SOLUTION ANACROUSE

PERSONAL MIXER
ANUBIS -Venue Mission

A collaboration between Radioactivitees and Merging Technologies

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PRESENTATION

A symphony orchestra performing in a concert hall dedicated to classical repertoire does not need sound reinforcement.

However, when playing outdoors, in larger venues, or with contemporary music ensembles, amplification becomes essential.

The comfort and well-being of the musicians then become the top priority for technicians and sound engineers.

Unfortunately, setup and rehearsal times are often too short.

The Anacrouse solution was designed with these requirements in mind.

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CONCEPT

This solution combines audio products from the latest technological innovations by renowned manufacturers such as Luminex, Neutrik, and Merging Technologies.

This high-quality technical solution was born from our collaboration with Merging Technologies to create a Personal Mixer application within the Anubis audio-over-IP interface: Venue Mission.

It was designed to simplify the recording and monitoring of classical orchestras for live performances or recordings.

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Symphonic orchestral live performance
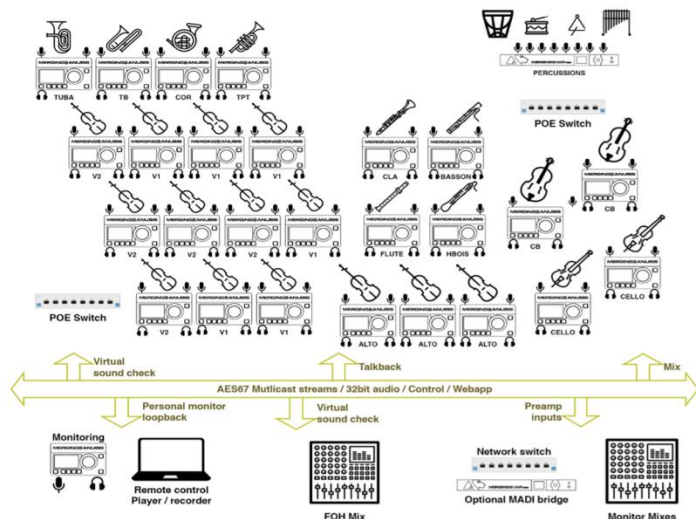
AoIP-AES67

The implementation relies on an audio-over-IP network infrastructure that remains interoperable with all digital audio formats in your usual environment.

In simpler terms: a single RJ45 cable delivers power, various stems created by the sound engineer, captures sound from microphones and instruments, and provides the musician's mix for remote verification and adjustment.

The choice of AES67 is justified by the minimal network latency of 0.13ms when configured in 6-sample mode.

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SWITCH GIGACORE LUMINEX

To minimize cable visibility within the orchestra, PoE+ switches from Luminex are used to create a star network connecting the various Anubis units distributed throughout the orchestra sections.
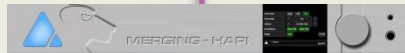
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Network Infrastructure Configuration:
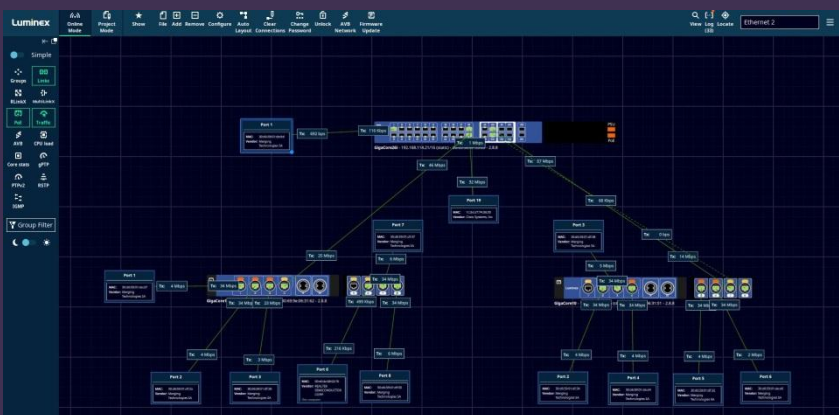
- Core network: Luminex 26i switch

