WHEATNET

# LX-24

## ADVANCED MODULAR NETWORKABLE CONSOLE


Wheatstone

BROADCAST AUDIO PERFECTIONISTS℠

## Wheatstone consoles and control surfaces

Wheatstone has long been the leader in audio consoles and networking for the radio and television audio industries. Wheatstone consoles built 25 years ago are still in service. They are known for their rock-solid reliability and superior performance, and we bring these qualities to the table whenever we design something new.

Our LX-24 is designed to be top of its class – maybe even a rung or two higher than that. Its fit and finish are flawless. Its function is something that's the envy of every other console in the industry. Get your hands on one and you simply won't want to give it up. It's THAT good.

## WheatNet-IP: The Intelligent Network

We looked at the world of AoIP Networking and thought long and hard before jumping in. The stuff that was out there was OK, but left a LOT of room for improvement. For starters, the way the workload was distributed had to change. Rather than having a single point call the shots, we thought it important to have distributed intelligence built into WheatNet-IP. What this means is that every BLADE (or node) has the DNA of the entire network and can operate in any position on the network. It means that the network can configure itself, as every BLADE is self-aware. It means the network can heal itself - if a BLADE fails (fat chance) just put a new one in its place and watch it set itself up. We also incorporated gigabit ethernet speed throughout the entire network, giving you 10 times the bandwidth of the common stock.

WheatNet-IP's Intelligent Network is what the industry has been waiting for – WheatNet-IP is what YOU'VE been waiting for!


SONY

# the surface

**our top of the line console feels exactly the way a surface like this should...perfect**

While it's a feast for the eyes, its core design elements are what make Wheatstone's LX-24 really stand out. For starters, it's conceived for people who work in radio. Pull up a chair and you'll feel right at home.

The LX-24's totally modular design lets you configure it exactly as you like. And you can hot-swap any module at any time. There are no electronics in the pan below the modules – in the event one needs to be replaced, simply reassign the audio to another module and you're up and running in seconds. Pop in a replacement module at your convenience. It's that simple.

The LX-24 can be anywhere you need. It's already part of the WheatNet-IP Intelligent Network – the IP88E Mix Engine BLADE provides audio mix functionality and can be anyplace on the network. Additional BLADEs can be added for inputs and outputs in a variety of digital and analog formats, and this I/O can be shared with other consoles and devices, such as AirAura and Aura8-IP, throughout the Intelligent Network (see pages 8 and 9).

The LX-24 is an intelligent surface that can store and recall all your settings. It even remembers settings if you have to hot-swap a module. Snapshots of the LX-24's configuration can be saved and recalled at the touch of a button, making setup for different shows or dayparts a snap.

The LX-24 modular control surface has a low-profile, table-top design that allows it to fit into almost any studio situation. The meterbridge features up to four sets of bright, high resolution LED meters, as well as circular LED displays for auxiliary send levels and pan control. A digital count-up/count-down timer is also included.

Each input channel can be assigned to four stereo busses, plus four pre/post-selectable aux sends, a stereo CUE bus, four mix-minuses and the panel's own bus-minus. An LED source name display, an A/B source selector, and two programmable soft buttons are included and a SET button provides access to assignable controls in the master section.

Control room and headphone outputs with level control and source selection are provided, as well as two independent studio monitor outputs. Stereo CUE speakers are built into the meterbridge. Headphones and CUE are delivered to the surface right from the IP network, so there's no tying up BLADE outputs for the headphone and cue audio.

On-board VGA and USB-Mouse connectors allow a monitor and mouse to be connected to the console for configuration and advanced console functions.

As with all Wheatstone products, the LX-24 is made in the USA at our New Bern, NC facility and is supported by Wheatstone on both sides of the country (and around the world).

It was time to raise the bar for radio consoles. Who better to do it than Wheatstone?

- Low-profile table-top design
- Meterbridge with up to four bright, high-res LED meter sets
- Each input channel features:
  - Four stereo bus assigns
  - Four pre/post-fader aux sends
  - Four mix-minuses
  - Bus-Minus®
  - Source name display
  - A/B source selector
  - 2 programmable buttons
  - Vorsis EQ and Dynamics including 4-band parametric EQ, High- and Low-Pass filters, Compressor and Expander/Noise gate
- Control room and headphone outputs with level control and source selection
- Two independent studio outputs
- Stereo cue speakers and amplifier, built-into meterbridge
- Onboard VGA and USB-Mouse connectors
- Event storage (snapshots) and recall
- Mix Engine BLADE included

# five cool things...

...you can do with the LX-24 that you can't do with consoles of conventional architecture

1. Assign any source of any type anywhere on your network to any fader
2. Hot-swap individual modules without powering down or disassembling
3. Take command of the console from anywhere that has network access with our Glass-E software
4. Use Wheatstone's Automation Control Interface for bidirectional communication over WheatNet-IP between control surfaces and external systems from our technology partners
5. Sculpt and control your sound with Vorsis EQ and Dynamics

# the details

## a modular control surface that's completely customizable for your applications

The LX-24's design features stainless steel switchguards on the ON/OFF switches and long-life sealed contact switches that are LED illuminated. Its modular construction allows you to customize its layout and functionality. Every module is hot-swappable, meaning that there's never any downtime if you need to add, change or replace one. Have as many input modules as you need. Want more programmable buttons? Just add another Accessory module. There are no electronics beneath the modules in the LX-24, so the likelihood of an accidental spill taking the board out is minimized. And there are several frame sizes to choose from to get the exact size you need.

