# TSD-BB22 & TSD-BB44

Open Architecture Drag & Drop DSP for Fixed Installations

TSD-BB44

TSD-BB22 & TSD-BB44

For designers, integrators, and AV specialists having the right tools when you need them is important to your success. The TSD-BB22 and TSD-BB44 are powerful and flexible tools offering mission critical solutions to satisfy the exact needs of any installation. Engineered to strict standards with the highest quality internal components, the programmable TSDs provide pure clean audio, Ethernet connectivity for cost effective TCP/IP control and easy programmability. Intended for a variety of audio applications, the TSD-BB22 and TSD-BB44 are perfect audio solutions for digital signage, training rooms, kiosks, retail, restaurants, classrooms, as well as hundreds of other AV applications.

The TSD BlueBridge models provide many valuable processing tools including standard mixers, gain sharing auto-mixers, delays, equalizers, level controls, duckers, filters, and dozens of other processing capabilities in an incredibly small footprint, 2.75" x 5.5" x 1.5". The TSD BlueBridge models are available in either a 2x2 or 4x4 input/output configuration. Both models possess the same processing power and features.

Features Include:

- 2 or 4 Balanced Mic/line Inputs
- 2 or 4 Balanced Mic/line Outputs
- Ultra Low Noise Floor
- Ethernet Network Connectivity
- 24Bit Converters
- 48kHz, 40 Bit Floating DSP Engine
- High Quality Microphone Preamps
- Remote Control Using Optional Wall Plates
- Output Peak & Signal Indicator LED's
- Wireless Touch Panel Options
- Open Architecture Software for Flexibility
- External Power Supply
- Optional Rack Mount Kit Available (TSD-RMK)

Product Description

The Atlas Sound TSD-BB22 and TSDBB44 are part of the new BlueBridge family of products from Atlas Sound. The TSD-BB22 and TSD-BB44 models are the most powerful and compact DSP products in their class. The open architecture, drag and drop DSP models are offered in both 2x2 and 4x4 variations with all inputs and outputs balanced.

BlueBridge models utilize high quality microphone preamps and 24 Bit converters to obtain ultra-low noise floor while still maintaining the smooth sound an audio purest expects, with the flexibility and control a system designer requires.

BlueBridge models use a 40 Bit Floating Point DSP engine to prevent digital clipping that commonly occurs in other DSP products and to obtain maximum speed and power to process advanced algorithms in complex system designs. BlueBridge DSP units can operate on any network while the optional control accessories require a PoE Network. When connected to a network, each BlueBridge processor on the network will be auto recognized and controllable.

The BlueBridge software is an intuitive program used to configure audio processing and control capabilities within the device. The TSD BlueBridge models offer fixed application embedded designs and the ability to design custom drag and drop systems. BluePanel is a software plug-in program that allows a programmer to create control pages for elegant system operation and status viewing by untrained users. BluePanel software can be installed on Windows® computers for remote control without consuming large amounts of storage space.

The TSD-BB22 & TSD-BB44 BlueBridge models are ideal for system designs that require limited I/O's, but require a state of the art DSP platform. The compact design can be used as a standalone device to run a sophisticated sound system or as a supplement to an existing system.
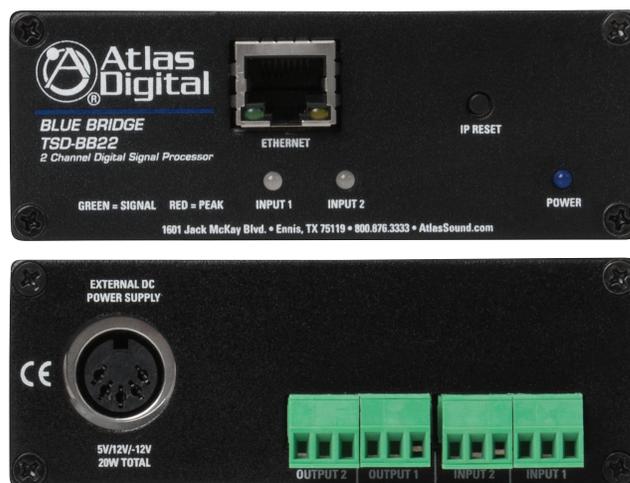