- Four Gigacore 10 switches connected via redundant inter-switch links

- ISL+ RLinkX enabled

- IGMP v2 enabled
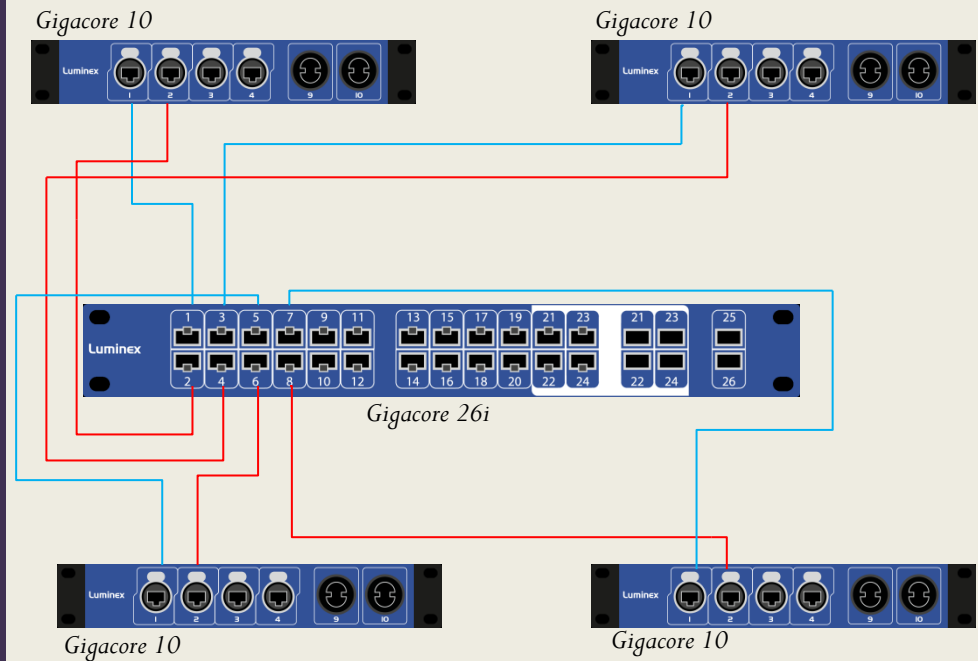
LIVE – Interopérabilité AES67-MADI

Stage: Preamp/monitor/talk (intercom)

stage

stage

monitor

FOH control: S6L (Avid)

Monitor control: SD series (Digico)

Recording system: Pyramix, Pro Tools, Nuendo with MAD (Merging Audio Device)

Live – Inter-opérabilité AES67/Dante

Stage: Preamp/monitor/talk (intercom)

stage

stage

monitor

FOH control: *série Rivage ou CL (Yamaha)*

Monitor control: *: série Rivage ou CL (Yamaha)*

Recording system: Pyramix, Pro Tools, Nuendo with MAD (Merging Audio Device)

YAMAHA

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ANUBIS

A standard AES67 AoIP interface.

2 high-quality microphone preamps with a 137 dBA dynamic range

2 independent headphone outputs

4 line-level outputs

1 integrated talkback microphone

The high-quality preamps transmit AES67 streams over the network with minimal background noise.

Anubis can split the same physical input across the network, which is particularly useful for sharing the same gain between sound reinforcement and recording, or between front-of-house and monitor consoles.