## Meterbridge

Behind the LX-24's beauty is tremendous functionality. Exceptionally fast and accurate, the level LED meters feature an overload indicator that glows blue when the signal is within 3dB of clipping. There are also 4 very cool circular LED displays that indicate auxiliary send levels. Below those are an LED indicator for pan control and a digital count-up/count-down timer.

# the details

## all the panels – everything you need to mix - right there at your fingertips

### input


The LX-24 is a modular console design that accommodates up to 24 input channel faders.

All modules feature sealed-contact illuminated LED switches. ON/OFF switches have stainless steel guards.

**SET Button** Assigns the channel strip for programming of pan, mix-minus assign, and input source on the master panels (control room and headphone) and for less frequently used controls (EQ, dynamics, logic and more).

**INPUT A/B Source Buttons**
Press to take or press and hold to program a source. This function can be locked out in the user access screen.

**Programmable SOFT 1 & 2 Buttons**
Can be programmed on the monitor display for a wide range of functionality. Typically used for hot source select, mode change, or EQ/ filter/compression insertion.

**MODE Indicators** Displays channel strip's source mode

**MXM Tallies** LEDs that indicate which mix-minus busses the source is feeding; assignment is set on the master section of the headphone panel.

**Bus ASSIGN Buttons**
Assigns the source to the console's four output busses.

**SOURCE Display** Displays the source currently assigned to the channel strip, or scrolls the available sources when changing input source.

**TB Button** Interrupts the channel bus-minus output with talkback.

**CUE** Assigns the source to the cue bus (pre-ON/OFF switch, pre-fader).

**FADER** 100 mm long-throw professional fader.

**ON-OFF** Turns the channel on and off.

### control room


This module is for Control Room monitor mix control and Source Selection for input channels, monitor mixes and switched meters.

**SEND 1 Level Control** When an input channel is in SET mode, this knob controls the level of that channel into the SEND 1 mix. There is an associated LED indicator ring in the meterbridge to display this level. Pressing the knob turns the Send ON or OFF.

**STEP Button** Steps through the channel MODEs (Mono, Left, Right, Stereo).

**SOURCE Selector 8-Character Display** When an input, monitor, or switched meter is in SET mode, this display shows the available sources as the encoder is scrolled.

**SOURCE SELECT Encoder**
When an input, monitor, or switched meter is in SET mode, this encoder is used to scroll through the list of available sources. Once the encoder is turned, the TAKE button lights up. Holding the SET button down while turning this knob sets channel input gain.

**TAKE Button for Source Select** When the desired source shows in the display, press to connect the source (times out after 20 seconds).

**CR/HDPN Monitor Source 8-Character Display** Shows the active source for the control room and headphone monitor mix.

**EXT Button for Control Room/ Headphone Monitor** A programmable "wild" source hot button for the control room and headphone monitor mixes. Press the EXT button to choose this wild source; press and hold to program the button.

**SET Button for Control Room/ Headphone Source Selection**
Press to enter SET mode for the control room/headphone mix and select the desired source.

**SOURCE Selection Buttons**
Pressing one of these places a console output bus into the control room / headphone monitor mix. More than one bus can be selected, and all selected sources will be mixed together.

**FADER** 100 mm long-throw professional fader sets the control room monitor mix level.

### headphone


This module is for Headphone monitor mix level control, Cue level control, Mix-Minus assignment, and Timer control.

**SEND 2 Level Control**
When an input channel is in SET mode, this knob controls the level of that channel into the SEND 2 mix. There is an associated LED indicator ring in the meterbridge to display this level. Pressing the knob turns the Send ON or OFF.

**MXM ASSIGN Buttons**
When an input channel is in SET mode, these buttons are used to assign that fader channel into the Mix Minus busses. The buttons stay lit to show the assignment.

**PAN Control for Input Channels**
When a fader channel is in SET mode, this control is used to pan the audio left - right in the stereo program busses. There is an associated LED indicator array in the meterbridge.

**SET Control for Switched METERS**
When pressed, places the switched meters into SET mode for source selection (available sources determined by visibility settings during setup).

**CUE Level Control**
Stereo level control for the meterbridge cue speakers.

**TIMER Controls**
Auto-restart, Start/Stop, Hold, and Restart. Auto-restart will stay lit when selected and allows VDIP selected input channels to restart the timer when turned ON. The UP arrow button is used to set the starting time for a countdown. The DOWN arrow button sets the timer to countdown mode.

**FADER**
100 mm long-throw professional fader sets the headphone monitor mix level.

## studio 1


This Module is for Studio 1 control, MXM Talkback, and Event hot button select.

**SEND 3 Level Control** When an input channel is in SET mode, this knob controls the level of that channel into the SEND 3 mix. There is an associated LED indicator ring in the meterbridge to display this level. Pressing the knob turns the Send ON or OFF.

**MXM Talkback Buttons** Pressing a button momentarily sends the Talkback interrupt signal to the selected Mix Minus bus. Releasing the button removes the Talkback interrupt signal from the mix.

**Encoder to SELECT Event** Rotate the encoder to select the desired event. Once the encoder is turned, the TAKE button lights up until it is pressed to select one of the events.

