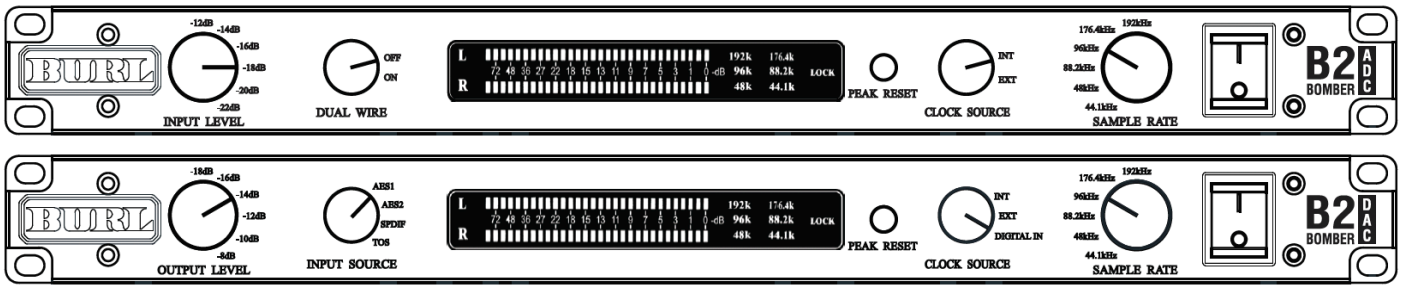
User Guide
B2 Bomber ADC
B2 Bomber DAC



Burl Audio
January 2025
Revision M and later

info@burlaudio.com
www.burlaudio.com

© 2025 Burl Audio. All rights reserved.

MADE IN THE USA

About Burl Audio

Founded in 2006, BURL Audio is a pro audio gear engineering and manufacturing company located in Santa Cruz, California. Based out of Paradise Recording and spearheaded by Rich Williams, BURL Audio's gear is designed in a commercial recording studio, by professional recording engineers, for recording engineers.

The philosophy of BURL Audio is to provide the best possible recording devices, in modular outboard units, to all levels of recording engineers at a reasonable price. All BURL Audio products are designed to improve your recording, mixdown, and mastering significantly. BURL Audio's products are designed to be a life-long asset to your studio.

BURL Audio is dedicated to bringing you ground breaking studio gear that will change your life. BURL Audio has redefined recording in the digital age with its revolutionary converter design.

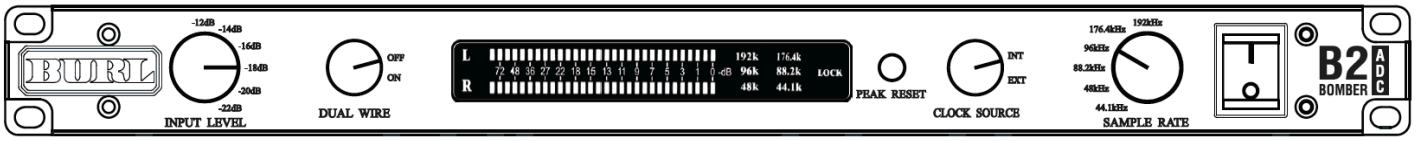
Simply put, the B2 Bombers have redefined digital recording. For anyone who has felt that digital recording has been lacking warmth, musicality, and soul, the B2 Bombers and B80 Mothership are the answer. The B2s were forged from BURL Audio's deep dedication to analog class-A circuitry. The result is not only heard, it is felt. The B2 Bombers stand out from every other interface on the market not because they are colored, but because they do not sterilize the source.

Webster defines burly as follows:

Main Entry: bur·ly
Function: adjective
Inflected Form(s): bur·li·er; -est
Etymology: Middle English : strongly and heavily built : HUSKY <a burly man>
– bur·li·ly - adverb
– bur·li·ness - noun

Burl is also defined as a tough, yet beautifully knotty base of 2000 year old redwood tree trunks. Burly is the heavy surf and fog that descends without warning over Santa Cruz, California. Burly is the dual rectified guitar and kick drum recorded through a BURL Audio B2 Bomber ADC and B1 Mic Pre. Burly is the toughness and heavy build quality of a BURL Audio unit. BURL is a creative state of mind. BURL is about music, grace, and power.

