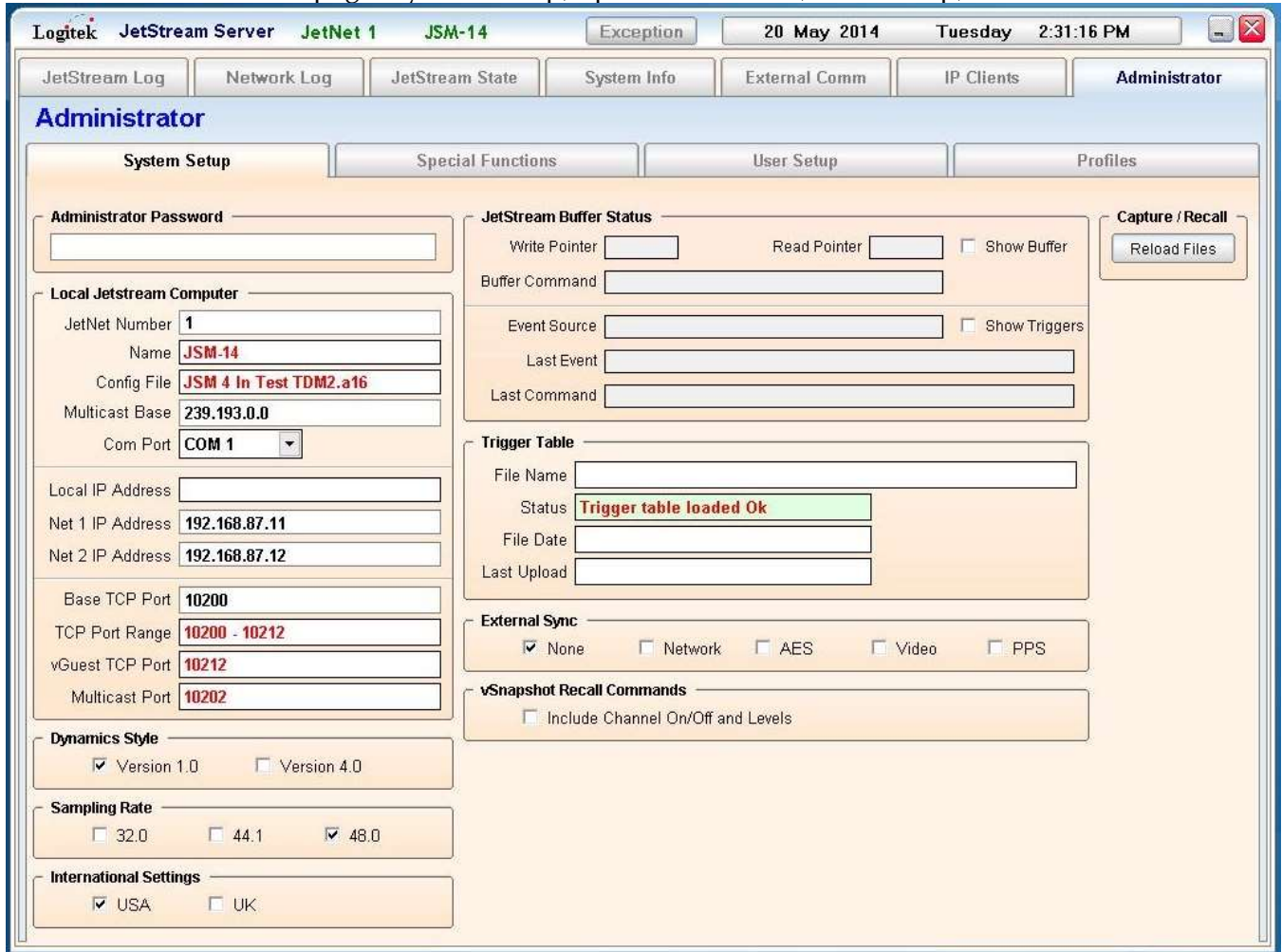
Client	User Name	Profile	Remote JS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

This page is for informational purposes and troubleshooting only; there is nothing to adjust on this page.



## The Administrator Page

There are 4 tabs on this page: System Setup, Special Functions, User Setup, and Profiles



## The System Setup Tab

### Administrator Password

Normally left blank. If a password is entered in this field, this page will become password protected. However this is not very secure, as it is stored in clear text within the registry.

### Local JetStream Computer

Here you define the JetStream Number (a unique identifier for the device between 1 and 255). If this number is changed, tab out of this field and close and restart Server for the change to take effect.

The computer name is taken from the embedded PC's computer name as set in Windows.

Multicast Base is the base address used by the multicast system. Most customers should keep the default 239.193.0.0 address, but if the addresses used by JetStream conflict with other AoIP or multicast equipment it may be adjusted.

---

*The range 239.0.0.0 – 239.255.255.255 is considered an Administratively Scoped Block and is reserved for private use by the IANA so it will not conflict with any public networks. In most cases JetStreams will not conflict with other AoIP equipment on your LAN, but in large corporate environments the potential to conflict with videoconferencing and other equipment exists if we both happen to choose the same addresses. Generally speaking, Logitek devices operate as 239.193.jn.sn (where jn = the JetNet number set above and sn is the stream number that is assigned by the software) and 239.193.0.0 is used as the “announce channel” for the JetStreams to announce streams and changes to each other. If our addresses will conflict with something else on your network, contact support and we will help you choose the correct base address.*

---

The COM port is the port used for Server to talk to the DSP. The default is COM 1 for all JetStreams.

The Local IP Address is the Admin Net address; if no network cable is plugged in this will be blank. If you need to adjust this address you cannot adjust it here; change this in Windows. The Admin Net port is set to get an address automatically via DHCP by default.

Net IP Address 1 and 2: the IP Address of the NIC for Audio Net 1 and Audio Net 2. You can adjust this address here in Server. We recommend using a unique address for each NIC.

Base TCP Port: this is the base TCP port used by all Logitek applications. The default is 10200. Change this only if it conflicts with something else on your network. If the base is changed here, all other Logitek devices will need to be adjusted accordingly.

## Sampling Rate

This is the sample rate that the JetStream will use for networking as well as what it will use for its outputs. If SR converters are turned on at the inputs, they will resample to this rate.

## International Settings

Chooses the metering standard and default behavior of the console. UK customers used to doing things the British way with UK model consoles should check the UK box. Customers in other countries should check the US box.



---

USA: Zero is -20 dbFS. Unity gain is -10. On/Off switches control bus 0. Metering is a mix of average and PPM.

UK: Unity gain is full scale. Fader start controls bus 0. On switch turns on machine start (bus 15). Off switch engages PFL (bus 2). Metering is PPM (peak) only.

## **External Sync**

Chooses how this JetStream will lock its sample rate clock.

None: Does not rate-lock; operates on its internal sample rate clock only

Network: rate locks to the master across the LAN

AES: Locks to AES silence on the Ext. Sync input

Video: Tri-level sync on the BNC Video Sync input

Word Clock: Word clock on the BNC Video Sync Input

PPS: Pulse per second sync from a GPS clock

## **JetStream Buffer Status**

Used in troubleshooting to make sure the circular buffers that process commands are running. If Show Buffer is checked and the console is operating and passing metering data, the read/write buffers will scroll very quickly. If the buffer is not processing commands, one or both of the pointers will be stuck. The trigger section operates the same way showing the processing of macros loaded into the system from Command Builder. We recommend leaving these boxes unchecked. If you do turn them on, immediately turn them off after you have verified operation.

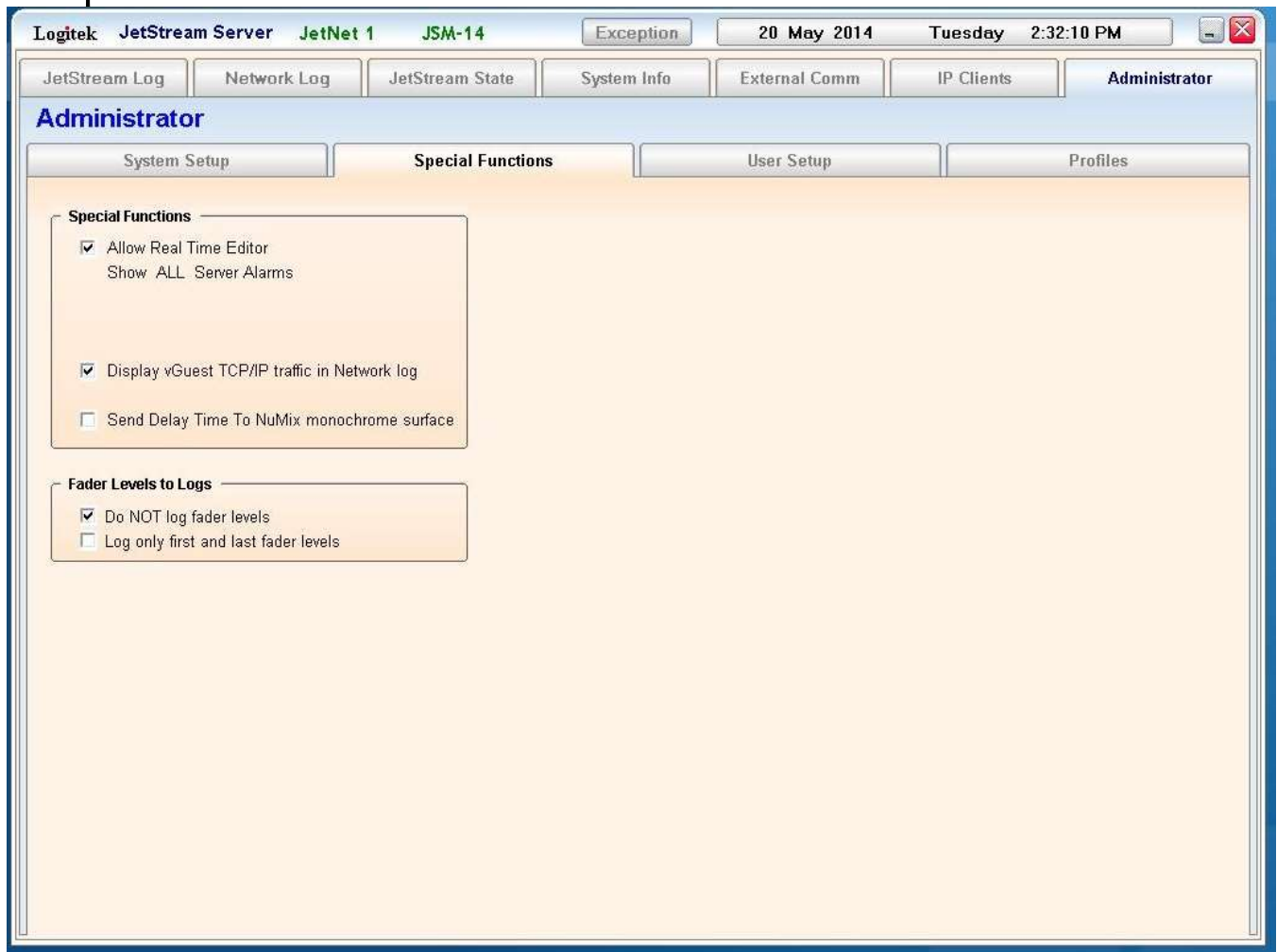
## **Trigger Table**

Displays the file name, date, and last upload of the trigger table from Command Builder.

## **vSnapshot Recall Commands**

If checked, vSnapshot will include fader levels and channel on/off commands when the snapshot is recalled. If unchecked, we ignore the fader level and channel on/off commands captured but process the routes, bus assignments, eq, dynamics, etc.

## The Special Functions Tab



### Allow Real Time Editor

Turned on by default. When on, enables user to make changes in real time on the JetStream State page. If unchecked, user will not be able to change levels, make routes, or turn buses on and off.

### Display vGuest TCP/IP traffic in Network Log

Turned on by default. Logs all vGuest traffic in Network Log. Useful for troubleshooting. Uncheck if the network log file is becoming too big.