**TAKE Button for Event Selection** Events (up to 99) are created and named.

**EVENT 8-Character Display** Shows the last event taken, or the available events as the selector is scrolled. If no event is taken, times out after 20 seconds and reverts to showing the last event taken.

**PRESET Hot Buttons for Events 1, 2, 3, & 4** The first 4 saved events have a special status; they can be recalled by pressing one of these hot buttons. Press once and the button flashes, press a second time and the event is taken and the light goes out.

**EXT Button for Studio 1 Monitor** A programmable "wild" source hot button for the Studio 1 monitor mix. Press the EXT button to choose this wild source; press and hold to program the button. The button remains lit while the wild source is feeding the mix.

**SET Button for Studio 1 Source Selection** Press to enter SET mode for the Studio 1 mix and select the desired source.

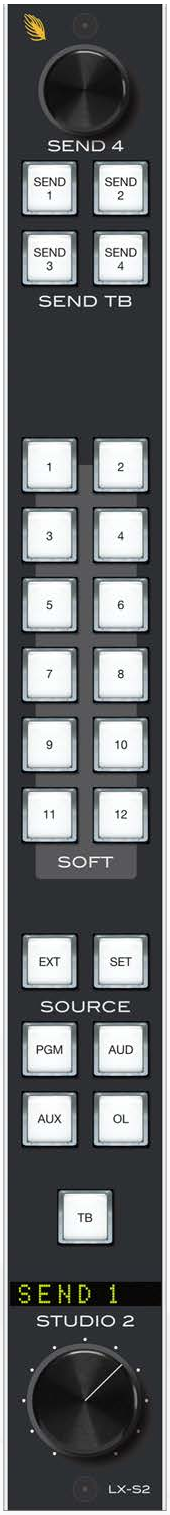
**Studio 1 SOURCE Selection Buttons** Pressing one of these selects a console output bus as the Studio 1 monitor source. The button stays lit to indicate the selection.

**TALKBACK Button for Studio 1** Press to momentarily send the Talkback interrupt signal to the Studio 1 monitor mix. Releasing the button removes the Talkback interrupt signal from the mix.

**STUDIO 1 Source 8-Character Display** Shows the active source for the Studio 1 monitor mix.

**STUDIO 1 Level Control** Sets the level of the Studio 1 monitor mix.

## studio 2




This Module is for Studio 2 control, Send Talkback, and Programmable Soft Buttons.

**SEND 4 Level Control** When an input channel is in SET mode, this knob controls the level of that channel into the SEND 4 mix. There is an associated LED indicator ring in the meterbridge to display this level. Pressing the knob turns the Send ON or OFF.

**SEND Talkback Buttons** Pressing a button momentarily sends the Talkback interrupt signal to the selected SEND bus. Releasing the button removes the Talkback interrupt signal from the mix.

**Programmable SOFT Buttons (12)** Use these to control salvos, events, momentary connections, intercom and logic functions, etc.

**EXT Button for Studio 2 Monitor** A programmable "wild" source hot button for the control room and headphone monitor mixes. Press the EXT button to choose this wild source; press and hold to program the button. The button remains lit while the wild source is feeding the Studio 2 mix.

**SET Button for Studio 2 Source Selection** Press to enter SET mode for the Studio 2 mix and select the desired source.

**Studio 2 SOURCE Selection Buttons** Pressing one of these selects a console output bus as the Studio 2 monitor source. The button stays lit to indicate the selection.

**TALKBACK Button for Studio2** Press to momentarily send the Talkback interrupt signal to the Studio 2 monitor mix. Releasing the button removes the Talkback interrupt signal from the mix.

**STUDIO 2 Source 8-Character Display** Shows the active source for the Studio 2 monitor mix.

**STUDIO 2 Level Control** Sets the level for the Studio 2 monitor mix.

## accessory


There are two different versions of the ACCESSORY module:

The first version has switches whose terminals and LED indicators are brought out to a console frame external connector.

The other version has the same switches, but these are connected to a GPC-1 control card so they can be user programmed in scripts.

There is no surface software interaction with either version of this panel.

# reaction

## LX-24 buzz from some pretty heavy hitters in radio

"I didn't think Wheatstone could improve upon the E-Series of consoles, but they have done it with the new LX-24. This is a beautiful, well designed console and the individual faders, integrated meters with overload indicators and low profile table-top design make this a must have for our facilities."

*Michael Cooney, Vice President of Engineering & CTO, Beasley Broadcast Group, Inc.*

"A high performance, reasonably priced, great looking console integrating common sense features such as overload indicators for meters and ergonomic controls. Very impressive and well thought out."

*Benjamin Brinitzer, Regional VP Engineering Clear Channel Media & Entertainment*

"Wow! Wow!"

*Rick Hunt, Vice President & Director of Radio Engineering, Entravision Communications Corporation*

"I am very impressed with the sleek new design that incorporates single channel-strip architecture, integrated metering and stereo cue speakers in a thin, sloping chassis that needs no cabinetry cut out. Well done."

*Erik Kuhlmann, Senior Vice President of Engineering, Clear Channel Media + Entertainment*

"By far the most elegant and feature rich control surface on the market. The attention to detail and functionality is remarkable. Its architecture, such as "hot swappable" modular design, is a winner. A traditional meterbridge is appreciated by users and your millwork guy will appreciate the fact that it's a table-top design."