B2 BOMBER ADC



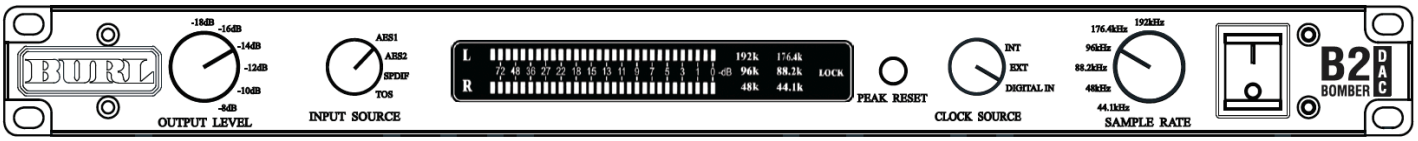
IN THE BOX:

- B2 BOMBER ADC
- IEC Power Cable
- 4 Rack Screws with Washers

B2 ADC FEATURES:

- 44.1 kHz to 192 kHz, 24 bit, 2 channel ADC.
- Proprietary, high definition, BURL Audio BX1 transformer input.
- All Class-A, discrete transistors signal path with zero feedback and zero capacitors.
- Audiophile quality 6 position attenuator with standard headroom settings.
- High definition metering with simultaneous RMS and peak indication.
- 2x AES, SPDIF and Toslink outputs. Dual Wire AES output at 176.4kHz and 192kHz (Dual Wire: Left = AES1 -- Right = AES2).
- BNC word clock input. Two BNC outputs of extremely low jitter word clock.
- Frequency response: **48kHz** = 12Hz to 22kHz, +/- 0.1dB
- **96kHz** = 15Hz to 46kHz, +/- 0.1dB
- **192kHz** = 18Hz to 94kHz, +/- 0.1dB
- 120dB Dynamic Range (A- weighted), 117dB (no weighting).
- -100dB THD+N (+4dBU = -18dBFS). -94dB THD+N (+21dBU = -1dBFs).

B2 BOMBER DAC



IN THE BOX:

- B2 BOMBER DAC
- IEC Power Cable
- 4 Rack Screws with Washers

B2 DAC FEATURES:

- 44.1 kHz to 192 kHz, 24 bit, 2 channel DAC.
- Proprietary custom design BOPA11 all discrete op-amps.
- Passive filters.
- All Class-A, discrete transistors signal path with zero signal path capacitors.
- Audiophile quality 6 position attenuator with standard headroom settings.
- High definition metering with simultaneous RMS and peak indication.
- 2x AES, SPDIF Coaxial and Toslink inputs.
- BNC word clock input. Two BNC outputs of extremely low jitter word clock.
- Frequency response: **48kHz** = 10Hz to 22kHz, +/- 0.1dB
- **96kHz** = 10Hz to 30kHz, +/- 0.1dB, -0.3 dB @ 40kHz
- **192kHz** = 10Hz to 30kHz, +/- 0.1dB, -1.5 dB @ 90kHz
- 115dB Dynamic Range, -96dB THD+N, full scale output = +22dBU

B2 ADC FRONT PANEL CONTROLS

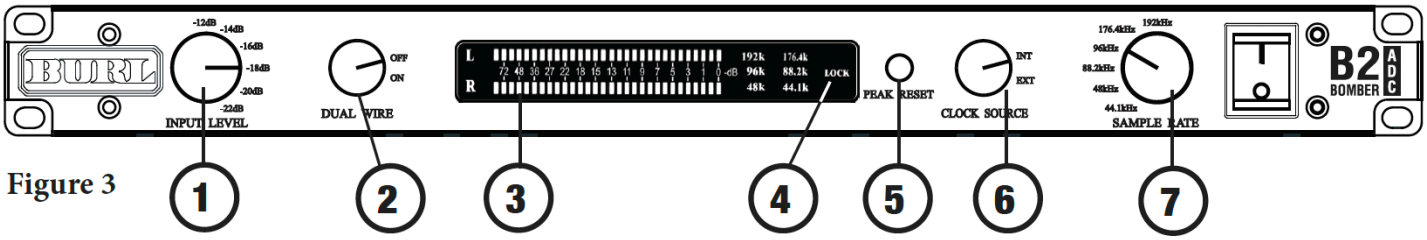


Figure 3

1. **Input Level Attenuator:** ***POST TRANSFORMER*** Allows quick selection between analog +4dBu =-12, -14, -16, -18, -20, or -2 2 dBfs digital headroom.
2. **Dual Wire:** Sends LEFT to AES1, RIGHT to AES2 at 176.4 and 192 kHz only. With Dual Wire set OFF, L and R are output to both AES1 and AES2. Dual Wire must be OFF for all sample rates other than 176.4/192 kHz.
3. **High Resolution Meter:** 30 segment meter shows RMS level and Peak simultaneously.
4. **Lock:** Red “LOCK” indicates unit is clocking correctly. When not lit, unit is not locked to external clock. Lock is always lit when on internal clock. When lock is lost, unit automatically switches to Internal.
5. **Peak Reset:** Clears the red 0dB peak LED.
6. **Clock Source:** Select Internal Clock or External Word Clock.
7. **Sample Rate Select:** (For Internal clock) Manually set sample rate to 44.1, 48, 88.2, 96, 176.4, 192 kHz.

