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## BBE 882i

# BBE 882i Sonic Maximizer User Manual

Model: 882i

## 1. INTRODUCTION

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The BBE 882i Sonic Maximizer is a dual-mono audio processor designed to enhance the clarity and presence of sound. It features dual-mono operation with balanced XLR and 1/4" Tip-Ring-Sleeve (TRS) inputs and outputs, engineered for applications requiring low noise, high headroom, and +4dBu input levels.

The core of the 882i is BBE High Definition Sound technology, which aims to restore the natural brilliance and clarity of audio signals that can be lost due to loudspeaker characteristics. This technology works by correcting phase and amplitude relationships of transients and harmonics, ensuring a more faithful reproduction of the original sound.



Figure 1.1: The BBE 882i Sonic Maximizer in its original packaging.

## 2. FEATURES

The BBE 882i Sonic Maximizer offers a range of features designed for professional audio environments:

- Two independent channels for stereo or separate dual mono mixes.
- Balanced +4dBu line level operation with 1/4" TRS and XLR inputs and outputs.
- Hardwire bypass switching for direct comparison of processed and unprocessed signals.
- High headroom of +23dBu to accommodate strong audio signals without clipping.
- Active balanced outputs for robust signal transmission.
- Front panel controls for BBE Process and Lo Contour adjustment per channel.



Figure 2.1: Front panel of the BBE 882i Sonic Maximizer, showing controls and indicators.

### 3. APPLICATIONS

The BBE 882i Sonic Maximizer is versatile and can be effectively used in various audio applications:

- **Professional Recording Studios:** Enhances clarity on individual tracks, during mixdown, and mastering.
- **Pro and Semi-Pro Sound Reinforcement:** Improves vocal intelligibility and overall system clarity in live sound environments.
- **Multitrack Studios:** Optimizes sound quality for various instruments and vocals.
- **Nightclub Sound Systems:** Delivers a more impactful and defined sound experience.
- **Broadcast Transmission:** Ensures high-quality audio for radio and television broadcasts.
- **Musical Instruments:**
  - *Electric and Acoustic Guitars:* Adds sparkle, clarity, and definition, making each note more distinct.
  - *Keyboards and Synthesizers:* Brings new realism, with clear percussive sounds and rich, full-textured chords.
  - *Electric & Acoustic Basses:* Provides a tight, punchy bottom end with presence and clarity.
  - *Vocals:* Helps vocals cut through the mix, improving intelligibility.

### 4. SETUP

Proper setup of the BBE 882i is crucial for optimal performance. Follow these steps for connection:

1. **Power Connection:** Connect the supplied AC power cable to the AC inlet on the rear panel of the 882i. Ensure the voltage selector switch (if present and accessible) matches your local power supply (115V/60Hz or

230V/50Hz). Plug the other end into a suitable power outlet.



Figure 4.1: Rear panel view of the AC power inlet and voltage selector.

- Input Connections:** Connect your audio source (e.g., mixer output, instrument pre-amp) to the *INPUT* jacks on the rear panel. The 882i accepts both balanced XLR and 1/4" TRS connectors. Use high-quality cables for best results.



Figure 4.2: Rear panel connections for Channel A, showing XLR and 1/4" TRS input and output jacks.

3. **Output Connections:** Connect the *OUTPUT* jacks of the 882i to the next device in your audio chain (e.g., power amplifier, recording interface). The 882i provides balanced XLR and 1/4" TRS outputs.



Figure 4.3: Rear panel connections for Channel B, showing XLR and 1/4" TRS input and output jacks.

4. **Power On:** Once all connections are secure, locate the power switch on the front panel and turn the unit on. The power indicator LED will illuminate.



Figure 4.4: Front panel view of the power switch.

## 5. OPERATING INSTRUCTIONS

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The BBE 882i features intuitive controls for shaping your sound:

- **Process Knob:** This control adjusts the amount of BBE processing applied to the signal. Turning the knob clockwise increases the effect, enhancing clarity and presence. Start with a subtle amount and adjust to taste, as too much processing can sound unnatural.
- **Lo Contour Knob:** This control adjusts the low-frequency contour. Turning it clockwise increases the low-end presence and definition. This works in conjunction with the Process knob to provide a full-range enhancement.
- **Bypass Switch:** Each channel has a bypass switch. Engaging this switch (often indicated by an LED) allows the audio signal to pass through the unit unprocessed. This is essential for A/B comparison to evaluate the effect of the Sonic Maximizer on your audio.
- **Clip Indicator:** An LED indicator for each channel illuminates when the input signal is too hot, indicating potential clipping. If this LED frequently lights up, reduce the input level from your source to prevent distortion.