The distance between the microphone and its preamp does not exceed three meters, eliminating signal degradation due to impedance, skin effect, and electromagnetic interference.
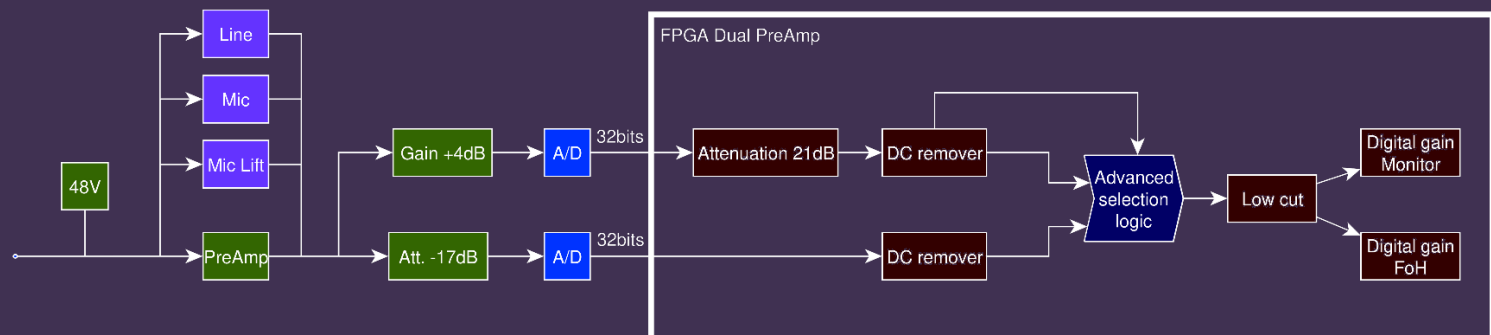
Anubis Dual PreAmp input diagram

