BSS BLU-103

BSS BLU-103 Conferencing Processor User Manual
Model: BLU-103

1. INTRODUCTION

The BSS BLU-103 is a high-performance conferencing processor designed for professional audio installations. It features Acoustic Echo Cancellation (AEC) and Voice over IP (VoIP) capabilities, making it suitable for a wide range of conferencing applications. This manual provides essential information for the proper setup, operation, and maintenance of your BLU-103 unit.

2. SAFETY INFORMATION

WARNING: THIS EQUIPMENT MUST BE EARTHED.

To ensure safe operation and prevent damage, please observe the following safety precautions:

- **Power Supply:** Connect the unit only to an AC power source within the specified voltage range (100-240V, 50/60Hz, 50W). Ensure the power cord is properly grounded.

- **Ventilation:** Do not block ventilation openings. Ensure adequate airflow around the unit to prevent overheating.

- **Moisture:** Do not expose the unit to rain or moisture. Do not place objects filled with liquids on the unit.

- **Servicing:** Refer all servicing to qualified service personnel. Do not attempt to service this product yourself.

- **Installation:** Install the unit in a stable environment, away from excessive heat sources, vibrations, or dust.

3. PRODUCT OVERVIEW

3.1. Product Description

The Soundweb London BLU-103 offers a fixed configuration of 8 analog inputs and 8 analog outputs, a Voice over IP (VoIP) interface, configurable signal processing, AEC processing, and a high bandwidth, fault tolerant digital audio bus. The VoIP port enables the BLU-103 to interface with two VoIP (SIP v2.0 or later) lines. The BLU-103 contains dedicated AEC processing for up to 8 independent AEC algorithms. The AEC

algorithm can be applied to signals coming from the local analog inputs or from the digital audio bus. 8 individual AEC references (one per algorithm) allow the user to provide a solution for multiple conferencing spaces using a single device. The BLU-103 and the other members of the Soundweb London family provide the building blocks of the perfectly tailored system solution.

3.2. Key Features

- 8 Analog Inputs (with 48V Phantom Power per Channel)
- 8 Analog Outputs
- VoIP Port for SIP v2.0 or later
- Dedicated AEC processing for up to 8 independent algorithms
- Rich Palette of Processing and Logic Objects
- Soundweb London Interface Kit for Third Party Control System Integration
- High bandwidth, fault tolerant digital audio bus (BLU link)

4. SETUP

4.1. Rear Panel Connections Overview

The following image illustrates the rear panel of the BSS BLU-103, detailing all available connections for power, audio, and control.

Figure 1: Rear panel of the BSS BLU-103 Conferencing Processor. From left to right: AC power inlet, RS232, Ethernet, BLU Link (IN/OUT), Control Inputs/Outputs, VoIP, Analog Outputs (D, C), Analog Inputs (B, A).

4.2. Power Connection

Connect the supplied IEC power cable to the AC inlet on the far left of the rear panel. Ensure the power source is within the 100-240V, 50/60Hz range. The unit consumes 50W. Always ensure the equipment is properly earthed.

4.3. BLU Link Connection

The BLU Link ports (IN and OUT) are used for connecting the BLU-103 to other Soundweb London devices, forming a high-bandwidth digital audio bus. Use standard CAT5e or higher Ethernet cables for these connections.

4.4. Ethernet Connection

The Ethernet port provides network connectivity for control and configuration of the BLU-103 using the Soundweb London Architect software. Connect this port to your network switch or router using a standard Ethernet cable.

4.5. RS232 Connection

The RS232 serial port allows for integration with third-party control systems. Refer to the Soundweb London Interface Kit documentation for detailed protocol information.

4.6. Control Inputs and Logic Outputs

The Control section features terminals for external control inputs (1-12) and logic outputs (1-6). These can be configured within the Soundweb London Architect software to interface with various external devices and triggers.

4.7. VoIP Connection

The VoIP port allows the BLU-103 to connect to two Voice over IP (SIP v2.0 or later) lines, enabling direct integration into IP-based telephony systems for conferencing.

4.8. Analog Outputs

The BLU-103 provides 8 analog outputs, labeled D (1-4) and C (1-4). These are balanced outputs, typically connected to amplifiers or other audio distribution equipment using appropriate cabling.

4.9. Analog Inputs

The unit features 8 analog inputs, labeled B (1-4) and A (1-4). These inputs support 48V phantom power per channel, suitable for connecting condenser microphones. Ensure proper gain staging for optimal audio quality.

5. OPERATING INSTRUCTIONS

The BSS BLU-103 is primarily configured and controlled using the **Soundweb London Architect** software, which runs on a personal computer (Windows operating system). This software allows for:

- Designing and loading audio signal processing configurations.
- Setting up AEC algorithms for each input.
- Configuring VoIP lines and parameters.
- Monitoring system status and audio levels.
- Integrating with third-party control systems via RS232 or network commands.

Refer to the Soundweb London Architect software documentation for detailed instructions on creating and deploying configurations.

6. MAINTENANCE

The BSS BLU-103 is designed for reliable operation with minimal maintenance. Follow these guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid abrasive cleaners or solvents.
- **Ventilation:** Periodically check that ventilation openings are clear of dust and debris.
- **Firmware Updates:** Check the manufacturer's website periodically for firmware updates to ensure optimal performance and access to new features.
- **Environmental Conditions:** Operate the unit within specified temperature and humidity ranges.

7. TROUBLESHOOTING

If you encounter issues with your BLU-103, consider the following basic troubleshooting steps:

- **No Power:** Ensure the power cable is securely connected and the power outlet is active. Check the power switch on the unit.
- **No Network Connection:** Verify Ethernet cable connections. Check network settings on the BLU-103 and your computer. Ensure the unit's IP address is correctly configured and accessible on the network.
- **No Audio Input/Output:** Check all analog and digital audio cable connections. Verify gain settings and routing within the Soundweb London Architect software. Ensure phantom power is enabled for condenser microphones if required.
- **VoIP Issues:** Confirm network connectivity and correct SIP account settings within the software. Check firewall settings if applicable.
- **System Lock-up:** If the unit becomes unresponsive, power cycle the device by disconnecting and reconnecting the power cable.

For persistent issues, consult the Soundweb London Architect software documentation or contact BSS customer support.

8. SPECIFICATIONS

The following table details the technical specifications of the BSS BLU-103 Conferencing Processor:

Specification	Value
Product Dimensions	25 x 5.98 x 17.01 inches
Item Weight	16 pounds
Item Model Number	BLU-103
Manufacturer	BSS
Compatible Devices	Personal Computer
Connectivity Technology	Ethernet, USB (for service/firmware)
Number of Channels	8 Analog Inputs, 8 Analog Outputs
Operating System (for control software)	Windows
Power Requirements	100-240V, 50/60Hz, 50W
Date First Available	June 12, 2015

9. WARRANTY AND SUPPORT

9.1. Warranty Information

This product is covered by a manufacturer's warranty. Please refer to the warranty card included with your product or visit the official BSS website for detailed terms and conditions regarding warranty coverage and duration.

9.2. Customer Support

For technical assistance, product inquiries, or service requests, please contact BSS customer support through their official website or authorized distributors. Ensure you have your product model number (BLU-103) and serial number available when contacting support.