INTONATO|24

Monitor Management Tuning System



Intonato 24 shown with included microphone and optional Intonato Desktop Controller

HIGHLIGHTS

Configurable monitoring in mono, stereo, surround
and immersive formats of up to 24 speakers

24 analog, digital and network input sources

Internal router/mixer
allows user-configurable down mixes and routings

Save and recall project-specific monitoring configurations
and speaker tunings

Automated speaker calibration with included microphone

Comprehensive bass management and subwoofer integration

Intuitive control with included Mac, Windows and tablet software*
and optional Intonato Desktop Controller

The JBL Intonato 24 Monitor Management Tuning System provides easy setup, automated calibration and comprehensive control of professional control room monitoring systems. Housed in a 2U rack-mount enclosure, Intonato 24 precisely calibrates and controls a combination of 24 speakers configured as stereo, surround or immersive audio reference monitoring systems. You can create and instantly recall customized routings of a combination of analog, digital and networked audio sources. Included software and an optional Desktop Controller put the system's powerful monitoring features at your fingertips. With included calibration mic and software app, Intonato 24 delivers the benefits of a precisely calibrated system, and takes control room monitoring to the next level.

Intonato
/Ĭntō'nătō/ (intonare) **tuned** *pp.*, **matched** *adj.*, **in tune** *adj. The primary attribute of the ideal control room monitoring environment.*

KEY MESSAGES

COMPLETE, NEXT-GENERATION SYSTEM
While the approach to control room monitoring has remained consistent over the years, the audio signal path and production workflow have evolved tremendously. The, JBL Intonato 24 and 7 Series Master Reference Monitors provide a complete next-generation system, empowering content creators to produce consistently superior output regardless of the spaces where they find themselves, or the formats they are asked to deliver. While JBL designed Intonato 24 as the hub of the JBL 7 Series installed reference monitor system, it can be used with any passive or powered speakers.

A PRECISELY TUNED MONITORING ENVIRONMENT
Intonato 24 includes our latest automated speaker calibration technology, which measures and automatically optimizes monitoring system response at the listening position. Using the supplied calibration microphone, and software app, the system precisely matches the level and time-of-arrival (delay) of each speaker while setting up to 12 filters per speaker to compensate for low-frequency anomalies related to the geometry and construction of the room. Eight additional user full-range EQ filters allow project-specific response curves and compensation for transmission loss when speakers are placed behind a perforated cinema screen.

IMMERSIVE READY—THE MOST I/O IN ITS CLASS
Intonato 24 comes standard with the most I/O in its class. With the connections and power to manage monitoring systems of up to 24 speakers, Intonato 24 makes immersive monitoring a reality in existing control rooms. 24 analog, 24 AES3, and up to 256 networked input connections* enable you to use a broad range of equipment including analog and digital mixing consoles, work stations and playback sources. Intonato 24 features internal routing and a mixer to provide unprecedented monitoring flexibility. Any combination of up to 24 connected analog and digital sources can be patched, routed and selectively monitored via any of the connected speakers or headphone systems. You can also create, store and instantly recall customized down-mix configurations.

** Intonato is Dante format compatible with the optional BSS BLUDAN interface*

INTONATO | 24

Monitor Management Tuning System

MAC, WINDOWS, TABLET* SOFTWARE

Intonato 24 software provides real-time control of System Volume, Mute and Dim controls, individual speaker Mute and Solo, input source and speaker selection, user-configured down-mixes and more. The software provides easy, intuitive setup and calibration of monitoring systems and input sources.