Input bank switch — Monitor processing

Status bar
Anubis name

Panners
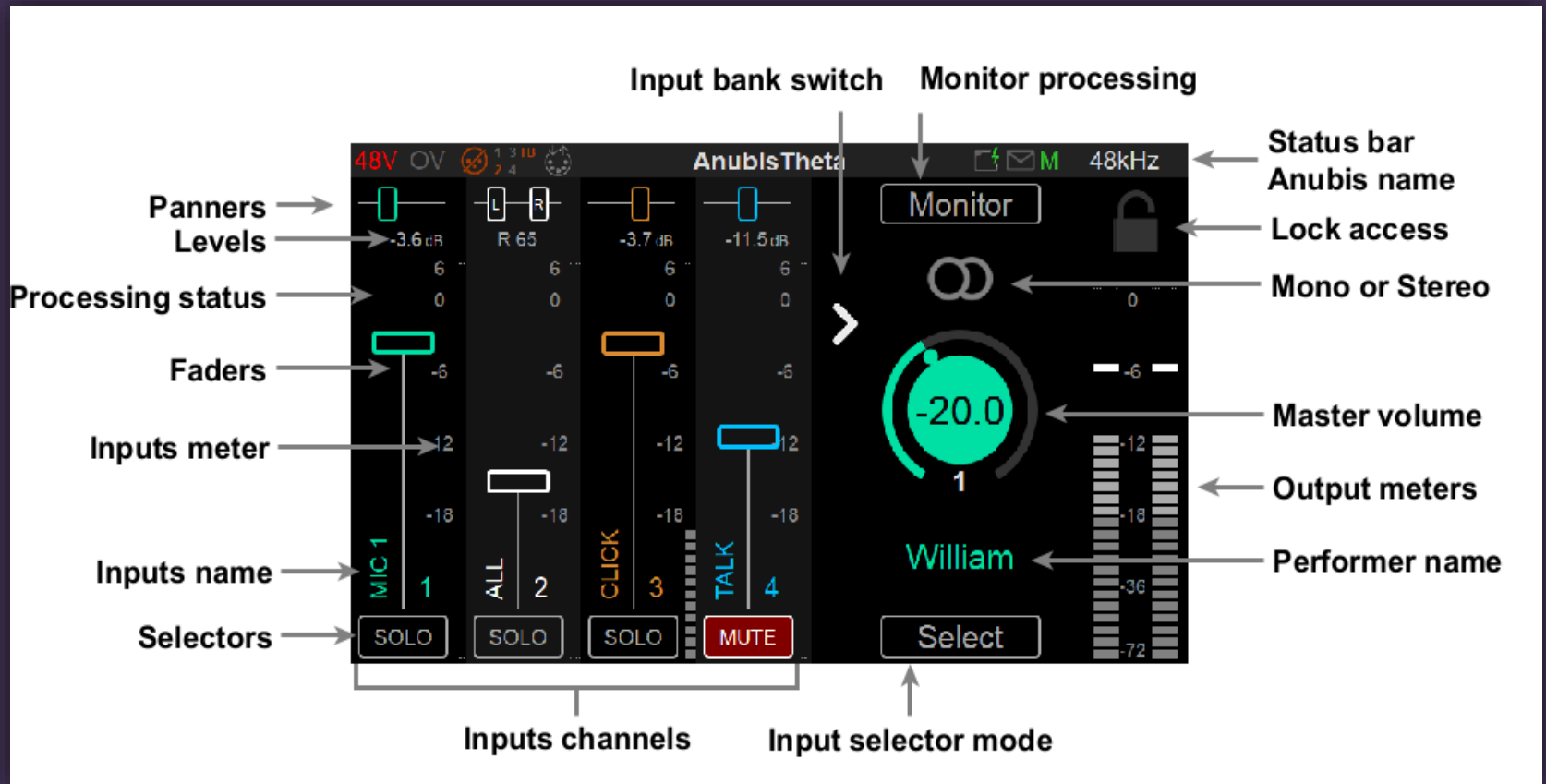Levels

Processing status

Faders

Inputs meter

Inputs name

Selectors

48V OV   1 3 10   AnubisTheta   M 48kHz
           2 4

Monitor

Lock access

Mono or Stereo

-3.6 dB   R 65   -3.7 dB   -11.5 dB

6   6   6   6
0   0   0   0

-6   -6   -6   -6

-20.0

Master volume

-12   -12   -12   12

1

-18   -18   -18   -18

William

Output meters

Performer name

MIC 1 1   ALL 2   CLICK 3   TALK 4

SOLO   SOLO   SOLO   MUTE

Select

Inputs channels   Input selector mode

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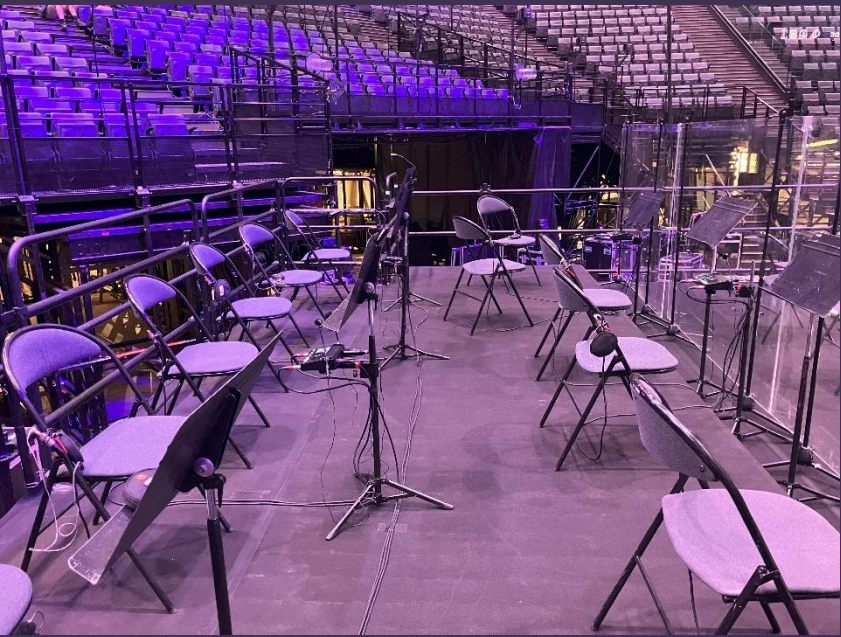
SIMPLICITY

The system offers simplified implementation for distributing and allocating various monitor mixes between wedge speakers and wired in-ear monitors.