### Send Delay Time to NuMix monochrome surface

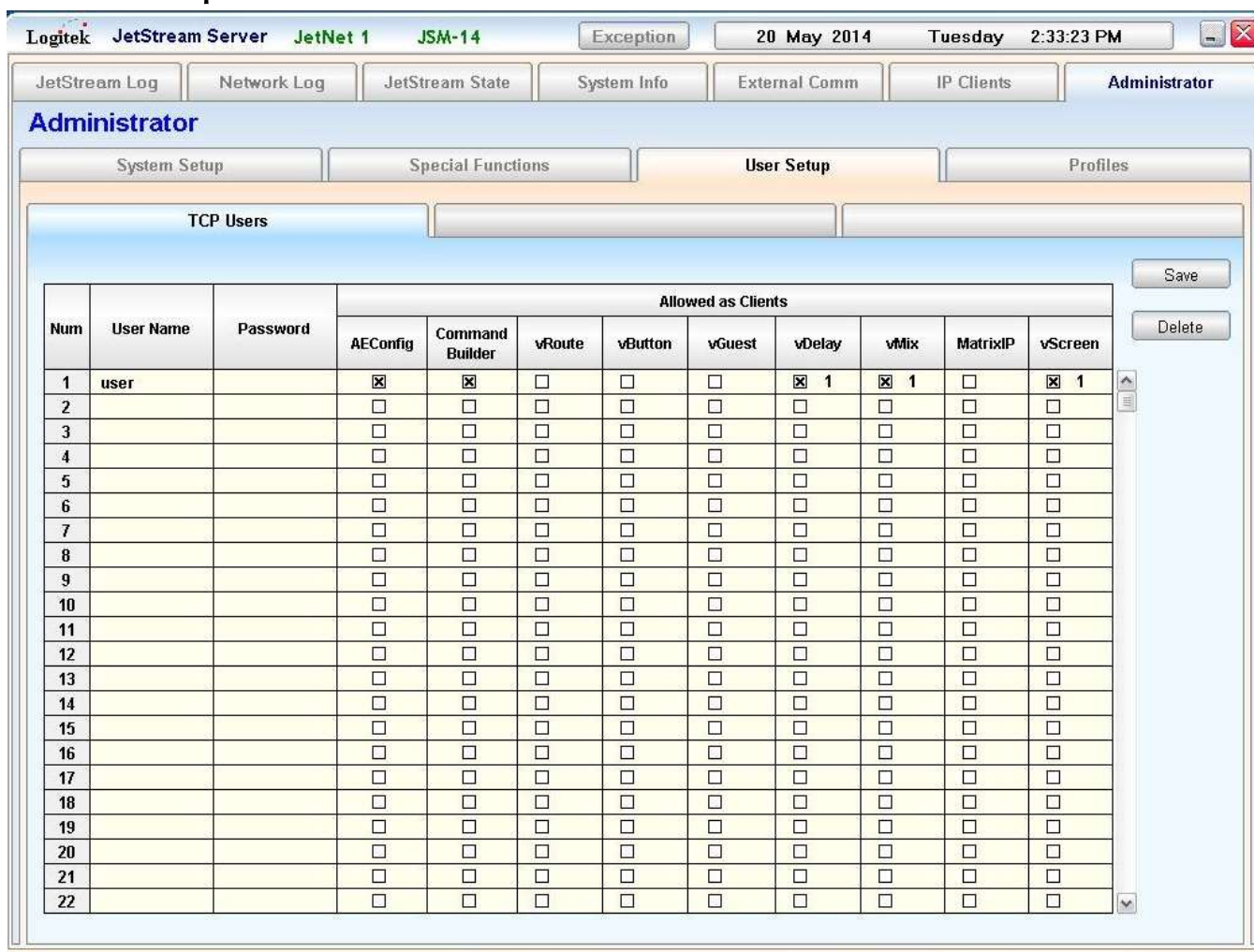
Turned off by default. The monochrome NuMix isn't compatible with the JetStream, so this really won't make much of a difference.

### Fader Levels to Logs

By default, we check "Do NOT log any fader levels." If you do need to log them, we offer a "Log only first and last fader levels" which will capture the starting and ending position when an operator

moves a fader. Logging fader levels can lead to very large JetStream logs, so we recommend logging fader levels only when necessary and turning it off right away after you've determined what you need.

## The User Setup Tab



Logitek JetStream Server JetNet 1 JSM-14 Exception 20 May 2014 Tuesday 2:33:23 PM

JetStream Log Network Log JetStream State System Info External Comm IP Clients Administrator

Administrator

System Setup Special Functions User Setup Profiles

TCP Users

Num	User Name	Password	Allowed as Clients								
			AEConfig	Command Builder	vRoute	vButton	vGuest	vDelay	vMix	MatrixIP	vScreen
1	user		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1
2			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Save Delete

This tab assigns rights to the user to Logitek software clients.

As Server evolves, AE Config, vRoute, vButton, vDelay, vMix, and MatrixIP will be removed. vScreen becomes vMix+ and Command Builder and vGuest remain.

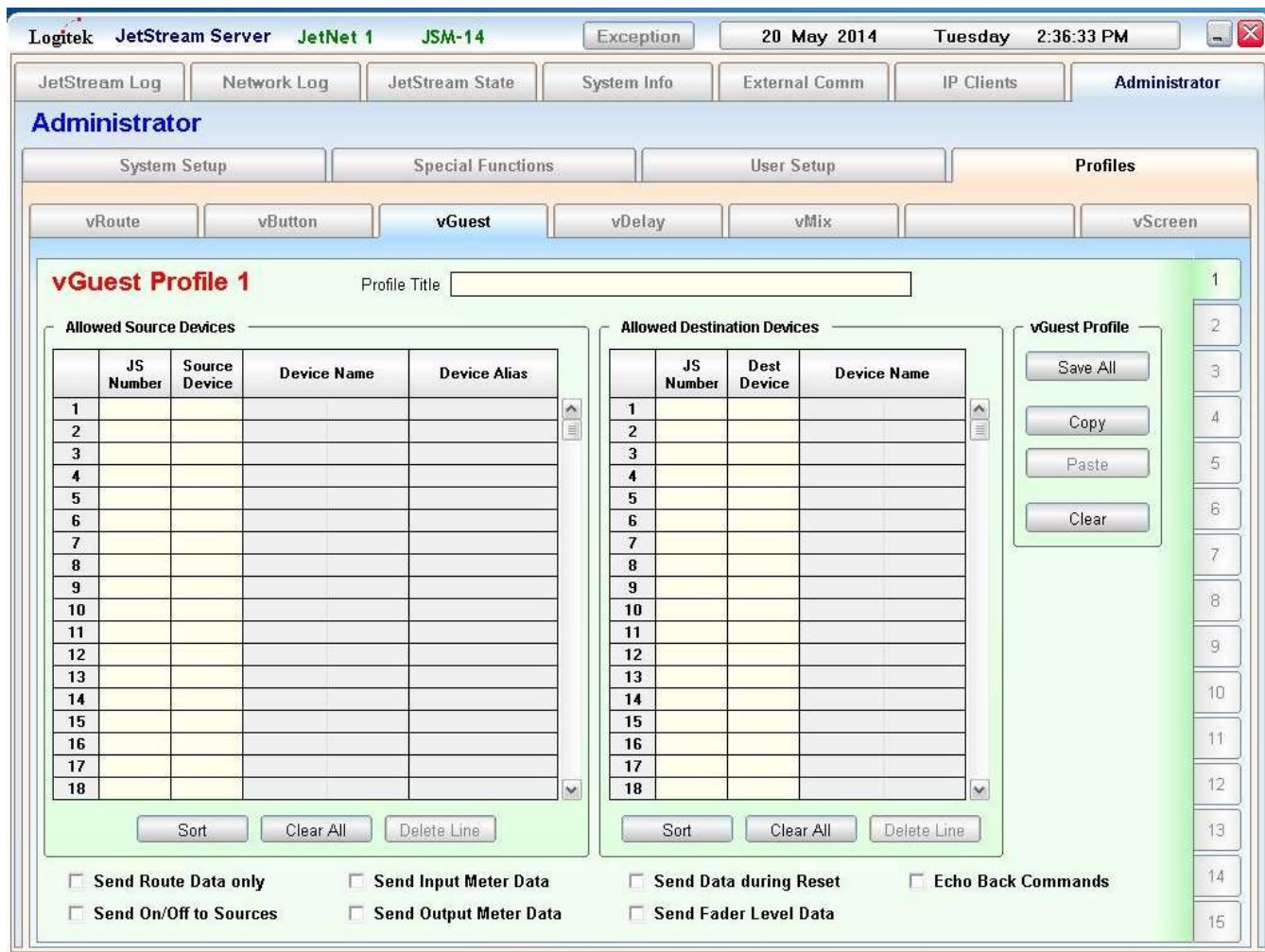
For vMix+ and vGuest, entering a profile number ties the username to a profile as set up on the Profiles tab.

The default user is "user" with no password.

It is permissible to have the username repeated more than once as long as the password is unique on each entry.

## The Profiles Tab

Note: The vRoute, vButton, vDelay, and vMix programs are being replaced by vMix+. The vScreen tab will be renamed vMix+. Therefore, this tab may appear different on your system.



The screenshot shows the Logitek JetStream Server Administrator interface. The top bar includes the Logitek logo, JetStream Server, JetNet 1, JSM-14, an Exception button, and the date/time: 20 May 2014, Tuesday, 2:36:33 PM. Below this is a navigation bar with tabs: JetStream Log, Network Log, JetStream State, System Info, External Comm, IP Clients, and Administrator. The Administrator tab is active, showing sub-tabs: System Setup, Special Functions, User Setup, and Profiles. The Profiles tab is selected, showing sub-tabs: vRoute, vButton, vGuest, vDelay, vMix, and vScreen. The vGuest sub-tab is active, displaying the 'vGuest Profile 1' configuration window. This window has a 'Profile Title' field and two main sections: 'Allowed Source Devices' and 'Allowed Destination Devices'. Each section contains a table with columns for JS Number, Source Device, Device Name, and Device Alias. Below these tables are buttons for 'Sort', 'Clear All', and 'Delete Line'. To the right of these tables are buttons for 'Save All', 'Copy', 'Paste', and 'Clear'. At the bottom of the window are several checkboxes: 'Send Route Data only', 'Send Input Meter Data', 'Send Data during Reset', 'Echo Back Commands', 'Send On/Off to Sources', 'Send Output Meter Data', and 'Send Fader Level Data'. A vertical list of numbers 1 through 15 is on the far right.

## The vGuest Profile

Fill in allowed source devices on the left or allowed destination devices on the right. Device addresses that do not match the allowed sources are filtered out. It is recommended to either use sources or destinations but not both.

### Profile Title

Enter a Profile Title that describes the purpose of this vGuest. This is not necessary for correct operation, however, it is provided to assist in quickly determining the function of the vGuest Profile.

The vGuest profile works in the same fashion for IP vGuest clients as the vGuest serial.

On the left, enter the Engine Number and Device Number for Allowed Source Devices. Server

will automatically fill in the Device Name and Alias fields. On the right, enter the JS Number and Device Number for Allowed Destination Devices. Supervisor will automatically fill in the Device Name and Alias fields. [Note: you may only use the JS number for the unit you are working on.]

There is a common misconception that all sources to be used by vGuest must be entered into the source side and all destinations used by vGuest must be entered into the destination side. This is not necessarily the case. Rather, these lists represent two different modes of operation. It is possible to use both modes of operation at the same time, but only with great care.

### **Mode 1 - Allowed Source Devices**

When a source is listed in this section, the JetStream will report to the vGuest client any time an JetStream command involving that source occurs.

---

*The device numbers in the following examples may differ greatly from valid device numbers in the JetStream; this documentation is being adopted from the AE-32 Audio Engine where vGuest originated. Use the examples to understand the concept, but use the device numbers that match with your system.*

---

#### **Example:**

An automation computer is device0100. Anytime a fader with device 0100 routed to it is turned on, an on command is reported back to vGuest in order to trigger a play command on the computer.

In this scenario, the following three sources are assigned in the grid under Allowed Source Devices:

device0100 - Automation 1  
device0101 - Automation 2  
device0102 - Automation 3

When device0100 is routed to fader1 on surface1, Serverr sends a 54 (route) command out the vGuest port to the automation computer, showing that device0100 was routed to device000B on surface1.