*Kris Rodts, Director of Engineering, IT & Facilities, CKUA Radio Network*

"The LX caught my attention on the NAB Show floor. The look, form and function are unlike any other IP console available today. The easy-to-read buttons and displays are just second to none, not to mention the most bang for the buck. I can't wait 'til I have the opportunity to deploy my first LX."

*Anthony A. Gervasi, Jr., Sr. Vice President Engineering & Technology, Nassau Broadcasting*

"Cool and sexy (I sound like Bruno from Dancing with the Stars). A great addition to the WheatNet-IP family."

*Norman Philips, Vice President of Engineering, Townsquare Media*

"Considering the LX-24's attractive good looks, modularity, traditional console layout and functionality, I can't wait to get my hands on one!"

*Greg Landgraf, Senior Engineering Manager, Corus Radio Western Canada*

"Leave it to the exquisite design talents of Gary Snow and the Wheatstone team to really hit the nail on the head. The LX-24 is not only the most functional, feature-laden IP based console for radio, it also raises the bar for the finest ergonomic radio command center on the planet."

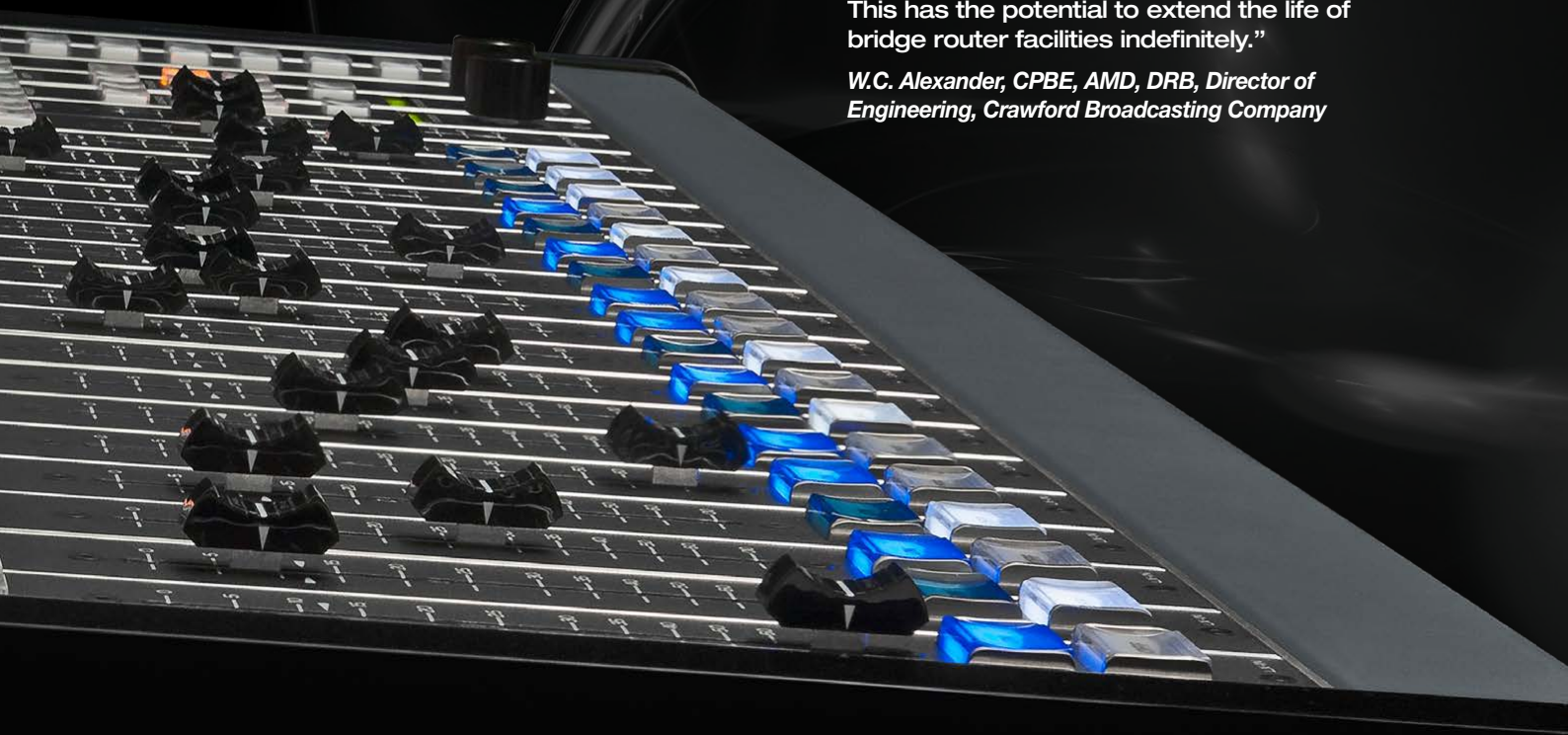
*Tim Schwieger, President / CEO, BSW- Broadcast Supply Worldwide*

"Wheatstone's innovation continues to make AoIP a viable product for professional broadcasting facilities. Just a few things that make the LX-24 stand out to me are the clear and decisive metering, individual fader modules, and "out of the box" thinking with faders for the headphone and monitor volume controls instead of rotary knobs."