Each Anubis can assign its four line outputs and two independent headphone outputs to any stream circulating on the network.

The touchscreen and physical buttons provide an intuitive, customizable user interface, allowing you to assign colors and label inputs and monitors.

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VENUE MISSION

The musician's comfort was central to the development of this solution.

The touchscreen and physical buttons were designed to be as intuitive as possible.
The mixer's input count can be adjusted based on the context.

Musicians can access a single fader, up to 16 (mono or stereo), or just a simple volume knob, which also includes a mono summing function—particularly useful when using a single earpiece.
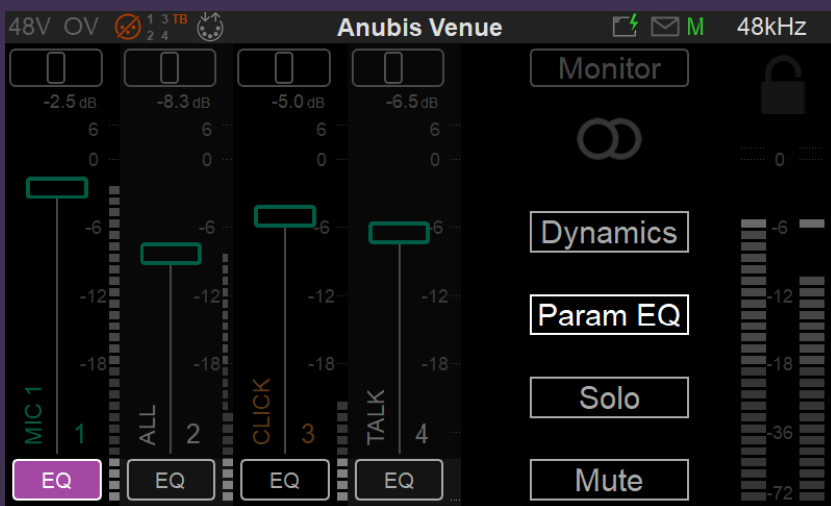
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Solo, Mute, input/output processing features like EQ, Dynamics, and Reverb have been integrated, transforming it into a true personal mixer.

Additionally, when multiple musicians share the same Anubis, the touchscreen locks after a period of inactivity to prevent accidental changes.

The sound source connected directly to the Anubis allows the musician to hear his instrument with almost imperceptible latency (AD-DA 0.38ms at 48 kHz).

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In order to facilitate communication between the musicians, each section, the conductor, and, of course, the sound engineer, we have implemented a talkback solution.

PLUG AND TALK

- Built-in mic or external microphone selectable
- EQ/Dynamic correction on the talk input
- Dedicated physical talk button
- 8 independents talk channels/directions
- Channels configurable for talking and/or listening
- Auto-connect with discovered Anubis having the same channels name
- Automix of incoming talkbacks
- Up to 32 talks incoming streams