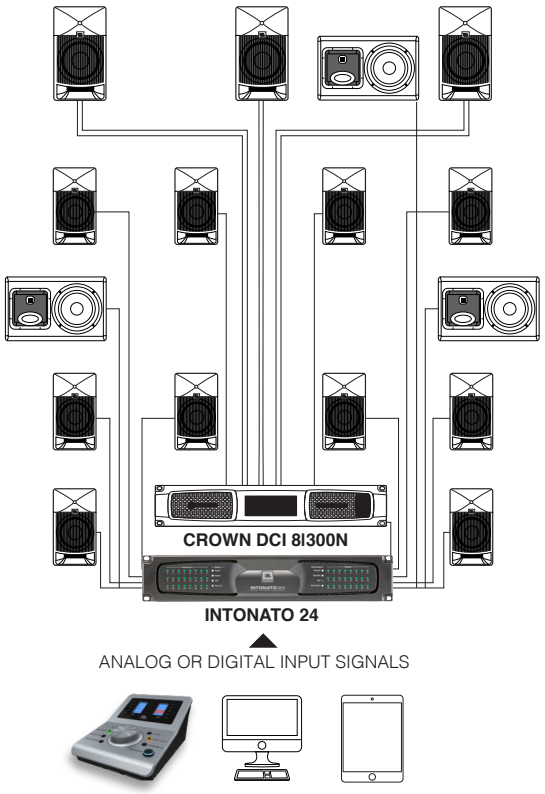


** iOS and Android Tablet Software available summer 2017*

INTONATO 24 DESKTOP CONTROLLER

In an elegant compact form factor, the optional Intonato Desktop Controller provides live control of the features needed during sessions. Instant recall of user-created Scenes allows down-mix monitoring and monitoring of selected sources via main and alternate speaker systems. The Desktop Controller is connected to Intonato 24 using a single CAT5 cable and powered over Ethernet.





Control using Computer, Tablet and Intonato Desktop Controller

A COMPLETE SOLUTION FOR ANY CONTROL ROOM

Intonato 24 pairs with JBL 7 Series studio monitors to create the first complete monitoring system designed for immersive audio production in control rooms of any size. Intonato 24 includes tuning presets for JBL 7 Series Installed Monitors and M2 Master Reference Monitors, and can also be used with any passive or powered speakers. In addition, the HARMAN BLU link network protocol allows Intonato 24 to be digitally networked with Crown power amplifiers and a wide assortment of system components.

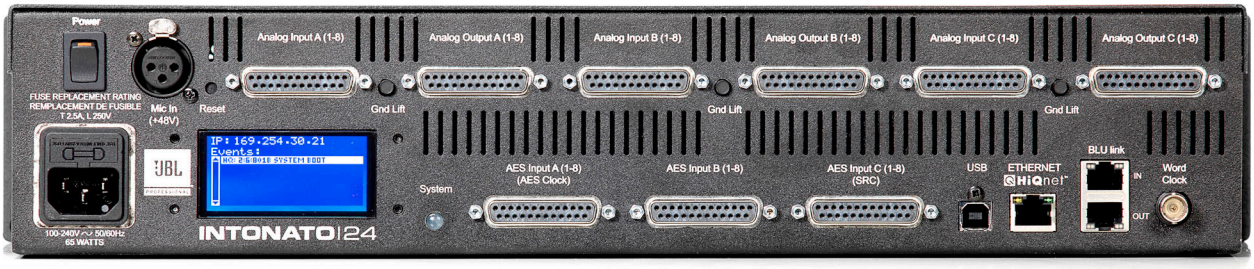
INTONATO|24

Monitor Management Tuning System

FULL FEATURES AND BENEFITS

- Intonato 24 can be used with any studio monitors
- 24 balanced analog line-level speaker outputs allow connection of powered studio monitors and power amplifiers
- Automated Speaker Calibration with included microphone precisely balances, tunes and aligns all speakers to deliver greater accuracy to the mix position in any room
- 12 bands of Room EQ, Delay and Level per speaker
- 8-band User EQ allows standard and customized response curves, such as X-Curve, and compensation for perforated screen transmission loss
- 24 balanced analog inputs with selectable input sensitivity and gain trims allow connection to a broad range of professional and consumer equipment
- 24 AES3 Inputs, 8 Sample-Rate Converters, and Word Clock Input allow connection of a broad range of digital sources
- RJ45 BLU link port allows convenient CAT5 connection to Crown power amplifiers and other HARMAN BLU link equipped devices; optional BSS BLUDAN interface connects Intonato 24 to Dante networks
- Input gain trim controls and level indicators on each channel allow precise calibration
- Internal router/mixer allows user-configurable down-mixes and selective monitoring of any input via any or all speakers
- Integration of up to 4 subwoofers for LFE channels and bass management
- Variable Audio/Video Sync delay allows compensation for video display latency
- Stereo Aux Out with dedicated level control, EQ and talk back system allows an independent feed to be sent to talent or a remote “green room”
- Scenes allow instant recall of down-mixes, input source and speaker selection
- Profiles allow configurations and project-specific EQ to be saved and recalled
- Intuitive setup and control with included Macintosh, Windows and iOS/Android tablet software or optional Intonato Desktop Controller
- Low-noise fan for quiet operation





INTONATO 24

Monitor Management Tuning System

SPECIFICATIONS

OUTPUTS

Total Simultaneous Outputs: 24 analog outputs and 24 simultaneous BLU link outputs