Most automation systems ignore this, however, when that fader is turned on, Server sends a 52 (bus on) command stating that device0100 bus0 is on. Automation systems with a Logitek interface will take that command and use it to start playing the cut. Likewise, when the fader is

turned off, Server sends a 53 (bus off) command stating that device0100 bus 0 is off. If the automation system is set to act on this, it could stop playing the cut.

No matter what fader device0100 is routed to, a bus on command will send the 52 command for device 0100 and a bus off command will send a 53 command for 0100. This enables the operator to route the automation computer to any fader on the console and still have the remote starts follow. In this scenario, the other two payout cards would follow for device0101 and device0102.

## **Mode 2 - Allowed Destination Devices**

When a destination is listed in this section, the vGuest client can route any source to that destination.

The automation system can then, by sending a command via vGuest, execute a route command to send any source to the destinations listed in the Allowed Destination Device list. In addition to this, the automation system can send bus on and bus off commands to those destinations via vGuest and Server will send any bus on/off commands performed by the surface or triggers that involve those destinations, back to the automation system via vGuest. Any destinations not specified in the Allowed Destination Devices list are filtered out.

Example:

In this scenario, the following five destinations are assigned in the grid under Allowed Destination Devices:

- device000B - Fader 1
- device000C - Fader 2
- device000D - Fader 3
- device006E - Output to Transmitter
- device006F - Output to Recorder

The automation system can then send a command to route any source to faders 1, 2, or 3, as well as any source to the Transmitter and a Recorder. When faders 1, 2, or 3 are turned on or off, the information is returned back to the automation computer. Bus on/off commands are turned on and off on the outputs (6E and 6F) when 52/53 commands are issued. As those outputs do not have any assigned bus commands in the JetStream, it is possible to use those busses as virtual GPIs to keep track of tallies within their automation system.

The automation system can also send text commands to the faders to print text on the consoles if the faders are included in the Allowed Destination Devices list.



---

## Mode 1 & 2 - Using Both Modes

Using both modes is complex, but possible.

Example 1:

When device0100 is routed to device000B (Fader 1), Server reports that device0100 has been routed to device000B. When the fader is turned on, Server reports a 52 command for both device0100 and device000B. When these double commands are issued, it is very easy to introduce circular logic and therefore problems.

For best stability, do not route items in the source list to the destination list. This avoids having duplicate commands sent back to your automation system.

When using both modes simultaneously, it is strongly recommended to do some prior planning around what needs to be accomplished. When remote starts for automation when live are required, only items in the Allowed Source Devices are required.

If remote starts for automation and the ability to route automation directly to transmission are required, the following example may be of assistance.

Example 2:

Allowed Source Devices

device0100 - Automation 1

device0101 - Automation 2

device0102 - Automation 3

Allowed Destination Devices

device006E - output to transmission

Devices in input settings but not in the vGuest profile

device0103 - duplicate of Automation 1 (same input pins) - not assigned to surface

device0104 - duplicate of Automation 2 (same input pins) - not assigned to surface

device0105 - duplicate of Automation 3 (same input pins) - not assigned to surface

When routing macros, it is best to configure the automation system to route the duplicate inputs to transmission. This allows remote starts while live, routing when automated, and no duplicate messages.

### vGuest Available Commands

vGuest will process only the following subset of Logitek Protocol v2 (LP2) commands for vGuests:



51H 81 Relay Pulse  
52H 82 Turn On  
53H 83 Turn Off  
54H 84 Input Assign  
55H 85 Input Mode  
56H 86 Fader Level  
5CH 92 Write Text

Any communications from non-registered vGuests are ignored by Supervisor. All allowed commands must follow the LP2 command structure exactly.

Commands from registered vGuests will be processed only if their Destination Device number is in the sending vGuest profile. Destination Device numbers greater than or equal to the lowest allowed input device number must be one of the Device numbers in the Allowed Source Devices list. The location of these Device numbers can be limited to a specified surface if that surface number is given in the command.

Using surface number equal to 0 will cause all surfaces to be checked for the Device number. Destination Devices in the range of reserved console buses must be one of the DSP channels in the Allowed Destination Devices list.

Commands from the Engine or Triggers from Server will be sent to a vGuest only if the command's Destination Device number is in that vGuest profile.

### **vGuest Commands**

**Following is the list of supported commands and the format for each command structure.**

**To build a command, lookup each byte in order (sequence #) adjusting the values where applicable. To be a valid command, the number of bytes to follow must be correct. Where a default**

**value is shown, this is for reference only and these byte values must still be set.**

**<00> denotes a byte in hex. All decimal values must be converted to hex.**

### **51h - Momentary Relay Closure**

Momentarily turns on selected relay. Duration can be specified in 50ms increments.

Seq Byte Description Notes

- 1 <02> Start byte
- 2 <07> Bytes to follow
- 3 <51> Command = Relay Pulse
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte

---

6 <d#> Device Number – Low Byte

7 <s#> Surface Number = 00 Always <00> for this command

8 <b#> Bus (Relay) Number <01> to <19> Number of relays depends on surface type

9 <dt> Data = Duration x 50ms <00> to <FF> Number of milliseconds in 50ms increments  
<00> = 500ms

The following example will momentarily close Relay 15 on the Engine 2 relay bank:

02 07 51 02 00 01 00 0F 00

The following example will momentarily close Relay 10 on the Engine 2 relay bank for 200ms:

02 07 51 02 00 01 00 0A 04

TIP: This command is only applicable to GPI Outputs (relays).

TIP: If the duration of the pulse is set to <00>, a 500ms pulse will be sent.

---

## 52h - Turn on

Turns the selected fader channel, bus, relay, switch or setting ON.

### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <06> Bytes to follow
- 3 <52> Command = Set On
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte
- 6 <d#> Device Number – Low Byte
- 7 <s#> Surface Number <00> to <03>
- 8 <b#> Bus Number <00> to <FF> See Bus Number reference list for common mix busses

The following example will turn on Engine 7, Surface 1, Fader 1 (device 00 0B):

```
02 06 52 07 00 0B 00 00
```

The following example will assign Engine 4, Surface 2, Fader 5 to the Aux1 bus:

```
02 06 52 04 00 37 00 03
```

□TIP: The main ON/OFF button (bus0) must also be set to ON as shown above for the audio to actually pass from the input device to the Aux1 output bus unless independent bus switching has been enabled.

The following example will turn on source “Hard Disk 1” on Engine 3, Surface 1. Hard Disk 1 has a .device number of <0123>:

```
02 06 52 03 01 23 01 00
```

The following example will close (turn on) Relay 9 on the Engine 2 relay bank:

```
02 06 52 02 00 01 00 09
```

---

### 53h - Turn off

Turns the selected fader channel, bus, relay, switch or setting OFF.

#### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <06> Bytes to follow
- 3 <53> Command = Set On
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte
- 6 <d#> Device Number – Low Byte
- 7 <s#> Surface Number <00> to <03>
- 8 <b#> Bus Number <00> to <FF> See Bus Number reference list for common mix busses

The following example will turn off the main bus (bus0) of Engine 3, Surface 3, Fader 4:

02 06 53 03 00 5E 00 00

### 54h – Input Assign

Assigns a physical, network or DSP source to a destination physical, network or DSP output.

#### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <08> Bytes to follow
- 3 <54> Command = Assign
- 4 <e#> AE Number – Dest
- 5 <d#> Dest Device – High Byte
- 6 <d#> Dest Device – Low Byte
- 7 <s#> Surface Number <00> to <03>
- 8 <e#> AE Number – Source Must match destination Engine Number above
- 9 <s#> Source Device – High <00> to <FF>
- 10 <s#> Source Device – Low <00> to <FF>

TIP: The engine number must be the same for the source and the destination.

The following example will assign source number <02 34> to destination <00 6E> on Engine 5:

02 08 54 05 00 6E 00 05 02 34

---

## 55h – Input Mode

Sets the mode on the selected channel fader.

### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <06> Bytes to follow
- 3 <55> Command = Mode
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte
- 6 <d#> Device Number – Low Byte
- 7 <s#> Surface Number <00> to <03> Use <00> if Device Number < 0100
- 8 <dt> Data = Mode Type <00> to <06> <00> = Stereo <01> = Mono <02> = Phase <03> = LL <04> = RR <05> = Lx <06> = xR

The following example will set Mode to Left on Engine 2, Surface 1, Fader 9:

```
02 06 55 02 00 13 00 03
```

## 56h – Fader Level

Sets the main fader level of the selected device. The DSP processor converts this into the actual gain.

### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <06> Bytes to follow
- 3 <56> Command = Level
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte
- 6 <d#> Device Number – Low Byte
- 7 <s#> Surface Number <00> to <03> Use <00> if Device Number < 0100
- 8 <dt> Data = Fader Level <00> to <FF> See LP2 Command Reference for dB gain conversion table  
<00> = zero <c3> = unity <ff> = +10dB

The following example will set the Fader Level on Engine 1, Surface 1, Fader 5 (device 00 0F) to 200:

```
02 06 56 01 00 0F 00 C8
```

## 5Ch – Write Text

This command will write text to a LCD display.

### Seq Byte Description Notes

- 1 <02> Start byte
- 2 <##> Bytes to follow 8 + number of characters in text string (in hex)
- 3 <5C> Command = Write Text
- 4 <e#> AE Number
- 5 <d#> Device Number – High Byte
- 6 <d#> Device Number – Low Byte
- 7 <s#> Surface Number <00> to <03>
- 8 <l#> Line Number See the individual control surface manuals for line number definitions
- 9 <c#> Starting Column Number The starting column positions are 1 to 33 on Numix series surface for small font
- 10 <ma> Message attribute <00> to <FF> See table below
- 11 <t1> First text character <00> to <FF> Standard ASCII Character set (not all characters may be supported)
- n <tn> Last text character <00> to <FF> Standard ASCII Character set (not all characters may be supported)

TIP: Not all control surfaces and vTool programs support all features.

The following example will send “Next” to First Line Position 1 of Surface 1, Fader 1, Overwrite, Normal video, White:

```
02 0C 5C 03 00 0B 00 00 00 00 4E 65 78 74
```

The following example will send “Next” to Second Line Position 3 of Surface 1, Fader 2, Insert, Normal video, Red:

```
02 0C 5C 03 00 0C 00 01 02 81 4E 65 78 74
```

### Message Attribute Data Bits

Bit 7 – Display Mode 0 = Overwrite Text 1 = Insert Text

Bits 6 & 5 – Video attribute 0 = Normal 1 = Flash continuously 2 = Reverse (reserved for future)

Bits 2, 1 & 0 – Message Text color  
(same as Message Indicator command format)

0 = White

1 = Red

2 = Yellow

3 = Green

4 = Cyan

5 = Magenta

## D. JetSet Excel Export/Import (JetFiles)

### Function and Theory of Operation

There are two primary reasons why we want to export and import **JetStream** configuration information into a common spreadsheet format:

1. Triggers. One of the most popular features of the Logitek Audio Engine was the **Command Builder** scripting language to write macros to route sources, turn on lamps, fire relays, and perform countless functions using the **Supervisor** program.

On the Audio Engine platform, one Supervisor computer connected to as many as 25 audio engines and provided a central place to control all of them. However, this created a central point of failure.

When we set out to create the **JetStream**, we broke apart that central Supervisor by putting its functions in **JetStream Server** solely for its own machine. The JetStreams tell each other that machine x is telling machine y to turn on z, but x is only responsible for sending the message to y; y in turn performs z. This eliminates the central point of failure, but it requires that x and y know what sources and destinations each other have. In turn, we then need to tell **Command Builder 5**, which is at its heart a text editor, what those things are.

After much trial and error, we came up with this solution: **Command Builder 5** will read the exported .xls files from each **JetStream** on a network to build its list of sources and destinations. Because the .xls file includes the device numbers of both local sources (which are set either by **JetSet** automatically or manually through the .xls file) and network sources (which are dynamically assigned by JetStream Server as they automatically propagate) **Command Builder 5** can keep track of all of the device numbers and simplify the process of writing triggers.