*Phillip Vaughan, Chief Engineer KFROG, CBS Radio*

"Wheatstone continues to hit balls out of the park and this year they did so again with the LX-24 control surface. This new product marries the best of the old (modular design architecture) with the new (Audio-over-IP). Continuing in that theme was a Wheatstone module that marries their bridge router system to the new "BLADE" audio-over-IP system. This has the potential to extend the life of bridge router facilities indefinitely."

*W.C. Alexander, CPBE, AMD, DRB, Director of Engineering, Crawford Broadcasting Company*



# the network

## With the modern, intelligent WheatNet-IP audio networking, you can:

**Make wholesale studio changes...**
...or switch studios from any seat, reconfigure control surfaces for multiple purposes, and even change audio processing settings automatically when, say, a certain mic turns on. It's all in the WheatNet®.

**Bring on the devices.**
WheatNet-IP gets along with everyone, including MADI gear like ProTools and TDM systems, and interfaces to more than 40 third-party brands and/or products for end-to-end, seamless operation from the microphone to the stick. In addition, new third-generation WheatNet-IP access units are AES67 compatible, which means you can integrate your audio network with other AES67 compatible devices and systems.

**Integrate audio routing and automation.**
Imagine interfacing your audio network to your automation system with no sound cards, external logic connections or added routers. Or, better yet, imagine fully integrated audio automation and routing so an announcer seated at the playout system can set a fader for a console located anywhere in the facility. That's WheatNet-IP.

**Access any audio, anywhere.**
WheatNet-IP handles native analog, microphone, AES/EBU, SPDIF, AoIP, MADI, SDI and even AES67, which is now included in our third-generation access units. Ingest any audio format into the WheatNet-IP, and convert to any audio output — analog to digital, AES to IP, microphone to AoIP or MADI to AES67.

**Control and route audio all on the same cable.**
No more having to chase down or create new logic commands for sources every time you change control surfaces or studios. Logic follows audio. Audio and control for that audio travel down the same cable, so you can pick up feeds and the logic for those feeds anywhere along the network. Route any audio input to any or all outputs in the network.

**Relax, you have switch-over silence detection.**
Let's say an operator misses a cue or leaves a fader down. No problem. When WheatNet-IP senses silence, it can take the automation system directly to air until the operator catches up. Every single audio output channel can be programmed with silence detection and automatic switch-over function.

**Simplify things.**
No need to assign IP addresses or allocate bandwidth or pay someone else big money to do it. Just plug it into your managed gigabit Ethernet switch and let WheatNet-IP do the rest. Add codecs, processors and controllers or change I/Os in a snap. You spend less time configuring the system, and more time on what's important: creating awesome sound.

**Call the shots.**
You call the shots, not some PC. WheatNet-IP distributes the workload to all access points in the system for better overall network stability. Each WheatNet-IP BLADE access unit has its own embedded processor with operating system that allows it be a powerful standalone router or part of a larger system. WheatNet-IP is an embedded system that does not require outside intervention or control from 3rd party software running on PCs. The configuration of the entire network is stored in each BLADE.

**Self-pruning multicast trees.**
A lot of older IP audio networks don't manage the multicast streams, which could require you having to periodically manage this yourself or getting a bigger, more expensive switch to handle the mounting volume of streams. Not WheatNet-IP, which continually prunes unused source groupings from the network so that you never run out of switch or time having to delete unused channel assignments that are no longer in use.

**Avoid costly system failures.**
A distributed and intelligent network means no more centralized points of failure to go wrong, plus more points of recovery. Each WheatNet-IP BLADE access unit is self-aware, and can reconfigure itself in an emergency. In fact, each BLADE in the network can recover settings for your entire studio operation!

**Stay ahead of the curve with Gigabit Ethernet architecture.**
You might not be in a hurry now with 100mbps throughput, but we promise you'll want the system that has 1 gigabit/second Ethernet throughput once you get your audio network up and running. All WheatNet-IP BLADEs use gigabit Ethernet. This makes all the difference in network throughput, near-zero delay, reliability – and a whole lot more.

**Get more on the network for less cost.**
Some IP audio nodes are mere input/output devices. Each WheatNet-IP BLADE I/O access unit, by comparison, comes standard with routable utility mixers for mixing, summing and controlling audio in lieu of costly DAs, plus newer BLADE-3s include a multi-band stereo processor for "spot" processing satellite feeds, headphone audio, web streams or any audio feed routed throughout the network. Also included in our new BLADE-3 access units is embedded audio playback that can be used to put emergency audio on the air, and much, much more. With all that functionality built in, WheatNet-IP can save you substantially in hardware costs alone.