Talk channel switch

Panners

Levels

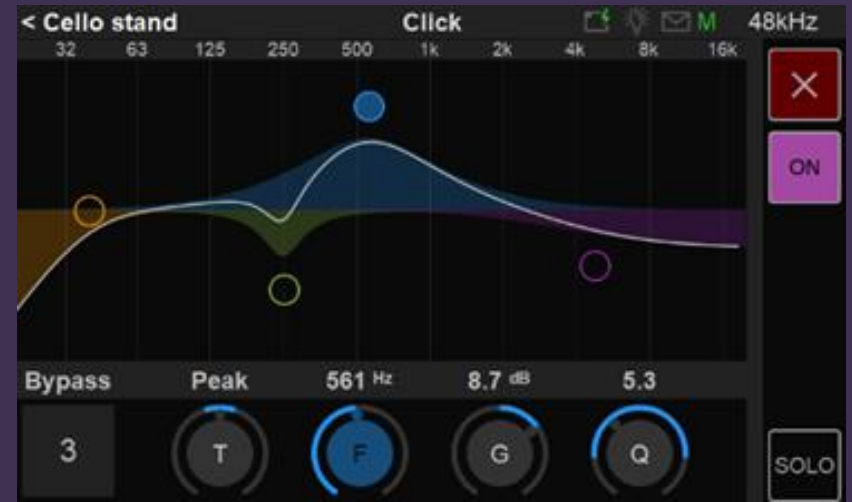< Anubis (theta)   TALKBACK   M   48kHz

Status bar

Channel A

-2.2 dB   -3.8 dB   -2.7 dB   -7.1 dB   -1.7 dB

Sidetone Processing status

Channel B

Talkbacks faders

Sidetone fader

Talk

Talkbacks input meter

Channel C

Sidetone meter

Talkbacks name

Channel A   Channel B   Channel C   Channel D   Channel D   Headphone 1

Performer name

1   2   3   4

Mute   TALK   TALK   MUTE   MUTE   MENU

Processing access

Talkbacks channels
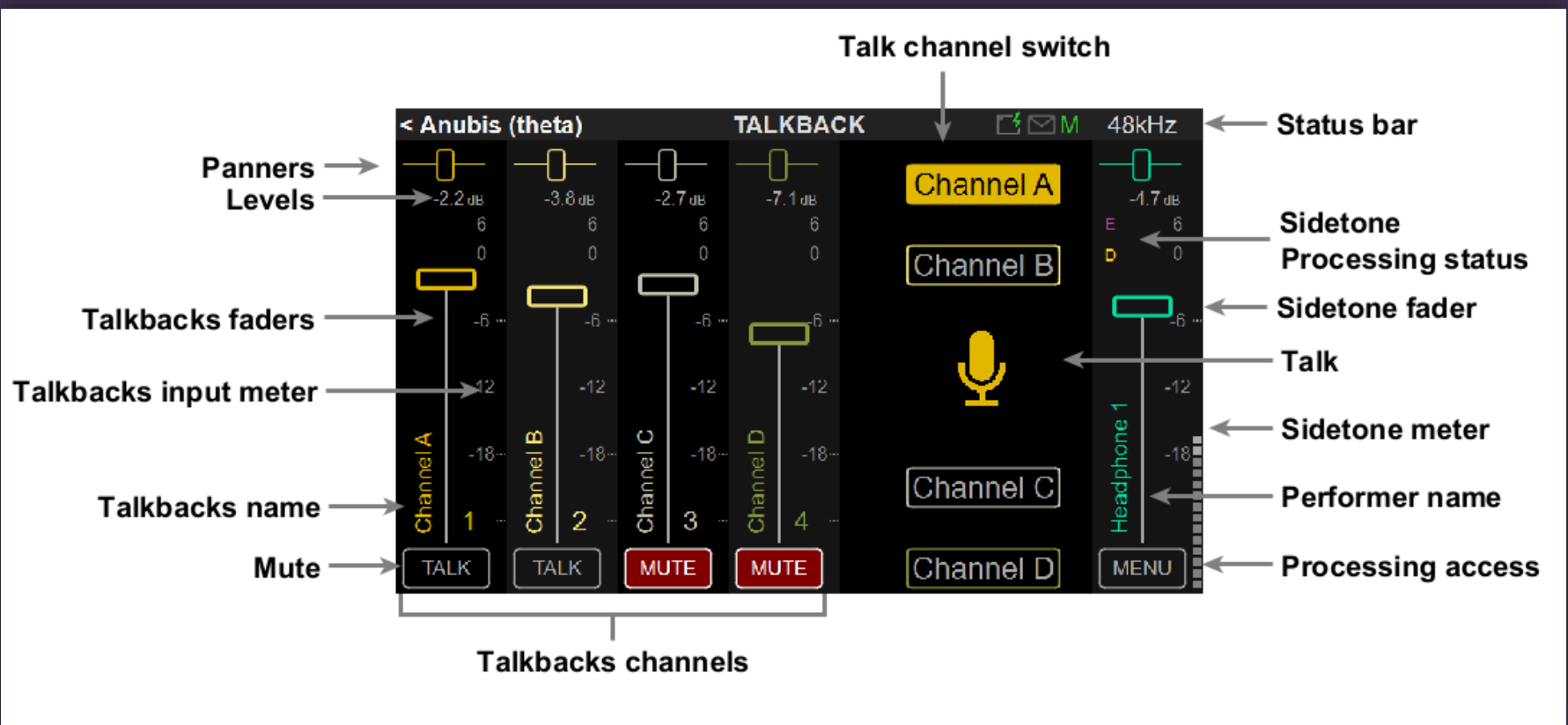
VENUE MISSION

Latency

Anubis Max latency in milisecond (AD to DA)

	44.1			48			96			192			kHz		
Personal Monitor	0.11	0.09	0.20	0.10	0.08	0.19	0.05	0.04	0.09	0.03	0.02	0.05	AD	Proc	DA**
	0.41			**0.38**			**0.19**			**0.10**			ms		
Personal Mixer	0.11	0.50	0.20	0.10	0.46	0.19	0.05	0.23	0.09	0.03	0.11	0.05	AD	Proc	DA**
	0.82			**0.75**			**0.38**			**0.19**			ms max*		

* latency max when all input and output processing are activated