**Command Builder 5**, in turn will upload the same trigger table to each **JetStream Server**. **JetStream Server** in turn will process the triggers that belongs to it and ignore those written for other machines.

2. Power Users. While **JetSet** offers a simple web interface, power users who are building dozens of identical studios in different locations need the capability of quickly installing a common configuration to a group of **JetStreams** to deploy the systems. The Excel export/import system lets these users build one master system and easily duplicate it as they build out their plants.

While all Power Users will use Triggers, the vast majority of Trigger users will not need to learn how to be a Power User.

If all you intend to do is use **Command Builder 5** with more than one **JetStream**, the most important thing you need to learn from this manual is how to save and manage the exported files.

If you intend to import the configuration from one **JetStream** into another, you will also need to learn how to edit the JetFile spreadsheet.

## Saving and Managing Exported JetFiles

As of this writing (September 2014), this function only works on the Administrator page of **JetStream Server**. While the same buttons exist in the JetSet administrator page in the web browser, they will not function until further notice.

Click the **Save to JetFile** button. A standard Windows dialog box will appear where you can choose the path of the file and the file name. We suggest using something simple for file path, such as **c:\logitek\configs** and naming the file after the studio or rack or other easily understood identifier. After you have typed the file name and set the path, click Save.

### Rules

1. Do not save a JetStream's configuration under a different name in the same folder. This is because Command Builder 5 will read every config found in the folder and you do not want it compiling the same JetStream more than once as that will do bad things. If you want to back up a configuration, move it to a different folder (example: **c:\logitek\configs\backup**) before you save a new one. At some point we will automate the backup process, but until further notice you must do that yourself.
2. In order for Command Builder 5 to know what is on the other JetStreams, you will need a copy of the .xls file for each JetStream in the config folder where you will be writing triggers. We recommend making your config folder sharable on each JetStream and export to each JetStream unit. This backs up your work in several places. Our plan is to automate this process and have each JetStream automatically back up the config folder to every JetStream on the network, but until this work is complete you will need to manually do it.
3. Spaces are valid in file names. All other Windows file name rules apply.

For example, if we had three studios and a technical ops center, we might have a **c:\logitek\configs** folder that looks like this:

```
studio a.xls  
studio b.xls  
studio c.xls  
toc.xls
```

If we chose to keep backups of old files, they might live in **c:\logitek\configs\backup** and the file name might have the date or date and time added to the end. Until this process is automated, it is at your option.



## Importing A Configuration File

As of this writing, this function only works within the **JetStream Server** administration page. While similar buttons exist on the **JetSet** (web browser) administration page, they will not function until further notice.

Click the **Read From JetFile** button. A standard Windows dialog box will appear. Select the appropriate path and file name and click Open.

**JetStream Server** will read the file and immediately upload it to the JetStream. Take care when selecting files to only open the file intended for that JetStream.

## Auxiliary Files

Longtime Logitek users will notice the absence of the DSP table and Command Library files that were used in the Audio Engine and JetStream up to version 4. Starting with this version (5.x) those files have been removed from the system and their functions saved within the JetFile and JetSet. Only the .xls JetFile is needed to back up the configuration of the JetStream.

## Backups

Having backup copies of your JetFiles is always prudent. We recommend making backup copies of the JetFiles both on the other JetStreams as well as on other media and/or offsite storage. They are small files and fit easily onto a removable drive or in a folder on an administrative computer.

## Editing the JetFile Spreadsheet

JetFiles are written in .xls (Excel 97-2003) format. We do not support the .xlsx format.

Compatible spreadsheet software includes Microsoft Excel (contained in Microsoft Office 2013 and Office 365), Google docs, Open Office, and Libre Office as long as the .xls format is maintained.

There are 8 tabs in the spreadsheet: DSP Dest, IO Dest, DSP Sources, IO Sources, Net Sources, Picks, Mutes, and System.

### DSP Dest

Defines the DSP Destinations. These are the places you would route audio so it could be mixed. Includes faders, headphone selectors, monitor selectors, the Mixer A submixer, and the DSP router crosspoints

### IO Dest

Defines the destination of the output cards. These are the places you would route audio directly to the output jacks. This also is where virtual routable outputs to the network are made which are sent as a stream on the audio network and not sent to a local output.

---

## **IO Sources**

Defines the definition of the input cards. These are the input jacks of the system.

## **Net Sources**

These are input streams coming from other JetStreams. JetStream Server will compile the list of these sources after reading the lists of sources that each JetStream sends to each other via multicast. As in JetSet, editing this list gives you the options to add specific attributes to the network source when it is used on this JetStream's console, such as assigning the source to a mix minus bus or mute group, lamp settings, or UDP control instructions.

## **Picks**

Used to define pick lists for faders or output destinations on the console or router. The rows on this spreadsheet are the destination (either a fader or output address) and the columns list the device numbers of the sources allowed to be chosen on each row.

## **Mutes**

Defines the mute groups on the JetStream.

## **System**

Defines all of the administrative information about this JetStream.

# **Writing Your Own Configurations**

It's best to let the JetStream write the spreadsheet for you than for you to write the spreadsheet for the JetStream because of the amount of information involved. Start by setting up the IO card assignments in JetSet, define the surfaces, and fill in as much information on the administrative page such as JetNet Number and sample rate as possible. Then save to a JetFile.

You might find some things like pick lists (surface settings, etc.) are easier in JetSet than in the spreadsheet. It's okay to bounce back and forth as long as you save your work in the spreadsheet using the same name, then reading the JetFile before editing in JetSet (saving your work on every web page) before you save to the JetFile again before going back to the spreadsheet.

[If that sounds too confusing, then just do as much as you can in JetSet (web browser) first, then save to a JetFile, and then pick it up in your spreadsheet.

You must assign every source and destination a device number. Sources and destinations have their own ranges of valid numbers. These ranges are defined on the system tab of the JetFile. For example, these ranges were set up on a JetStream Plus:

182	1st Port 1 Dest	0x000B
183	1st Port 2 Dest	
184	1st Port 3 Dest	
185	1st Port 4 Dest	
186	1st IO Dest	0x006E
187	1st Port 1 Source	0x00BE
188	1st Port 2 Source	
189	1st Port 3 Source	
190	1st Port 4 Source	
191	1st Mix Minus Source	0x00D2
192	1st IO Source	0x0100
193	1st network Source	0x0200

Generally speaking, we arrange the addresses so that the DSP destinations come first followed by IO destinations, followed by DSP sources, then mix minus buses, IO sources, and network sources. As long as none of these ranges step on each other, everything will work.

## General Spreadsheet Rules

JetStream Server follows these rules:

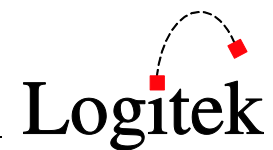
1. The names of the tabs must be exactly as specified
2. The order of the tabs and fields is not relevant. However the titles of the columns must be spelled correctly in order for Server to parse it correctly.
3. Missing columns and tabs are ignored.
4. If a column is not spelled correctly, it is ignored.

For best results, let Server create the spreadsheet by exporting from a working JetStream.

## Editing the DSP Dest Spreadsheet

The following page shows a copy of the DSP Destinations spreadsheet. Subsequent pages define the columns and the text within.

The destinations on this tab are virtual and are not tied to a specific physical output. They are internal crosspoints used to create the mixing console.



Device Number	Surface Name 1	Surface Name 2	Unique Name	Num Channels	Slot	Left Pin	Right Pin	Center Pin	LFE Pin	LS Pin	RS Pin	DSP Function	Lamp On Color	Lamp Off Color	Fader Level	Default Bus
0x000B	Fader 1	Port 1	Fader 1 Port 1	2	16	1	2					0	0,0,15	15,15,15	20	0x02081022
0x000C	Fader 2	Port 1	Fader 2 Port 1	2	16	3	4					0			175	
0x000D	Fader 3	Port 1	Fader 3 Port 1	2	16	5	6					0			175	
0x000E	Fader 4	Port 1	Fader 4 Port 1	2	16	7	8					0			175	
0x000F	Fader 5	Port 1	Fader 5 Port 1	2	16	9	10					0			175	
0x0010	Fader 6	Port 1	Fader 6 Port 1	2	16	11	12					0			175	
0x0011	Fader 7	Port 1	Fader 7 Port 1	2	16	13	14					0			175	
0x0012	Fader 8	Port 1	Fader 8 Port 1	2	16	15	16					0			175	
0x0013	Fader 9	Port 1	Fader 9 Port 1	2	16	17	18					0			175	
0x0014	Fader 10	Port 1	Fader 10 Port 1	2	16	19	20					0			175	
0x0015	Fader 11	Port 1	Fader 11 Port 1	2	16	21	22					0			175	
0x0016	Fader 12	Port 1	Fader 12 Port 1	2	16	23	24					0			175	
0x0023	StudioIn	Port 1	StudioIn Port 1	2	16	49	50					0			44	
0x0024	Mon In	Port 1	Mon In Port 1	2	16	51	52					0			44	
0x0025	PhonesIn	Port 1	PhonesIn Port 1	2	16	53	54					0			44	
0x0026	TlkBkMic	Port 1	TlkBkMic Port 1	1	16	55						0			175	
0x0027	GPI Out	Port 1	GPI Out Port 1	0								0				
0x0028	GPI In	Port 1	GPI In Port 1	0								0				
0x0029	Cue Dir	Port 1	Cue Dir Port 1	1	16	56						0			100	
0x002A	TalkRtn	Port 1	TalkRtn Port 1	1	16	57						0			100	
0x002B	RightCue	Port 1	RightCue Port 1	1	16	58						0			44	
0x002C	Mon Mtr	Port 1	Mon Mtr Port 1	2	16	59	60					0			175	
0x002D	MixA1 In	Port 1	MixA1 In Port 1	2	16	61	62					0			175	
0x002E	MixA2 In	Port 1	MixA2 In Port 1	2	16	63	64					0			175	
0x002F	MixA3 In	Port 1	MixA3 In Port 1	2	16	65	66					0			175	
0x0030	Route1In	Port 1	Route1In Port 1	2	16	67	68					0			175	
0x0031	Route2In	Port 1	Route2In Port 1	2	16	69	70					0			175	
0x0032	Route3In	Port 1	Route3In Port 1	2	16	71	72					0			175	

## **Device number**

Expressed in hex, always in format of 0xDDDD where *D* is the device number. The range of valid numbers is defined on the system tab. Whatever value is entered is used provided it matches the defined range. If a number is used more than once, the last entry is accepted. Take care not to duplicate numbers.

## **Surface Name 1**

Logitek consoles and router controllers display 16 character source names, divided in two fields of 8 characters. This is the top line for the source label that the operator will see on the console or within JetStream Server. Maximum 8 characters.

## **Surface Name 2**

This is the second line of text that the operator will see, usually displayed below Surface Name 1 on the console. Maximum 8 characters.

## **Unique Name**

Unique identifier for the destination. Command Builder 5 uses this text to find the device number to create a command.

## **Num Channels**

The number of channels used by the destination. Valid entries are 1, 2, and 6 which represent mono, stereo, and 5.1 respectively. For the GPI destinations, use 0 as no audio is used.

## **Slot**

The number of the slot that the source is connected to. Because these destinations are on the DSP card and the DSP card is installed in the 16<sup>th</sup> slot in the frame, all slot entries on this tab will be 16 with the exception of GPI In and GPI Out, which is left blank.

## **Left Pin**

The channel number for the left channel on destinations that carry audio. Because the destinations on this card are not tied to physical inputs and outputs, we number pins sequentially. Pin numbers cannot be duplicated.

## **Right Pin**

The channel number for the right channel on destinations that carry audio. See notes on Left Pin.

## **Center Pin**

The channel number for the center channel on destinations that carry audio. Used for 5.1 destinations. See notes on Left Pin.

## **LFE Pin**

The channel number for the Low Frequency Effects channel on destinations that carry audio. Used for 5.1 destinations. See notes on Left Pin.

## **LS Pin**

The channel number for the Left Surround channel on destinations that carry audio. Used for 5.1 destinations. See notes on Left Pin.