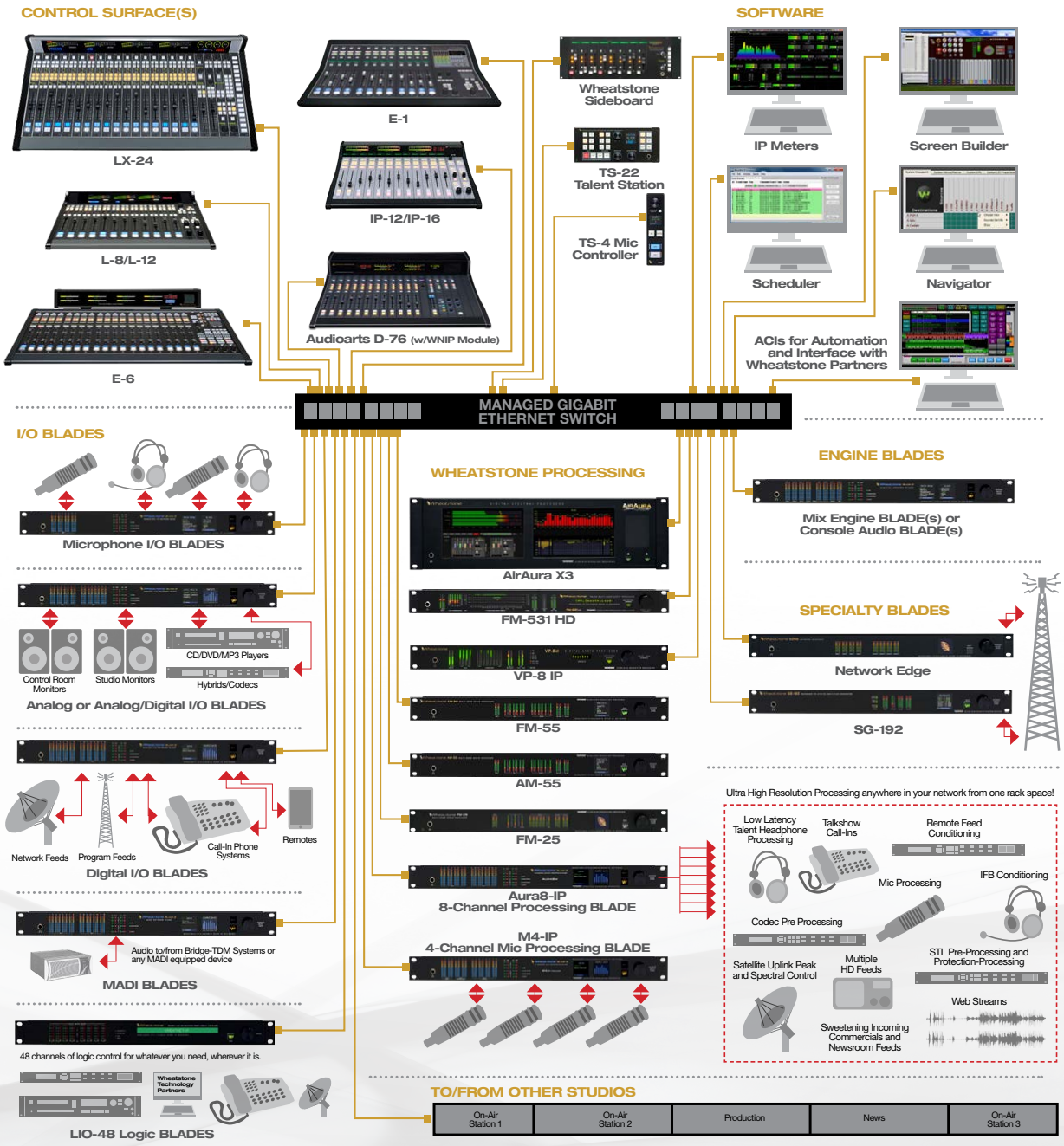
**Eliminate audio latency problems.**
Finally, an audio IP system that can keep up with audio, which means your automation system won't ever drop a satellite feed or skip a commercial because of delay again. Gigabit Ethernet is why.

**Get way more for less.**
We're talking full-featured routable mixers, stereo processor, and automation control in each BLADE-3 I/O unit , so operators can pan audio, turn channels ON/OFF, set fader levels, and do audio fades, ducking, source assignments – and lots more. The possibilities are mind-boggling.

**Expand your network at any time, for less.**
With control and intelligence built into every WheatNet-IP BLADE I/O access unit, you already have most of the networkability you need to grow with the times.

# the network

## building the audio ecosystem



# beyond the surface

**there's a world of Wheatstone smart control panels, software, BLADE-3s and other surfaces for you to put to work.**

## I/O BLADE-3s

I/O BLADEs are access points on the WheatNet-IP Intelligent Network, converting each hardware physical input — audio or logic — to a data stream on the network, and converting data streams to hardware digital outputs. They provide the means of interfacing and controlling all of the audio equipment on your network.

The IP88A (analog), IP88D (digital), IP88AD (analog/digital) and IP88M (mic level) BLADEs handle your standard audio I/O requirements. Each has 8 stereo channels, 16 mono channels, or any combination totaling 16 discrete channels. The A/D versions are half analog, half digital. And the mic BLADE has 8 XLR inputs with high-quality mic preamps.

## Special Purpose BLADE-3s

Another I/O BLADE is the MADI BLADE, which converts a 64-channel MADI input to data streams on the network, and converts data streams to 64-channel MADI outputs.

The LIO-48 Logic BLADE provides 48 universal logic I/O ports, each individually configurable, for turning devices on or off by time or event, for automatically adjusting the audio processing settings when a certain mic turns on, and for any other logic control you need in your studio operation.