TSD-BB22
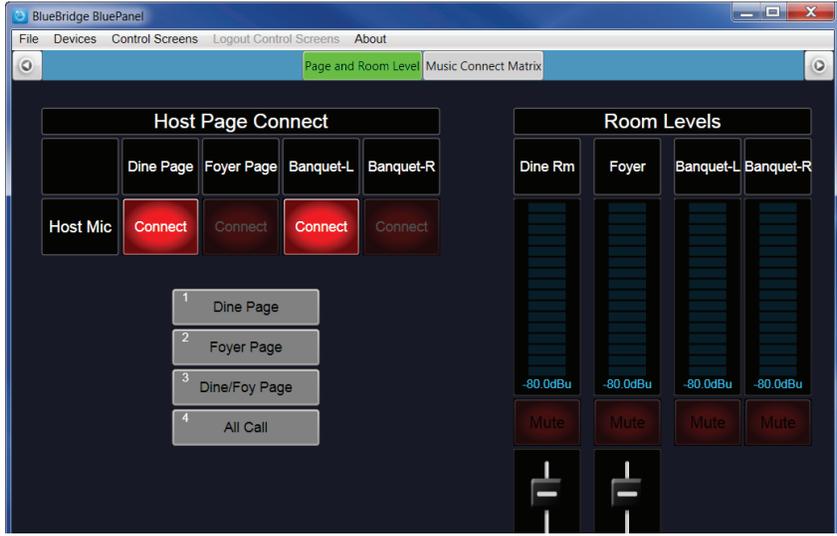
TSD-BB44 Restaurant BluePrint Screen Shot
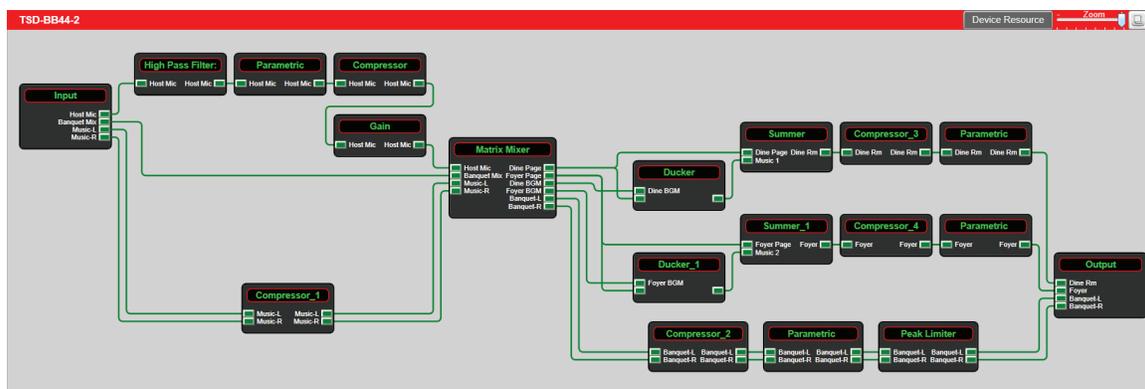
TSD-BB44 Restaurant Internal DSP Design
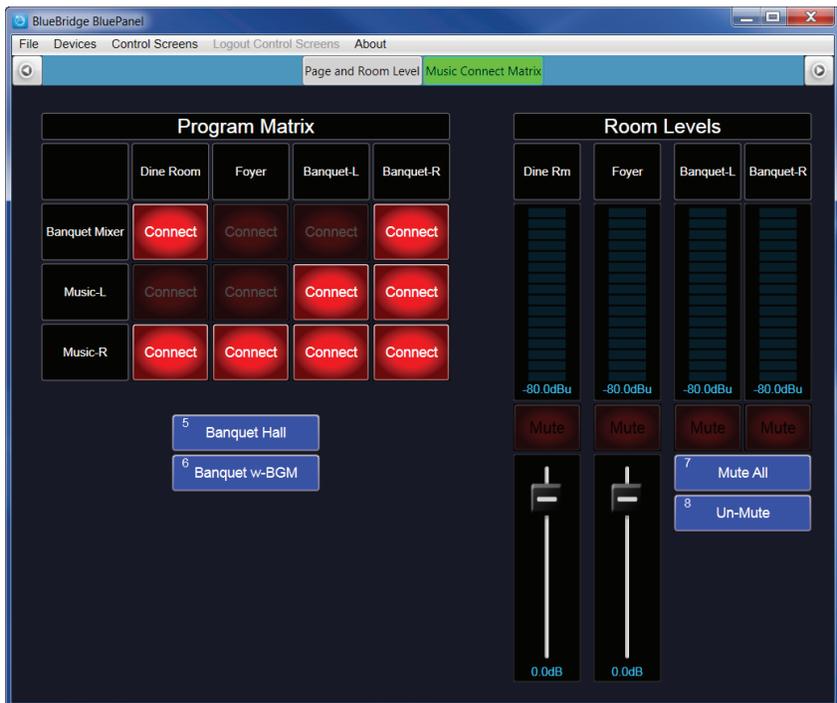
Restaurant Level Control Page On A BluePanel