## **RS Pin**

The channel number for the Right Surround channel on destinations that carry audio. Used for 5.1 destinations. See notes on Left Pin.

## **DSP Function**

Used to define the feature word for the destination. Valid entries are:

- 0 = Other
- 1 = Mix Bus
- 2 = Monitor
- 3 = Delay
- 4 = Mix Minus
- 5 = Router

## **Lamp On Color**

RGB value to set a default on button lamp color for the source, written in decimal. Separate with commas. Example: blue is 0,0,15.

## **Lamp Off Color**

RGB value to set a default off button lamp color for the source, written in decimal. Separate with commas. Example: blue is 0,0,15.

## **Fader Level**

The default fader level for the destination on a scale of 0 – 255. Unity gain is 195.

## **Default Bus**

Determines what buses should be turned on for this destination when the JetStream resets to its defaults.

# **Editing the IO Dest Spreadsheet**

The following page shows a copy of the IO Destinations Spreadsheet. Subsequent pages define the columns and text within.

The IO Dest tab concerns destinations for local output cards and virtual network outputs. The virtual network outputs are routable destinations that are streamed to other AoIP devices.

Device Number	Surface Name 1	Surface Name 2	Unique Name	Num Channels	Send to Network	Slot	Left Pin	Right Pin	Center Pin	LFE Pin	LS Pin	RS Pin	Digital Format	Default Gain	Default Source	Network Latency
0x006E	New	Net 3264	U3264	2	Y								AES	0	0x00D8	Low
0x006F	New 10-2	Output	Unique New 10-2 Output	2		10	3	4					S/PDIF	5	0x00D0	High
0x0070	New 10-3	Output	Unique New 10-3 Output	2		10	5	6					AES	0	0x00BE	High
0x0071	New	Net 1950	U1950	2	Y								AES	0		Low
0x0072	New 13-1	Output	Unique New 13-1 Output	2		13	1	2					S/PDIF	20	0x00BE	High
0x0073	New 10-6	Output	Unique New 10-6 Output	2		10	11	12					AES	-5	0x00C2	High
0x0074	New 10-5	Output	Unique New 10-5 Output	2		10	9	10					AES	-15	0x00BF	High
0x0075	New 13-2	Output	Unique New 13-2 Output	2		13	3	4					AES	5	0x00CC	High
0x0076	New	Net 5802	U5802	2	Y								AES	0	0x00BE	High

**Device number**

Expressed in hex, always in format of 0xDDDD where *D* is the device number. The range of valid numbers is defined on the system tab. Whatever value is entered is used provided it matches the defined range. If a number is used more than once, the last entry is accepted. Take care not to duplicate numbers.

**Surface Name 1**

Logitek consoles and router controllers display 16 character source names, divided in two fields of 8 characters. The Surface Name for IO Destinations will be visible on the JetStream State page of JetStream Server. This will also serve as the surface label sent to other JetStreams on outputs to the network. Maximum 8 characters.

**Surface Name 2**

This is the second half of the Surface Name. Maximum 8 characters.

**Unique Name**

Unique identifier for the destination. Command Builder 5 uses this text to find the device number to create a command.

**Num Channels**

The number of channels used by the destination. Valid entries are 1, 2, and 6 which represent mono, stereo, and 5.1 respectively.

**Send To Network**

Place a Y in this column for destinations that will be sent to the network instead of going to an output card. [If you put a Y in this column, leave the slot and pins columns blank for this line.] This denotes a virtual network output and thus cannot have a slot or pin assigned to it.

**Slot**

The number of the slot that the source is connected to. Valid slots are 1 – 15. The slots are defined on the System tab.

**Left Pin**

The IO card channel number for the left channel. Pin numbers cannot be duplicated.

**Right Pin**

The IO card channel number for the right channel. Pin numbers cannot be duplicated.

**Center Pin**

The IO card channel number for the center channel. Pin numbers cannot be duplicated. Used for 5.1 destinations.

**LFE Pin**

The IO card channel number for the Low Frequency Effects channel. Pin numbers cannot be duplicated. Used for 5.1 destinations.



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### **LS Pin**

The IO card channel number for the Left Surround channel. Pin numbers cannot be duplicated.  
Used for 5.1 destinations

### **RS Pin**

The IO card channel number for the Right Surround channel. Pin numbers cannot be duplicated.  
Used for 5.1 destinations.

### **Digital Format**

Valid entries are AES and S/PDIF. Entering S/PDIF disables record inhibit flags used by older “prosumer” equipment. An entry in this column for an analog output is ignored.

### **Default Gain**

Valid entries are -20 to 8. Adjusts gain of the output in dB. Zero means no gain adjustment. This number is ignored if the output is sent to the network; it only controls IO cards.

### **Default Source**

The hex address of the device number of the IO Source or DSP Source routed to the output by default. Expressed as 0xdddd, where *d* is the device number.

### **Network Latency**

Valid entries are Low and High. Low latency uses many small packets sent more frequently. High latency uses larger packets sent less often. Generally speaking, send high latency packets to computers using the JetNet driver and low latency packets to other JetStreams or other AoIP hardware. Text in this column is ignored if local IO card pins are present.

## **Editing the DSP Sources Spreadsheet**

The following page displays the DSP Sources Spreadsheet. Subsequent pages define the columns and text within.

DSP Sources are virtual devices that are not tied to a physical location. They are the outputs of mixing buses created by the console. DSP sources are routed internally to the network or to physical outputs on the IO Dest tab. For example, the program output is defined here on the DSP sources; to route program to an IO card, you would enter the address of program out from this tab on the IO Dest tab.

Because the sources on this tab are virtual, they can be copied to the network by putting a Y in the Copy to Network column. An explanation of this follows.

Device Number	Surface Name 1	Surface Name 2	Unique Name	Num Channels	Slot	Left Pin	Right Pin	Center Pin	LF Pin	LS Pin	RS Pin	DSP Function	Copy to Network	Net Tx IP Address	Network Latency	Default Gain	MixMinus Src Bus	MixMinus Bus On	MixMinus Add Mic	MixMinus Stereo
0x00BE	Program	Port 1	Program Port 1	2	16	1	2								0	0				
0x00BF	Aux 1	Port 1	Aux 1 Port 1	2	16	3	4						Y		0	0				
0x00C0	Aux 2	Port 1	Aux 2 Port 1	2	16	5	6						Y		1	0				
0x00C1	Aux 3	Port 1	Aux 3 Port 1	2	16	7	8								0	0				
0x00C2	Studio Monitor	Port 1	Studio Monitor Port 1	2	16	9	10								0	0				
0x00C3		Port 1	Port 1	2	16	11	12								0	0				
0x00C4	Phones	Port 1	Phones Port 1	2	16	13	14								0	0				
0x00C5	Tone TalkBk 2	Port 1	Tone TalkBk 2 Port 1	1	16	15							Y		1	0				
0x00C6		Port 1	Port 1	1	16	16									0	0				
0x00C7	MM 1	Port 1	MM 1 Port 1	1	16	17									0	0				
0x00C8	MM 2	Port 1	MM 2 Port 1	1	16	18									0	0				
0x00C9	MM 3	Port 1	MM 3 Port 1	1	16	19									0	0				
0x00CA	Pgm Mono	Port 1	Pgm Mono Port 1	1	16	20									0	0				
0x00CB	Aux1Mono	Port 1	Aux1Mono Port 1	1	16	21									0	0				
0x00CC	Cue	Port 1	Cue Port 1	2	16	22	23								0	0				
0x00CD	Phone sPF	Port 1	PhonesPF Port 1	2	16	24	25								0	0				
0x00CE	Mixer A	Port 1	Mixer A Port 1	2	16	26	27								0	0				
0x00CF	Route 1	Port 1	Route 1 Port 1	2	16	28	29								0	0				
0x00D0	Route 2	Port 1	Route 2 Port 1	2	16	30	31								0	0				
0x00D1	Route 3	Port 1	Route 3 Port 1	2	16	32	33								0	0				
0x00D2	MM 4/5	Port 1	MM 4/5 Port 1	2	16	34	35								0	0				
0x00D3	MM 6/7	Port 1	MM 6/7 Port 1	2	16	36	37								0	0				
0x00D4	MM 8/9	Port 1	MM 8/9 Port 1	2	16	38	39								0	0				

0x00D5	MM 10/11	Port 1	MM 10/11 Port 1	2	16	40	41	0	0
0x00D6	MM 12/13	Port 1	MM 12/13 Port 1	2	16	42	43	0	0
0x00D7	MM 14/15	Port 1	MM 14/15 Port 1	2	16	44	45	0	0
0x00D8	MM 16/17	P1 Aux4	MM 16/17 P1 Aux4	2	16	46	47	0	0
0x00D9	MM 18/19	P1 Aux5	MM 18/19 P1 Aux5	2	16	48	49	0	0
0x00DA	MM 20/21	P1 Aux6	MM 20/21 P1 Aux6	2	16	50	51	0	0
0x00DB	MM 22/23	P1 Aux7	MM 22/23 P1 Aux7	2	16	52	53	0	0
0x00DC	MM 24/25	P1 Aux8	MM 24/25 P1 Aux8	2	16	54	55	0	0

### **Device number**

Expressed in hex, always in format of 0xDDDD where *D* is the device number. The range of valid numbers is defined on the system tab. Whatever value is entered is used provided it matches the defined range. If a number is used more than once, the last entry is accepted. Take care not to duplicate numbers.

### **Surface Name 1**

Logitek consoles and router controllers display 16 character source names, divided in two fields of 8 characters. This will also serve as the surface label sent to other JetStreams on outputs to the network. Maximum 8 characters.

### **Surface Name 2**

This is the second half of the Surface Name. Maximum 8 characters.

### **Unique Name**

Unique identifier for the DSP source. Command Builder 5 uses this text to find the device number to create a command.

### **Num Channels**

The number of channels used by the DSP source. Valid entries are 1, 2, and 6 which represent mono, stereo, and 5.1 respectively.

### **Slot**

The number of the slot that the source is connected to. Because these are virtual sources within the DSP card, the DSP slot 16 is used.

### **Left Pin**

The IO card channel number for the left channel. Even though these are virtual channels, we must assign pins. Pin numbers cannot be duplicated. Use sequential numbers as you assign channels.

### **Right Pin**

The IO card channel number for the right channel. Pin numbers cannot be duplicated.

### **Center Pin**

The IO card channel number for the center channel. Pin numbers cannot be duplicated.  
Used for 5.1 destinations.

### **LFE Pin**

The IO card channel number for the Low Frequency Effects channel. Pin numbers cannot be duplicated. Used for 5.1 destinations.

### **LS Pin**

The IO card channel number for the Left Surround channel. Pin numbers cannot be duplicated.  
Used for 5.1 destinations

### **RS Pin**

The IO card channel number for the Right Surround channel. Pin numbers cannot be duplicated.

---

Used for 5.1 destinations.

### **DSP Function**

Used to define the feature word for the destination. Valid entries are:

- 0 = Other
- 1 = Mix Bus
- 2 = Monitor
- 3 =
- 4 =
- 5 = Router

### **Copy To Network**

A Y in this box will send the source to other devices on the Audio LAN.

### **Net Tx IP Address**

If this source is to be copied to the network, a valid multicast IP address for the stream is entered here. A valid address will start with the base address on the system page, changing the third octet from zero to the JetNet number of this machine as defined on the system page. The final octet is the stream number for that machine. (Example: base is 239.193.0.0. This is JetNet 12. This is the 10<sup>th</sup> stream output on the machine, thus the address is 239.193.12.10.) [NOTE: the mechanism for defining stream addresses without colliding with the automatic stream addressing system is still being worked out. Therefore, until further notice, let the JetSet web page perform this task.]

### **Network Latency**

Valid entries are 0 and 1. 0 is high latency, 1 is low. Low latency uses many small packets sent more frequently. High latency uses larger packets sent less often. Generally speaking, send high latency packets to computers using the JetNet driver and low latency packets to other JetStreams or other AoIP hardware. Text in this column is ignored if the source is not being copied to the network.

### **Default Gain**

Set this column to zero. Virtual sources cannot have their gain adjusted.