** Roll off filter set to slow (default)

AES67 network latency in milisecond

|	44.1	48	96	192	kHz
AES67 48 smpl	**1.09**	**1.00**	**1.00**	**1.00**	ms
AES67 12 smpl	**0.27**	**0.25**	**0.25**	**0.25**	ms
AES67 6 smpl	**0.14**	**0.13**	**0.13**	**0.13**	ms

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VENUE MISSION

Technicians and sound engineers can remotely control Anubis for interface setup, musician mix monitoring, or preamp control.

The integrated microphone enables internal communication without additional equipment.

A remote-control application compatible with Windows and macOS allows virtual interaction with the Anubis as if manipulating the device physically.

COMMANDE A DISTANCE
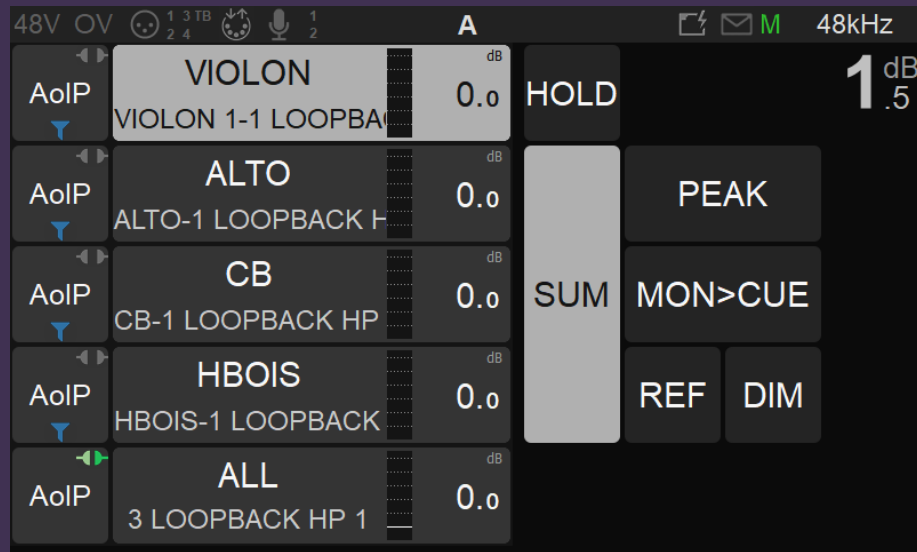
SOLUTION ANACROUSE JOHNNY SYMPHONQUE TOUR 2023-2024

1500 choirs tribute to florent pagny theatre antique orange 2024

ciné concert 100 ans de disney u arena de Paris la défense 2023

Louis Vuitton spring summer 2023 fashion show symphony orchestra