Atlas Sound

AtlasSound.com

Specifications

Description

TSD-BB22	2 x 2 DSP Platform
TSD-BB44	4 x 4 DSP Platform

Input

Quantity:	
TSD-BB22	Two(2) Inputs
TSD-BB44	Four(4) Inputs
Type	Microphone or Line Level, Selectable
Configuration	Electronically Balanced
Gain	-40 to +15dB in 0.25dB Steps
Polarity	+/- Selectable
Connection	PHX Style, 3 Position, 3.5mm Spacing
Input Impedance	>10kΩ
Maximum Input Level	+20dBu
Phantom Power	48V, GUI Enabled
Network	RJ45

Output

Quantity	
TSD-BB22	2
TSD-BB44	4
Type	Line
Configuration	Electronically Balanced
Polarity	+/- GUI Selectable
Gain	-40 to +15dB in 0.25 dB Steps
Connection	PHX Style, 3 Position, 3.5mm Spacing
Output Impedance	50Ω
Maximum Output Level	+20dBu

Controls & Indicators

LEDs	Input – 1 Per channel,
Color	Multi-Color Type
Signal LED	Green
Peak LED	Red, -3db Before Clip
Data Status LED	Yellow
Power Status LED	Blue
Interconnect	
IP Master Reset	Push Switch
Ethernet Port	RJ45
Power Input	DCV 5 Pin

Digital Audio Performance

Processor	40-Bit Floating Point
Sampling Rate	48kHz
Analog Converters	High Performance 24-bit
Propagation Delay	3ms

General Audio Performance

Frequency Response	20Hz – 20kHz (±0.1dB)
Dynamic Range	110dB type (unweighted)
CMMR	> 100dB (50 to 10kHz)
Crosstalk	< -100dB
Distortion	0.002% (1kHz @+4dBu)

Network Control

Ethernet	Network Control TCP/IP
DSP modules	Drag & Drop
EQ	Parametric, Graphic Anti Feedback
Crossover Type	Butterworth, Linkwitz Riley, Bessel, Slopes: 6 to 48dB per Octave
Filters	High Shelf, Low Shelf, All Pass
Delay	10mS - 2 Second,
Processing	Compressor, Limiter, Expander
Mixers	Gain Sharing Auto Mixer, Matrix Mixer, Gating Auto Mixer, L & R Mixer, LCR Mixer, RMS Meters, Ducker
Generators	Sine Tone, White & Pink Noise, Sine Sweep

System Parameters

Preset Programs	30
Delay Units	ms, ft, m
Security locks	Password

General

Rack Mount	Optional Kit
Power	5-12VDC External Power Supply
Dimensions	1.5" x 5.5" x 2.75" (38mm x 140mm x 70mm)
Chassis Color	Black
Chassis Material	Aluminum
Weight	TSD-BB22: 13 oz, .368kg TSD-BB44: 15 oz, .425kg

Accessories

TSD-RMK	1RU Rack Panel

Safety and Certifications

With Included External Power Supply	cUL, CE, TUV
TSD	CE, CCC Listed

Warranty

Atlas Warranty	Three Year

Power Supply

AC Voltage Operating Range	100V - 240V 50Hz / 60Hz

Power Supply & TSD-BB22 Combined

Power Consumption	7.8 Watts
Thermal Dissipation	27 BTU

Power Supply & TSD-BB44 Combined

Power Consumption	8.8 Watts
Thermal Dissipation	30 BTU