Connectors: 3 female 25-pin D-Sub connectors

24 Balanced ANALOG OUTPUTS: Female XLR

Max Output Level: +24 dBu, balanced, ≤ .006% THD

BLU LINK AUDIO

Connectors: 2 x RJ45 connectors

Maximum Cable Length: 100m/328ft on Category 5e or higher cable between devices

Latency: 11/Fs [0.23ms@48k, 0.11ms@96k]

Pass Through Latency: 4/Fs [0.08ms@48k, 0.04ms@96k]

INPUTS

Total Simultaneous Inputs: 24 (selectable among the available 24 analog, 24 AES3, and 24 BLU link input channels)

ANALOG INPUTS

Connectors: 3 female 25-pin D-Sub connectors

Type: Electronically balanced, RF filtered

Impedance: > 48 kΩ balanced, > 24 kΩ unbalanced

Input Sensitivity: Selectable in software per D-Sub connector: -10 dBV with 18 dB of headroom, +4 dBu with 20 dB of headroom, +8 dBu with 24 dB of headroom

Max Input Level: +28 dBu, ≤0.008% THD

CMRR: > 47 dB @ 1 kHz

24 AES3 DIGITAL INPUTS

8 Sample Rate Conversion: selectable in software

1 Calibration MIC / Talk back Mic INPUT

With Phantom Power: +48 VDC

WORD CLOCK INPUT

Supported Sample Rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz Tolerance: ±50 ppm max

SYSTEM PERFORMANCE

A/D Converter: 24-bit

A/D Dynamic Range: 114 dB A-weighted

D/A Converter: 24-bit

D/A Dynamic Range: 115 dB A-weighted

Internal Processing Word Length: 32-bit floating point

Supported Sample Rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz; 32-192 kHz, sample-rate convertors enabled.

Dynamic Range: 114 dB A-weighted; 112 dB unweighted

THD+Noise: 0.007% typical at +4 dBu, 1 kHz, 0 dB input gain

Frequency Response: 20 Hz – 20 kHz, +0 /- 0.5 dB

Latency: Analog IN to analog OUT (96 kHz): 2.28 ms

AES IN to analog OUT (96 kHz): 2.15 ms

BLU link input to BLU link output (96 kHz): 0.04ms

SIGNAL PROCESSING

Included Speaker Tuning Presets: JBL 705i, 708i, M2

User EQ: 8-band fully parametric EQ w/ selectable filter type

Room EQ: 12-band fully parametric EQ

Bass Management Crossover: Variable

Speaker Output Delay: Up to 18 ms per output channel for speaker time-of-arrival offset)

A/V Synchronization Delay: Up to 150 ms (globally applied to all output channels except aux outputs)

Aux Out Delay: Up to 150 ms

Master Volume Control: -120 dB to 0 dB

Dim Control: User-adjustable, -120 dB to 0 dB

POWER SUPPLY

Type: Universal switch-mode

Operating Voltage: 100-240 VAC, 50/60 Hz

Power Consumption: 85 Watts

PHYSICAL

Rack Height: 2U

Unit Weight: 14.30 lbs (6.4kg)

Shipping Weight: 19.04 lbs. (8.64 kg)

Dimensions: 3.5" (H) x 13.75" (D) x 19.0" (W) 88.9mm (H) 349.25mm (D) x 482.6mm (W)

Order SKU: INTONATO24MX

UPC 691991006197

RECOMMENDED AUDIO CABLES (not included)

Analog In/Out DB25 (Female); AES In DB25 (Female)

Wired according to industry-standard TASCAM DB25 pinout

INCLUDED ITEMS

Power Cords: 1 ea. US and 1 ea. European (SHUKO-plug)

Operation Manual and Setup Guide

Calibration Microphone

Set Up and Control Software (via download)

OPTIONAL ACCESSORIES:

Intonato Desktop Controller

Unit Weight: 1.0 lbs (0.45 kg)

Dimensions: 2.84" (H) x 6.73" (D) x 4.70" (W) 72.0mm (H) 117.0mm (D) x 119.4mm (W)

Shipping Weight: 1.7 lbs (0.76 kg)

Shipping Carton dimensions: 8.75" L x 7" W x 5.75" H (222.25 mm L x 177.8 mm W x 146 mm H)

Order SKU: INTONATO-DC-M

UPC 691991006203

Complete Specifications are available in the Intonato 24 Operation Manual at **www.jblpro.com/intonato**

HARMAN **JBL Professional** 8500 Balboa Blvd. Northridge, CA 91329 USA

© 2017 HARMAN International Industries, Incorporated. All rights reserved. AKG is a trademark of AKG Acoustics GmbH, registered in the United States and /or other countries. Features, specifications and appearance are subject to change without notice.

www.jblpro.com