The BBE Sonic Maximizer works by dynamically adjusting the phase and amplitude relationships of the audio signal. It compensates for the inherent time delays introduced by loudspeakers, ensuring that high and low frequencies arrive at the listener's ear in their correct time alignment. This results in a more coherent and "live" sound.

## 6. TECHNICAL SPECIFICATIONS

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Parameter	Value
Frequency Response (Process Mode)	Program controlled
Frequency Response (Bypass Mode)	10Hz to 50kHz, +/- 0.5dBu, 0dBu input
Signal to Noise Ratio	115dB Process IN
THD (Process Mode)	Less than 0.025% 20-20kHz
THD (Bypass Mode)	Less than 0.002% 20-20kHz
Maximum Output	+23dBu (may vary due to control settings)
Input Impedance	14.7K Ohms, balanced 1/4" stereo phone jack or XLR jack
Output Impedance	600 Ohms, balanced 1/4" stereo phone jack or XLR jack
Sensitivity	-45dBu for maximum process
Maximum Process	+12dBu boost at 5kHz, 0dBu input
Lo Contour	+12dBu adjustment at 50Hz, 0dBu input
Item Weight	6 pounds (2.72 kg)
Product Dimensions	19 x 5.75 x 1.75 inches (48.26 x 14.61 x 4.45 cm)
Power Source	AC Powered (115V/60Hz or 230V/50Hz selectable)
Number of Channels	2

## 7. MAINTENANCE

To ensure the longevity and optimal performance of your BBE 882i Sonic Maximizer, follow these maintenance guidelines:

- **Cleaning:** Regularly wipe the exterior of the unit with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or waxes, as they may damage the finish or internal components.
- **Ventilation:** Ensure that the unit has adequate ventilation. Do not block any ventilation openings. Proper airflow prevents overheating and extends component life.
- **Environment:** Operate and store the unit in a cool, dry environment, away from direct sunlight, excessive heat sources, moisture, and dust.
- **Cable Management:** Keep audio and power cables neatly organized and free from kinks or excessive tension to prevent damage to connectors and internal wiring.
- **Power Off When Not in Use:** For extended periods of inactivity, it is advisable to power off the unit and disconnect it from the mains power supply.

## 8. TROUBLESHOOTING

If you encounter issues with your BBE 882i Sonic Maximizer, refer to the following common troubleshooting steps:

- **No Power:**
  - Check if the power cable is securely connected to both the unit and the power outlet.

- Verify that the power outlet is active.
- Ensure the power switch on the front panel is in the "On" position.
- **No Sound Output:**
  - Confirm that all audio cables (input and output) are correctly and securely connected.
  - Check the bypass switch; ensure it is in the "Process" position if you expect processed sound.
  - Verify that the input source is sending an audio signal and the receiving device is properly configured.
  - Ensure the Process and Lo Contour knobs are not set to minimum.
- **Distorted Sound / Clipping:**
  - Observe the Clip indicator LED. If it frequently illuminates, the input signal is too strong. Reduce the output level from your source device.
  - Ensure the Process and Lo Contour knobs are not set excessively high, which can introduce unwanted artifacts.
  - Check all cable connections for any damage or loose contacts.
- **Hum or Noise:**
  - Ensure all connections are balanced (XLR or TRS) where possible to minimize noise.
  - Check for ground loops by ensuring all equipment is connected to the same power circuit or using a ground loop isolator if necessary.
  - Keep audio cables away from power cables to prevent interference.

If these steps do not resolve the issue, please refer to the warranty and support information.

## 9. WARRANTY AND SUPPORT

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The BBE 882i Sonic Maximizer comes with a **5-year limited warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

For technical support, service, or warranty inquiries, please contact BBE customer service through their official website or the contact information provided with your product documentation. Do not attempt to service the unit yourself, as this may void the warranty and pose a safety risk.