## Mix Engine & Console Audio BLADE-3s

We have several BLADES built to handle specific tasks. First are the Engine BLADES: IP88E and IP88CB. The IP88E is a BLADE that houses all DSP power for an individual control surface or Glass-E virtual mixer, and distributes the four stereo PGM busses, four stereo AUX sends, per-channel mix-minus feeds, monitor outputs, and other bus signals to the network. Once on the network, they are available as sources and destinations anywhere. This creates an extremely flexible system, where program outputs from one surface can be a source on any other surface. For example, a news mixer's program bus can come up as a source on the air studio control surface. While the IP88E doesn't house audio I/O, it does include 12 universal logic (GPIO) ports.

The IP88CB provides powerful interface options, including four AES inputs, four stereo analog inputs, four AES outputs, and four stereo analog outputs on RJ45s; control room and studio stereo analog outputs on XLRs, two mic level inputs with gain trim and switchable phantom power on XLRs; cue and headphone outputs on both RJ45 and 1/4" TRS, and 12 GPI logic ports on RJ45.

## Audio Processing BLADE-3s

Placing a processor everywhere you'd like one has been costly and impractical. Until now. A single Aura8-IP gives you up to eight processors to use as you wish. Use it as a standalone processor with analog and digital inputs or make it a part of your WheatNet-IP network. Either way, the Aura8-IP is a powerhouse.

The M4-IP Microphone Processor BLADE combines four high-quality microphone preamps, four channels of Vorsis embedded microphone processing, and a WheatNet-IP BLADE interface, allowing you to place four microphone inputs anywhere in your WheatNet-IP Intelligent Network. The preamps and processors are accessed and controlled from any point on the network via its Windows-based GUI.

There are several other processors that are WheatNet-IP native as well. These include the VP-8IP, AirAura X3 and FM-531HD.

*NOTE: As of August 2014, our original BLADEs are still available. Please contact your Wheatstone sales engineer for further info.*

### WheatNet-IP Overview & Planning Guide

Get a good overview of the Intelligent Network. Learn about all of your console options, details about all BLADEs and compatible processors, all accessories, details on WheatNet-IP technology, interface ideas and more.

This guide is downloadable from any WheatNet-IP product page on our website.

Or, just go to:
**http://ip-overview.wheatstone.com**


## Small Control Surfaces

### 1. TS-4 Talent Station
Provides lighted on/off/cough and talkback switches for a single talent microphone. A rotary headphone source selector is provided along with an OLED display for identifying the selected source.

### 2. TS-22 Talent Station
This full featured Talent Station turret plugs into the WheatNet-IP intelligent network to provide microphone control, headphone (with built-in amplifier) and speaker levels, plus source select, programmable soft buttons and timer control. No outboard equipment required and no wiring it all together; a single CAT6 cable handles it all. Also available as a flush-mount countertop panel.

### 3. Sideboard Control Surfaces
This small control surface is available in 4 or 8 input, tabletop or rack versions and provides an extensive tool set, yet simple operation. Includes built-in headphone amp and controls, source select, and programmable buttons. As with the Talent Stations, just plug it into the WheatNet-IP network and go.

## Controllers

### HBX8-R Controller
An eight button rackmounted source controller for rapid access to eight preprogrammed sources. An encoder knob with associated display allows access to any signal on the network.

### XYE-R IP Controller
A rackmounted controller with full dialup source and destination control. Any signal accessible in a networked system is fully routable.

## IP Meters GUI Software

Get a quick read of any audio source, destination or stream in your WheatNet-IP Intelligent Network. Our new IP Meters GUI app displays a “wall of meters” on your computer screen for ongoing monitoring of audio peak levels and average levels at selected points throughout the entire network. Included is a separate analysis meter for spectral readings plus visual alerts should a channel go dark.

## Glass-E Software

Wheatstone’s Glass-E is the ultimate remote access tool. Use it where you don’t need a physical control surface, or to augment one that already exists. Think of it as a glass cockpit for your control room. With it, any of our control surfaces can be controlled remotely. Use GLASS-E to take command of the console from anywhere that has network access to the system – ideal for running the board from a remote or for assisting an unfamiliar operator from the engineer’s home!

## GP Series Control Panels

### GP8 and GP16 Panels
More than simple switch arrays, these 8 and 16 button panels come with their own scripting wizard. At the simplest level they can do source selection, push-to-talk, and preset/salvo activation. But the intelligence in each panel allows them to query the entire network and make switching decisions based on what they find. Conditional switching using Boolean logic functions allows for complex switching scenarios such as IF Studio B has requested the airchain, AND Studio A has acknowledged, THEN fire the Studio Change salvo.

### GP3 Panel
A straightforward headphone panel with level control, 1/4” headphone jack and a switch with LED tally (typically used for the COUGH function, but can be custom wired). Connectorized with both RJ45 and Phoenix screw terminals.

### GP4 Panel
A 4 button switch array for remote mic functions (typically ON, OFF, COUGH, TALKBACK). Interfaces with any available BLADE GPIO ports. Of course, all four switches can be custom wired for other functions as well.

### GP Turret
A compact desktop turret designed to house up to three (or six in our double width version) GP Panels.

### The Wheatstone Touch
Our protocol allows us to interface with commercially available third party touchscreens. You can create customized touch panels that are perfect for your application.