### **Mix Minus Src Bus**

If a Mix Minus Bus is being defined on this line, this column will denote the number that the mix minus is being derived from. [A mix minus bus starts with a mix bus and then subtracts sources such as telephone hybrids or remote codecs from the mix.] Enter the bus number of the mix bus to base the mix minus upon. Only one bus can be entered here. Valid numbers are:

- 1 = Program
- 2 = Cue
- 3 = Aux 1
- 4 = Aux 2
- 5 = Aux 3
- 6 = Aux 4
- 9 = Aux 5
- 10 = Aux 6
- 11 = Aux 7

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12 = Aux 8

### **Mix Minus Bus On**

If a Y is entered in this cell, the mix minus will always be on and sending audio. Otherwise, the bus is only created when an IO Source tagged with the mix minus bus number is turned on at the console. Do not use this feature if you are using Mix Minus Add Mic, as it conflicts.

### **Mix Minus Add Mic**

If a Y is entered in this cell, the console's talkback mic will be routed to the mix minus bus output when the IO source tagged with the mix minus bus number is turned off at the console. When the tagged IO source turns on at the console, the audio switches from talkback mic to mix minus. Used to create offline telephone record mixes. Do not use this feature if you are using Mix Minus Bus On, as it conflicts.

### **Mix Minus Stereo**

If a Y is entered in this cell, a stereo mix minus bus is created. Number of pins must be set to 2 and a left and right pin must be defined.

## **Editing the IO Sources Spreadsheet**

The following pages display the DSP Sources Spreadsheet. Subsequent pages define the columns and text within.

Because of the width of this tab, it is broken into two pages in this manual. Within the spreadsheet it is one continuous tab.

The IO Sources are the physical inputs to the JetStream.

Device Number	Surface Name 1	Surface Name 2	Unique Name	Num Channels	Slot	Left Pin	Right Pin	Center Pin	LFE Pin	LS Pin	RS Pin	Default Gain	Default Pan	Default Mode	Mix Minus Bus	Copy To Network	Lamp On Color	Lamp Off Color
0x0100	Mic 1		Mic 1	1	1	1						50						
0x0101	Mic 2		Mic 2	1	1	2						50			5		0,0,15	15,15,15
0x0102	Mic 3		Mic 3	1	1	3						45						
0x0103	Mic 4		Mic 4	1	1	4						20						
0x0104	Mic 5		Mic 5	1	1	5						20						
0x0105	Mic 6		Mic 6	1	1	6						20						
0x0106	Mic 7		Mic 7	1	1	7						20						
0x0107	In 5-1		In 5-1	2	5	1	2					20						
0x0108	Mic 8		Mic 8	1	1	8						20						
0x0109	In 3-1		In 3-1	2	3	1	2					5			1	Y	15,0,0	0,15,0
0x010A	In 3-2		In 3-2	2	3	3	4								6		15,0,15	15,15,0
0x010B	In 3-3		In 3-3	2	3	5	6					-5				Y		
0x010C	In 3-4		In 3-4	2	3	7	8									Y		
0x010D	In 3-5		In 3-5	2	3	9	10									Y		
0x010E	In 3-6		In 3-6	2	3	11	12									Y		
0x010F	In 3-7		In 3-7	2	3	13	14					-10						
0x0110	In 3-8		In 3-8	2	3	15	16					2						
0x0111	In 5-2		In 5-2	2	5	3	4					20						
0x0112	In 5-3		In 5-3	2	5	5	6					20						
0x0113	In 5-4		In 5-4	2	5	7	8					20						
0x0114	In 5-5		In 5-5	2	5	9	10					20						
0x0115	In 5-6		In 5-6	2	5	11	12					20						

Network Tx IP Address	Network Latency	GPI On	GPI Off	GPI Co ugh	G P O St art	G P O St op	G P O Tal ly	Mut e Gro up	UDP IP Address	UD P Po rt	UDP Start Com mand	UDP Stop Com mand	Ti me r Re set	Fa der Sta rt	C u e B u s	C u e At In f	All ow Mo de	Allo w Effe cts	All ow Pa n	Allow Trim	Phantom Power	SR Converter	UK Tally
0					2	2	2						Y				Y	Y	Y	Y			
0		10		10	0	0	0	20	192.16	10	Start	Stop	Y				Y	Y	Y	Y			
0		1	102	3	1	2	3	4	8.5.5	05	5	5	Y				Y	Y	Y	Y			
0													Y				Y	Y	Y	Y			
0													Y				Y	Y	Y	Y			
0																							
0																							
0																							
0																							
0																							
1		1	2	3	4	5	6	7					Y		Y		Y		Y		Y		
0														Y		Y		Y		Y		Y	
1																							
0																							
1																							
1																	Y						



**Device number**

Expressed in hex, always in format of 0xDDDD where *D* is the device number. The range of valid numbers is defined on the system tab. Whatever value is entered is used provided it matches the defined range. If a number is used more than once, the last entry is accepted. Take care not to duplicate numbers.

**Surface Name 1**

Logitek consoles and router controllers display 16 character source names, divided in two fields of 8 characters. This is the first half. Maximum 8 characters.

**Surface Name 2**

This is the second half of the Surface Name. Maximum 8 characters.

**Unique Name**

Unique identifier for the source. Command Builder 5 uses this text to find the device number to create a command.

**Num Channels**

The number of channels used by the Source. Valid entries are 1, 2, and 6 which represent mono, stereo, and 5.1 respectively.

**Slot**

The number of the slot that the source is connected to. Valid slots are 1 – 15. The slots are defined on the System tab.

**Left Pin**

The IO card channel number for the left channel. Duplicate pins are allowed.

**Right Pin**

The IO card channel number for the right channel. Duplicate pins are allowed.

**Center Pin**

The IO card channel number for the center channel. Duplicate pins are allowed.  
Used for 5.1 destinations.

**LFE Pin**

The IO card channel number for the Low Frequency Effects channel. Duplicate pins are allowed.  
Used for 5.1 destinations.

**LS Pin**

The IO card channel number for the Left Surround channel. Duplicate pins are allowed. Used for 5.1 destinations

**RS Pin**

The IO card channel number for the Right Surround channel. Duplicate pins are allowed.  
Used for 5.1 destinations.

**Default Gain**

Adjusts gain of the output in dB. Zero or no entry means no gain adjustment.

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## **Default Pan**

The default setting of the pan control when the source is routed to the fader. No entry or 0 denotes center. The pan control goes from left to right, 1 (closest to center) to 19 (farthest from center). Thus, valid entries range from L1 – L19, 0, R1 – R19. (example: to default to hard left, enter L19 in the cell)

## **Default Mode**

The default mode setting when the source is routed to the fader.

Stereo = default to number of channels defined by the source; 2 channels will be stereo, single channels will be mono

Mono = sum to mono

LL = Left channel in both channels

RR = Right channel in both channels

Lx = Left channel, silence right

xR = Silence left, right channel

Phase = Phase invert

Blend = sum to mono, keep pan control active to weight mix (Artisan only)

5.1 = surround (Artisan only)

## **Mix Minus Bus**

A number from 1 to 24 that assigns this input to a mix minus bus. Every input tagged with this number will be subtracted from its matching mix minus bus.

## **Copy to Network**

With a Y in this cell, this source will be copied to the network and streamed to other AoIP devices.

## **Net Tx IP Address**

If this source is to be copied to the network, a valid multicast IP address for the stream is entered here. A valid address will start with the base address on the system page, changing the third octet from zero to the JetNet number of this machine as defined on the system page. The final octet is the stream number for that machine. (Example: base is 239.193.0.0. This is JetNet 12. This is the 10<sup>th</sup> stream output on the machine, thus the address is 239.193.12.10.) [NOTE: the mechanism for defining stream addresses without colliding with the automatic stream addressing system is still being worked out. Therefore, until further notice, let the JetSet web page perform this task.]

## **Network Latency**

Valid entries are 0 and 1. 0 is high latency, 1 is low. Low latency uses many small packets sent more frequently. High latency uses larger packets sent less often. Generally speaking, send high latency packets to computers using the JetNet driver and low latency packets to other JetStreams or other AoIP hardware. Text in this column is ignored if the source is not being copied to the network.

## **GPI On**

Enter the GPI number for the GPI input that will remotely turn this source on. GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

### **GPI Off**

Enter the GPI number for the GPI input that will remotely turn this source off. GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

### **GPI Cough**

Enter the GPI number for the GPI input that will remotely activate the cough mute (bus 8). GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

### **GPO Start**

Enter the GPI number for the GPI output that will pulse when the fader is turned on. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

### **GPO Stop**

Enter the GPI number for the GPI output that will pulse when the fader is turned off. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

### **GPO Tally**

Enter the GPI number for the GPI output that will latch on when the fader is turned on and turn off when the fader turns off. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

### **Mute Group**

Enter the number of the matching mute group (set on the Mutes tab). Valid entries are 1 – 12. All sources tagged with 1 will belong to mute group 1, all sources tagged with 2 will belong to mute group 2, and so on.

### **UDP IP Address**

Enter the IP address to send text over UDP when the fader is turned on or off

### **UDP Port**

Enter the port to send text over UDP.

### **UDP Start Command**

Enter the text string to send to the specified UDP address/port when the fader turns on.

### **UDP Stop Command**

Enter the text string to send to the specified UDP address/port when the fader turns off.

### **Timer Reset**

If a Y is in this cell, reset the console timer when its fader turns on

### **Fader Start**

If a Y is in this cell, turn on bus 0 (fader on) when the fader is raised from infinity and off when the fader is returned to infinity. Most commonly used outside of North America.

### **Cue Bus**

If a Y is in this cell, send audio to the cue bus post fader. The default is no entry.

### **Cue At Inf**

If a Y is in this cell, turn on bus 3 (cue) when the fader is lowered to infinity and turn off bus 3 (cue) when the fader is raised from infinity. In the UK, Cue is known as PFL and this function will operate the PFL switch.

### **Allow Mode**

If a Y is in this cell, allow user to change the mode of the source from consoles with a mode switch.

### **Allow Effects**

If a Y is in this cell, allow user to change EQ and dynamics settings from consoles with EQ and dynamics controls. (On Artisan consoles, this also gives access to frame delay)

### **Allow Pan**

If a Y is in this cell, allow user to adjust pan from consoles with pan controls.

### **Allow Trim**

If a Y is in this cell, allow user to adjust trim from consoles with trim controls. [Note: older consoles such as Remora and Numix do not respect this setting.]

### **Phantom Power**

If a Y is in this cell, turn on phantom power for this input (Mic input cards only; ignored by all other input cards.)

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### SR Converter

If a Y is in this cell, disable the sample rate converter for this input. (Digital cards only; ignored by all other input cards.)

### UK Tally

If a Y is in this box, turn on the start lamp when the fader is open. (UK consoles only, JetStream must be set to UK Mode on system tab.)

## Editing the Net Sources Spreadsheet

The Net Sources tab is initially filled in by other JetStreams reporting their network channels to this JetStream.

After the sources appear, this tab can be used to edit how this JetStream will treat the sources locally. For example, this is how you assign a mix minus bus to a networked remote codec or assign GPI control to a networked source.

A copy of the spreadsheet appears below, followed by descriptions of the entries on subsequent pages.

Because of the width of the spreadsheet, it is broken into three pages in the manual but is one continuous spreadsheet within the tab.

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*When a JetStream starts and every few minutes afterwards, the JetStream Server application will announce what streams it has available on the network. All JetStreams and JetNet devices listen on the base multicast channel for these messages and build a list of channels from around the network as well as announce to the others what they have. By listening in on the “party line” announce channel, each device ensures that its list of sources is up to date. When a JetStream goes offline, the other units tag that machine’s channels as missing. If the machine stays offline for two weeks, the missing channels will be purged. If the machine comes back online before the purge, they are tagged as active and all of their settings persist. If the channels are purged before it comes back online, any surface settings or other customizations may need to be done again. When the JetFile is read, any customizations stored on the JetStream DSP are overwritten by the contents of the JetFile.*

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Device Number	Surface Name 1	Surface Name 2	Unique Name	Num Channels	Default Pan	Default Mode	Mix Minus Bus	Lamp On Color	Lamp Off Color	Jet Net
0x0200	AE6	Aux 1	AE6 Aux 1	2			4	0,15,15	15,0,15	6
0x0201	AE6	Program	AE6 Program	2			5			6
0x0202	JSM-200	Net 2	Unique New Net 2	2						7
0x0203	Dale 1a		Dale 1a	2						10
0x0204	Dale 2		Dale 2	2						10
0x0206	John's	Desk	John's Desk	2						30
0x020A	JSM-200	Net 1		2						7
0x0217	New	Net 429	First row Old Excel	2						11
0x0218	New	Net 7345	net 7345 slow packet	2						11
0x021C	New	Net 620		2						11
0x021D	New	Net 432		2						11
0x021E	New	Net 433		2						11

Source Type	Destination IP Address	Network Latency	GPI On	GPI Off	GPI Cough	GPO Start	GPO Stop	GPO Tally	Mute Group	UDP IP Address	UDP Port	UDP Start Command	UDP Stop Command
JSM	239.193.6.3	Low	301	302	303	401	402	403	12	192.168.87.12	1234	This is start	This is stop
JSM	239.193.6.1	Low											
JSM	239.193.7.18	Low											
WIN	239.193.10.1	High											
WIN	239.193.10.2	High											
WIN	239.193.30.1	High											
JSM	239.193.7.17	Low											
JSP	239.193.11.1	High											
JSP	239.193.11.2	High											
JSP	239.193.11.7	Low											
JSP	239.193.11.8	Low											
JSP	239.193.11.9	Low											

Timer Reset	Fader Start	Cue Bus	Cue At Inf	Allow Mode	Allow Effects	Allow Pan	Allow Trim	UK Tally
Y	Y	Y	Y	Y	Y	Y	Y	
Y								
Y								
Y								
Y								
Y								
Y								
Y								
Y								
Y								



### **Device number**

Expressed in hex, always in format of 0xDDDD where *D* is the device number. The range of valid numbers is defined on the system tab. Whatever value is entered is used provided it matches the defined range. This number is created by the DSP card and is filled in when the JetStream discovers the source on the network. This field should not need editing.

### **Surface Name 1**

Logitek consoles and router controllers display 16 character source names, divided in two fields of 8 characters. This is the first half. Maximum 8 characters. This cell is filled in by information sent from its host device and should not need editing.

### **Surface Name 2**

This is the second half of the Surface Name. Maximum 8 characters. This cell is filled in by information sent from its host device and should not need editing.

### **Unique Name**

Unique identifier for the source. Command Builder 5 uses this text to find the device number to create a command. This cell is filled in by information sent from its host device and should not need editing.

### **Num Channels**

The number of channels used by the source. 1 = mono, 2 = stereo, 6 = surround. This cell is filled in by information sent from its host device and should not need editing.

### **Default Pan**

The default setting of the pan control when the source is routed to the fader. No entry or 0 denotes center. The pan control goes from left to right, 1 (closest to center) to 19 (farthest from center). Thus, valid entries range from L1 – L19, 0, R1 – R19. (example: to default to hard left, enter L19 in the cell)

### **Default Mode**

The default mode setting when the source is routed to the fader.

Stereo = default to number of channels defined by the source; 2 channels will be stereo, single channels will be mono

Mono = sum to mono

LL = Left channel in both channels

RR = Right channel in both channels

Lx = Left channel, silence right

xR = Silence left, right channel

Phase = Phase invert

Blend = sum to mono, keep pan control active to weight mix (Artisan only)

5.1 = surround (Artisan only)

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### **Mix Minus Bus**

A number from 1 to 24 that assigns this input to a mix minus bus. Every input tagged with this number will be subtracted from its matching mix minus bus.

### **Lamp On Color**

RGB value to set a default on button lamp color for the source, written in decimal. Separate with commas. Example: blue is 0,0,15.

### **Lamp Off Color**

RGB value to set a default off button lamp color for the source, written in decimal. Separate with commas. Example: blue is 0,0,15.

### **JetNet**

The ID number of the JetNet device, as set on the system tab. Valid numbers are 1 – 255. This information is sent by the host when the source is announced and should not be edited.

### **Source Type**

JSM = From a JetStream, announced via JetNet. WIN = From a JetNet Windows Audio Driver, announced via the JetNet Control PC app.

### **Destination IP Address**

The multicast address of the source coming from the other JetStream computer. This information is sent by the host when the source is announced and should not be edited.

### **Network Latency**

Low = Low latency (aka Fast Audio) packets, sent by other JetStreams. High = High latency (aka Slow Audio) packets, usually sent by PCs using the JetNet Windows Audio Driver, although these can also originate from JetStream devices. This information is sent by the host when the source is announced and should not be edited.

### **GPI On**

Enter the GPI number for the GPI input that will remotely turn this source on. GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

### **GPI Off**

Enter the GPI number for the GPI input that will remotely turn this source off. GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

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## **GPI Cough**

Enter the GPI number for the GPI input that will remotely activate the cough mute (bus 8). GPI inputs on the JetStream are addressed 1 – 12.\* GPI Inputs on the first surface are addressed 101 – 112\*. GPI Inputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI Inputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI inputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI inputs will range 101-125.

## **GPO Start**

Enter the GPI number for the GPI output that will pulse when the fader is turned on. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

## **GPO Stop**

Enter the GPI number for the GPI output that will pulse when the fader is turned off. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

## **GPO Tally**

Enter the GPI number for the GPI output that will latch on when the fader is turned on and turn off when the fader turns off. GPI outputs on the JetStream are addressed 1 – 12.\* GPI outputs on the first surface are addressed 101 – 112\*. GPI outputs on the second surface are addressed 201-212\*. GPI Inputs on the third surface are addressed 301-312\*. GPI outputs on the fourth surface are addressed 401-412\*.

\*On a device with more than 12 GPI outputs, the ending number will match according to the numbering scheme. Example: a surface on port 1 with 25 GPI outputs will range 101-125.

## **Mute Group**

Enter the number of the matching mute group (set on the Mutes tab). Valid entries are 1 – 12. All sources tagged with 1 will belong to mute group 1, all sources tagged with 2 will belong to mute group 2, and so on.

## **UDP IP Address**

Enter the IP address to send text over UDP when the fader is turned on or off

## **UDP Port**

Enter the port to send text over UDP.

## **UDP Start Command**

Enter the text string to send to the specified UDP address/port when the fader turns on.

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## UDP Stop Command

Enter the text string to send to the specified UDP address/port when the fader turns off.

## Timer Reset

If a Y is in this cell, reset the console timer when its fader turns on

## Fader Start

If a Y is in this cell, turn on bus 0 (fader on) when the fader is raised from infinity and off when the fader is returned to infinity. Most commonly used outside of North America.

## Cue Bus

If a Y is in this cell, send audio to the cue bus post fader. The default is no entry.

## Cue At Inf

If a Y is in this cell, turn on bus 3 (cue) when the fader is lowered to infinity and turn off bus 3 (cue) when the fader is raised from infinity. In the UK, Cue is known as PFL and this function will operate the PFL switch.

## Allow Mode

If a Y is in this cell, allow user to change the mode of the source from consoles with a mode switch.

## Allow Effects

If a Y is in this cell, allow user to change EQ and dynamics settings from consoles with EQ and dynamics controls. (On Artisan consoles, this also gives access to frame delay)

## Allow Pan

If a Y is in this cell, allow user to adjust pan from consoles with pan controls.

## Allow Trim

If a Y is in this cell, allow user to adjust trim from consoles with trim controls. [Note: older consoles such as Remora and Numix do not respect this setting.]

## UK Tally

If a Y is in this box, turn on the start lamp when the fader is open. (UK consoles only, JetStream must be set to UK Mode on system tab.)

# Editing the Picks Spreadsheet

This is the surface settings pick list, built by the tick mark grid on the surface settings page in JetSet.

Logitek strongly suggests you edit this data in the web page and not in the spreadsheet.

An example spreadsheet is on the next page, followed by a description of the contents on subsequent pages.

Device Number	Pick Count	Pick 1	Pick 2	Pick 3	Pick 4	Pick 5	Pick 6	Pick 7	Pick 8	Pick 9	Pick 10	Pick 11	Pick 12	Pick 13	Pick 14	Pick 15	Pick 16	Pick 17	Pick 18
0x000B	27	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x000C	26	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x000D	25	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x000E	24	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x000F	22	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x0010	21	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x0011	20	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x0012	19	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0107	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x0013	18	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0120	0x0118
0x0014	21	0x0200	0x0201	0x0203	0x0204	0x0109	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0111	0x0112	0x0113	0x0114	0x0115	0x0118
0x0015	21	0x0200	0x0201	0x0203	0x0204	0x010A	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0118
0x0016	20	0x0200	0x0201	0x0203	0x0204	0x010B	0x010C	0x010D	0x010E	0x010F	0x0110	0x0111	0x0112	0x0113	0x0114	0x0115	0x0116	0x0117	0x0118
0x0023	6	0x00BF	0x00C0	0x00C1	0x0204	0x0100	0x00BE												
0x0024	6	0x00BF	0x00C0	0x00C1	0x0204	0x0101	0x00BE												
0x0025	6	0x00BF	0x00C0	0x00C1	0x0204	0x0102	0x00BE												
0x002E	3	0x00BF	0x021D	0x021E															
0x0031	3	0x00BF	0x00C0	0x00C1															
0x0032	4	0x00BF	0x00C0	0x00C1	0x00CF														
0x006F	5	0x00BF	0x00C0	0x00C1	0x00CB	0x00CC													
0x0070	2	0x00BF	0x00C0																

The width of the table is defined by the number of tick marks for a particular device.  
The lines represent the destinations.

**Device Number**

The device number of the destination.

**Pick Count**

The number of choices for that destination

**Pick 1 – Pick xx**

Each pick is the device number of a source that is allowed to be routed to that destination.

## Editing the Mutes Spreadsheet

This tab defines the microphone mute groups. In a mute group, when any tagged microphone is on, the monitors mute until the last tagged microphone is turned off.

A copy of the spreadsheet is on the next page, with explanation on the page after that.

Mute Group	Mute Device 1	Mute Device 2	Active	Cue	Tally 1	Tally 2	Tally 3
1	0x0024	0x0023	Y	Y	101	102	103
2	0x0025		Y		1	2	3
3	0x0023				104	105	106
4	0x0024			Y			
5							
6							
7							
8							
9							
10							
11							
12	0x0025		Y	Y	4	5	6

---

## Mute Group

A number from 1 to 12. This is the number that is associated with microphones that belong to this group.

### Mute Device 1

The device number of the monitor mix bus that should mute when any of the group's microphones are on. Expressed in hex as 0xDDDD.

### Mute Device 2

If a second monitor mix bus should mute when the group's microphones are on, the device number is entered here. Expressed in hex as 0xDDDD.

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*Mute Device 1 and Mute Device 2 allow you to mute two studios at once on this JetStream. If you need to mute monitors on a studio on a different JetStream you would use Command Builder 5 to send commands to the other frame.*

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## Active

If a Y is in this box, allow this mute group to function. Otherwise it will be ignored.

## Cue

If a Y is in this box, mute the monitors when the microphone is placed in cue. Otherwise, the channel will mute only when bus 0 (the on/off switch for the fader) is on.

## Tally 1

The GPI number of the GPI output that will turn on when the microphones are on. Use standard Logitek GPI numbering: JetStream GPIs are 1-15, port 1 consoles are 101-112, port 2 consoles 201-212, port 3 301-312, port 4 401-412. If devices support more than 12 or 15 GPIs, the ending number matches the highest relay on the device.

## Tally 2

The GPI number of the second GPI output that will turn on when the microphones are on, using standard Logitek GPI numbering as described above.

## Tally 3

The GPI number of the third GPI output that will turn on when the microphones are on, using standard Logitek GPI numbering as described above.

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*Multiple tallies allow you to connect more than one on-air light or to connect an on-air light and aircheck record skimmer.*

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## Editing the System Spreadsheet

These are the master system settings for the JetStream.

The parameter is keyed to the index number. Blank rows can be inserted for clarity as long as the index numbers match their parameters as show below.