# the big picture

## this is where you get to see what you are hearing

You don't need to have a display hooked up to operate the LX-24. Its meterbridge and modules give you everything you need to operate the console day-in and day-out. You CAN use it with a monitor every day, if you like, via its built-in VGA port. Or if you want to get in and tweak the board's functions, the USB mouse port and GUI interface make it a snap to access our feature-rich software. It provides easy to understand tools for the less experienced board op, power tools for the experienced production guru, and setup and programming for the facility engineer. No external PC is required.

### MAIN SCREEN

Displays all critical information to the operator including high-resolution program level meters (average/peak), switchable meter, analog and digital clock, timer, and current event. Tabs allow access to lesser-used functions.


### EVENTS SCREEN

Create and recall console configurations for your different shows, functions, remotes and events. Store channel source and bus assignments, mix-minus settings, input mode and pan, and monitor configurations.


### INPUT SCREEN

Displays the source mode and panning configurations for each input channel.


### OPTIONS TAB

Essentially, this is your preferences screen. You can set options for studio mutes, studio tallies, bus-minus settings, offline mix and more.


### EQ & DYNAMICS

The LX-24 offers comprehensive Vorsis-grade processing for great-sounding voices, cleanup of remote feeds, and sweetening in the production environment:

**4-BAND PARAMETRIC EQUALIZER** with top and bottom bands switchable peak/shelf; the display shows the resulting curve.

**HIGH- AND LOW-PASS FILTERS,** 24db/octave, adjustable frequency 16-500Hz and 1-20kHz.

**SOFT-KNEE COMPRESSOR** with adjustable threshold, ratio, attack, release, makeup level.

**EXPANDER/NOISE GATE** with adjustable threshold, ratio, depth, and time constants.


# the nitty gritty

## specifications and other important stuff you should know about

*The LX-24 has built-in VGA and USB Mouse ports so you can operate it with an optional, off-the-shelf VGA monitor. Use the monitor as a part of daily operation or just for deeper editing and put it away. The choice is yours.*

*Back of LX-24*

### OLED SWITCH PANEL

*The all-new OLED Switch Panel is available for the LX-24, the L-8 and the L-12. Each button has a high-resolution OLED screen that can easily be customized to indicate its function.*

*The buttons are programmable to handle anything you can script.*

**PHYSICAL DIMENSIONS:**
LX-24 modules are 14" long x 1.5" wide. Standard LX-24 frames accommodate from 17 to 33 modules depending on the frame size.

All LX-24 frames are 1.9" (5 cm) high at the front, 5" (13 cm) high at the rear, and 19.7" (50 cm) from front to back.

The above dimensions are based on counter-top mounting; the LX-24 can optionally be dropped into a counter cut-out which will lower the above counter height by .75" (2 cm).

**STANDARD FRAME WIDTHS:**

| panels | frame width | optional counter cut-out |
|---|---|---|
| 17 | 28" (71cm) | 26-1/8" x 16-1/8" (66 x 41 cm) |
| 23 | 37" (94 cm) | 35-1/8" x 16-1/8" (89 x 41 cm) |
| 27 | 43" (109 cm) | 41-1/8" x 16-1/8" (105 x 41 cm) |
| 29 | 46" (117 cm) | 44-1/8" x 16-1/8" (112 x 41 cm) |
| 33 | 52" (132 cm) | 50-1/8" x 16-1/8" (127 x 41 cm) |

**CONNECTORS:**

| | |
|---|---|
| Monitor | VGA DB-15 |
| Ethernet | RJ-45 |
| Mouse | USB |
| Headphone | 3-pin (for use with supplied remote headphone jack bracket) |
| Power | Two 2-pin high power d-sub for redundant power supplies |

**INCLUDED WITH CONSOLE**
Every LX-24 console comes complete with frame, meterbridge with meters and CUE speakers (meter complement is dependent on frame size), SEND/PAN/TIMER display, a set of 4 monitor modules, one PSE-2 power supply and cable, headphone jack bracket with cable, documentation, and number of input modules as ordered.

### PSE-2 Power Supply

Clean and proper power is key to the great performance you've come to expect from Wheatstone. It would be easy to just purchase over-the-counter power supplies for our LX-24. But we don't. In order to maintain our high level of quality we've designed and built a dedicated separate rackmount supply.

### Headphone Pigtail

We know that headphone jacks are seldom located where you need them to be, so every LX-24 comes with this handy pigtail and heavy-duty flange with a TRS jack. Just plug it into the board and mount the brushed steel flange where you need it (such as under your desk, as pictured above). Voila! Your headphone jack is exactly where you want it.

### Wheatstone & WheatNet-IP Are Automation and Control Ready

The power of Wheatstone's advanced mixing router includes handshaking technology with many of the broadcast industry's leaders: Agile, Audioarts, AudioVault, Audio Compass, AVT, Burli, BSI, Calliope, Crestron, Dalet, Davicom, DE Broadcast Shop, Digital Jukebox, Enco, Eventide, FLEX, Genesys, Grass Valley, iMediaTouch, Macromedia, Miranda, Moseley, MRZ Broadcast, Netia, NewsBoss, Op-X, Pulsar Multimedia, RCS, Reality Check Systems, Rivendell, Ross, SkyView, Sony, StreamSolution (XDEVEL corp.), Tieline, Utah Scientific, Vorsis, VoxPro, WideOrbit, WinMedia, Wire Ready, and Zenon X Media.
And more are partnering with us every day.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