Index	Parameter	Value
0	Table Version	50
1	Sample Rate	48.0 K
2	External Sync Type	none
3	JetNet Number	12
4	Country Code	USA
5	Net 1 IP Address	192.168.87.77
7	Net 2 IP Address	192.168.87.78
9	Multicast Base Address	239.193.0.0
11	JetNet Base Port	10200
12	Net Sync Master	Allow
13	Net Protocol	JetNet
20	Engine Type	JSP
21	Slot 1 Card Type	Mic In
22	Slot 2 Card Type	
23	Slot 3 Card Type	Analog In
24	Slot 4 Card Type	
25	Slot 5 Card Type	Analog In
26	Slot 6 Card Type	Digital In
27	Slot 7 Card Type	Digital In
28	Slot 8 Card Type	Mic In
29	Slot 9 Card Type	
30	Slot 10 Card Type	Analog Out
31	Slot 11 Card Type	SDI In
32	Slot 12 Card Type	SDI In
33	Slot 13 Card Type	Digital Out
34	Slot 14 Card Type	Digital Out
35	Slot 15 Card Type	Digital Out
36	Slot 16 Card Type	
37	Slot 17 Card Type	
38	Slot 18 Card Type	
39	Slot 19 Card Type	
40	Slot 20 Card Type	
49	JetStream Layout	2 Ports
50	Port 1 Surface Type	mixer
51	P1 Num of Devices	40
52	P1 Num of Faders	12
53	P1 Max Faders	24

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54	P1 Independ Bus Sw	1 0 0 0 0 0 0 0
55	P1 Pre-Fader Aux Bus	0 1 0 0 0 0 0 0
56	P1 Settings	0 0 0
	P1 Last Hardware	
57	Found	0
58	P1 Unique Name	Studio Tag
70	Port 2 Surface Type	none
71	P2 Num of Devices	
72	P2 Num of Faders	
73	P2 Max Faders	
74	P2 Independ Bus Sw	
75	P2 Pre-Fader Aux Bus	
76	P2 Settings	
	P2 Last Hardware	
77	Found	
78	P2 Unique Name	
90	Port 3 Surface Type	none
91	P3 Num of Devices	
92	P3 Num of Faders	
93	P3 Max Faders	
94	P3 Independ Bus Sw	
95	P3 Pre-Fader Aux Bus	
96	P3 Settings	
	P3 Last Hardware	
97	Found	
98	P3 Unique Name	
110	Port 4 Surface Type	none
111	P4 Num of Devices	
112	P4 Num of Faders	
113	P4 Max Faders	
114	P4 Independ Bus Sw	
115	P4 Pre-Fader Aux Bus	
116	P4 Settings	
	P4 Last Hardware	
117	Found	
118	P4 Unique Name	
130	Port 5 Surface Type	none
131	P5 Num of Devices	
132	P5 Num of Faders	
133	P5 Max Faders	
134	P5 Independ Bus Sw	
135	P5 Pre-Fader Aux Bus	
136	P5 Settings	
	P5 Last Hardware	
137	Found	
138	P5 Unique Name	

150	Port 6 Surface Type	none
151	P6 Num of Devices	
152	P6 Num of Faders	
153	P6 Max Faders	
154	P6 Independ Bus Sw	
155	P6 Pre-Fader Aux Bus	
156	P6 Settings	
	P6 Last Hardware	
157	Found	
158	P6 Unique Name	
160	Config file name	C:\Logitek\Configs v5\JSP-12.xls
172	Config Save Date	9/2/2014 9:51:58 PM
174	JetSet Name	jsp-PC
182	1st Port 1 Dest	0x000B
183	1st Port 2 Dest	
184	1st Port 3 Dest	
185	1st Port 4 Dest	
186	1st IO Dest	0x006E
187	1st Port 1 Source	0x00BE
188	1st Port 2 Source	
189	1st Port 3 Source	
190	1st Port 4 Source	
191	1st Mix Minus Source	0x00D2
192	1st IO Source	0x0100
193	1st network Source	0x0200

End of System sheet

## Table Version

The version number of the DSP software without the decimal point. The initial release that supports JetSet is 5.0, therefore it would be written as 50.

## Sample Rate

The master sample rate for the JetStream. If sample rate converters are engaged on digital inputs, all inputs will be resampled to this rate; if the sample rate converters are turned off the inputs must match this rate. All digital outputs will be set to this rate. Valid entries are 32.0 K, 44.1 K, 48.0K. Default is 48.0K.

## External Sync Type

The format of external sync the JetStream should expect.

None: Does not rate-lock; operates on its internal sample rate clock only

Network: rate locks to the master across the LAN

AES: Locks to AES silence on the Ext. Sync input

Video: Tri-level sync on the BNC Video Sync input

Word Clock: Word clock on the BNC Video Sync Input

PPS: Pulse per second sync from a GPS clock

## JetNet Number

A unique number to identify this JetStream on the LAN. Valid entries are 1 – 255.

## Country Code

Valid entries are USA and UK.

In the UK mode, metering shifts to PPM only, the fader scale shifts to unity gain being at fully open (255). Bus 0 turns on when the fader opens and off when the fader closes. The on switch in US consoles is a machine start button in UK consoles. The off switch in US consoles is a PFL (cue) switch in UK consoles.

## Net 1 IP Address

The IP address of the NIC for audio network 1. [Not the multicast address!] Set a fixed IP address that does not conflict on your network.

## Net 2 IP Address

The IP address of the NIC for audio network 2. As with 1, this is a hardware address and not the multicast address.

## Multicast Base Address

The base address that all multicast addresses on the system are created from. Also the address used for the “announce channel” where JetStreams report their sources. All JetStreams on the LAN should use the same base. Default is 239.193.0.0.

## JetNet Base Port

The base TCP port used for Logitek virtual clients and guest connections to connect to JetStream Server. Default is 10200.

## Net Protocol

Audio Networking Protocol used. Default is JetNet. Other valid entries include Livewire and AES67, but those are not supported at press time.

## Engine Type

Tells the DSP how many card slots to use and features to support. Valid entries are **JSP** for JetStream Plus and **JSM** for JetStream Mini

## Slot 1 Card Type

The type of card installed in this slot. Valid entries:

Mic In

Analog In

Analog Out

Digital In

Digital Out

SDI In

## Slot 2 Card Type

See Slot 1 entry for more information.

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**Slot 3 Card Type**

See Slot 1 entry for more information.

**Slot 4 Card Type**

See Slot 1 entry for more information.

**Slot 5 Card Type**

See Slot 1 entry for more information.

**Slot 6 Card Type**

See Slot 1 entry for more information.

**Slot 7 Card Type**

See Slot 1 entry for more information.

**Slot 8 Card Type**

See Slot 1 entry for more information.

**Slot 9 Card Type**

See Slot 1 entry for more information.

**Slot 10 Card Type**

See Slot 1 entry for more information.

**Slot 11 Card Type**

See Slot 1 entry for more information.

**Slot 12 Card Type**

See Slot 1 entry for more information.

**Slot 13 Card Type**

See Slot 1 entry for more information.

**Slot 14 Card Type**

See Slot 1 entry for more information.

**Slot 15 Card Type**

See Slot 1 entry for more information.

**Slot 16 Card Type**

This is the DSP slot on a JetStream Plus. Leave blank.

**Slot 17 Card Type**

Reserved for future expansion.

**Slot 18 Card Type**

Reserved for future expansion.

**Slot 19 Card Type**

Reserved for future expansion.

## Slot 20 Card Type

Reserved for future expansion.

## JetStream Layout

The number of active ports used. Example: if two consoles will be connected, this would be 2 Ports.

Now we get into the port definitions.

50	Port 1 Surface Type	mixer
51	P1 Num of Devices	40
52	P1 Num of Faders	12
53	P1 Max Faders	24
54	P1 Independ Bus Sw	1 0 0 0 0 0 0 0
55	P1 Pre-Fader Aux Bus	0 1 0 0 0 0 0 0
56	P1 Settings	0 0 0
	P1 Last Hardware	
57	Found	0
58	P1 Unique Name	Studio Tag

## Surface Type

None = no surface

mixer = any kind of audio console other than the artisan

Artisan = the Artisan TV console

## Num of Devices

How many device numbers used by the surface

## Num of Faders

How many faders are on the surface

## Independ Bus Sw

Independent Bus Switching. An array of binary numbers. 8 numbers, one for each aux bus, first one is aux 1 and last is aux 8. 1 means on and 0 means off. When independent bus switching is enabled, we ignore bus 0 for any fader with that aux bus selected.

## Pre-Fader Aux Bus

Pre-Fader Aux Bus means we ignore the fader position and send audio on the appropriate aux bus out at unity gain on that bus. An array of binary numbers. 8 numbers, one for each aux bus, first one is aux 1 and last is aux 8. 1 means on and 0 means off.

## Settings

A three digit binary array, where 0 means off and 1 means on. First digit is for the studio monitor bus; 1 means pre fader and 0 means post fader. Second digit is for the cue bus. 1 means pre fader and 0 means post fader. Third digit is for locking the program bus on with bus 0. 1 means yes, 0 means no.

## Last Hardware Found

The last surface type that checked in with JetStream Server.

### Unique Name

A unique name for the console to display in JetSet.

This information repeats for a total of 6 surfaces.

70	Port 2 Surface Type	none
71	P2 Num of Devices	
72	P2 Num of Faders	
73	P2 Max Faders	
74	P2 Independ Bus Sw	
75	P2 Pre-Fader Aux Bus	
76	P2 Settings	
77	P2 Last Hardware Found	
78	P2 Unique Name	
90	Port 3 Surface Type	none
91	P3 Num of Devices	
92	P3 Num of Faders	
93	P3 Max Faders	
94	P3 Independ Bus Sw	
95	P3 Pre-Fader Aux Bus	
96	P3 Settings	
97	P3 Last Hardware Found	
98	P3 Unique Name	
110	Port 4 Surface Type	none
111	P4 Num of Devices	
112	P4 Num of Faders	
113	P4 Max Faders	
114	P4 Independ Bus Sw	
115	P4 Pre-Fader Aux Bus	
116	P4 Settings	
117	P4 Last Hardware Found	
118	P4 Unique Name	
130	Port 5 Surface Type	none
131	P5 Num of Devices	
132	P5 Num of Faders	
133	P5 Max Faders	
134	P5 Independ Bus Sw	
135	P5 Pre-Fader Aux Bus	
136	P5 Settings	
137	P5 Last Hardware Found	
138	P5 Unique Name	

150	Port 6 Surface Type	none
151	P6 Num of Devices	
152	P6 Num of Faders	
153	P6 Max Faders	
154	P6 Independ Bus Sw	
155	P6 Pre-Fader Aux Bus	
156	P6 Settings	
	P6 Last Hardware	
157	Found	
158	P6 Unique Name	

## Config File Name

The path and file name of the JetFile

## Config Save Date

The date and time this JetFile was saved

## JetSet Name

The computer name of the embedded PC in the JetStream

## 1<sup>st</sup> Port 1 Dest

The device number of the first destination used by the surface, (think first mix bus address)

## 1<sup>st</sup> Port 2 Dest

The device number of the first destination used by the surface,

## 1<sup>st</sup> Port 3 Dest

The device number of the first destination used by the surface,

## 1<sup>st</sup> Port 4 Dest

The device number of the first destination used by the surface,

## 1<sup>st</sup> IO Dest

The device number of the first output on the IO cards

## 1<sup>st</sup> Port 1 Source

The device number of the first source used by the console (think first fader input)

## 1<sup>st</sup> Port 2 Source

The device number of the first source used by the console (think first fader input)

## 1<sup>st</sup> Port 3 Source

The device number of the first source used by the console (think first fader input)

## 1<sup>st</sup> Port 4 Source

The device number of the first source used by the console (think first fader input)

## 1<sup>st</sup> Mix Minus Source

The device number of the first mix minus bus



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**1<sup>st</sup> IO Source**

The first device number of the inputs from the IO cards

**1<sup>st</sup> Network Source**

The first device number assigned to incoming network sources

**End of System sheet**

denotes the end of the file. Must be present in the last Parameter in the tab.