B2 DAC FRONT PANEL CONTROLS

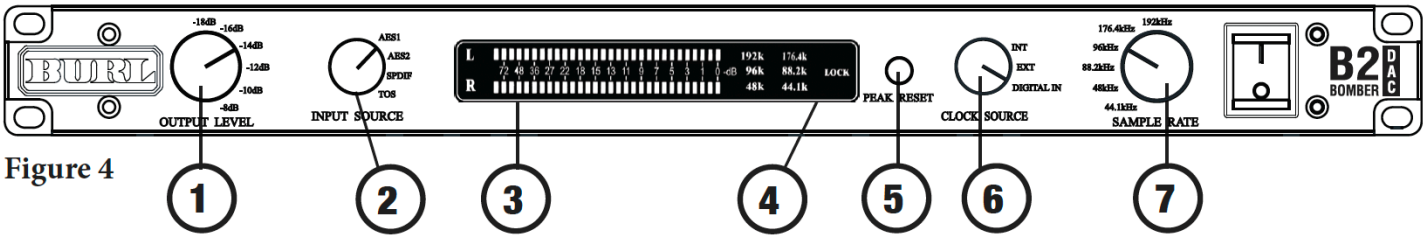


Figure 4

1. **Output Level Attenuator:** Allows quick selection between analog +4dBu = -18, -16, -14, -12, -10, or -8 dBfs digital headroom.
2. **Input Source:** Selects input between AES1, AES2, SPDIF, or TOS.
3. **High Resolution Meter:** 30 segment meter shows RMS level and Peak simultaneously.
4. **Lock:** Red “LOCK” indicates unit is clocking correctly. When not lit, unit is not locked to external clock. Lock is always lit when on internal clock. When lock is lost, unit automatically switches to Internal.
5. **Peak Reset:** Clears the red 0dB peak LED.
6. **Clock Source:** Select Internal Clock or External Word Clock or DIGITAL IN (AES1, AES2, SPDIF Coaxial or Toslink).
7. **Sample Rate Select:** (For Internal clock) Manually set sample rate to 44.1, 48, 88.2, 96, 176.4, 192 kHz.

B2 ADC REAR UNIT CONNECTIONS

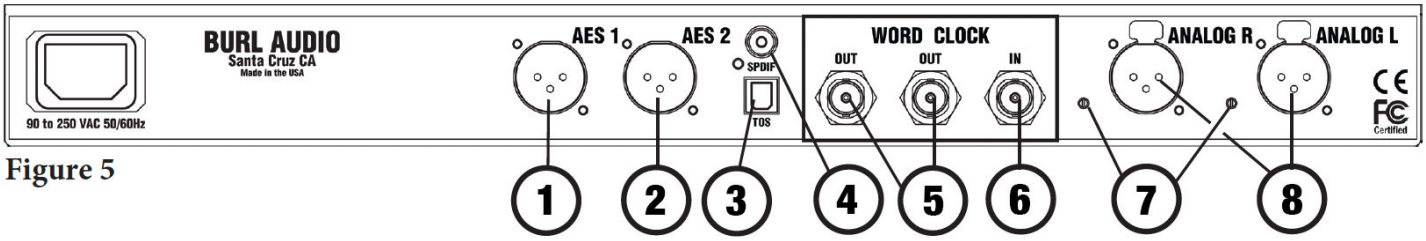


Figure 5

1. **AES 1:** Digital Output for channels L & R with Dual Wire OFF; LEFT channel with Dual Wire ON at 176.4/192 kHz.
2. **AES 2:** Digital Output for channels L & R with Dual Wire OFF; RIGHT channel with Dual Wire ON at 176.4/192 kHz.
3. **TOSLINK:** Digital Optical SPDIF Output for channels L & R. Not ADAT Lightpipe protocol.
4. **SPDIF:** Digital Coaxial SPDIF Output for channels L & R.
5. **Word Clock Output:** 2x BNC Word Clock outputs.
6. **Word Clock Input:** BNC input for an external Word Clock.
7. **Analog Input Trim:** For fine tuning input levels.
8. **Analog Input:** Standard XLR input.

B2 DAC REAR UNIT CONNECTIONS

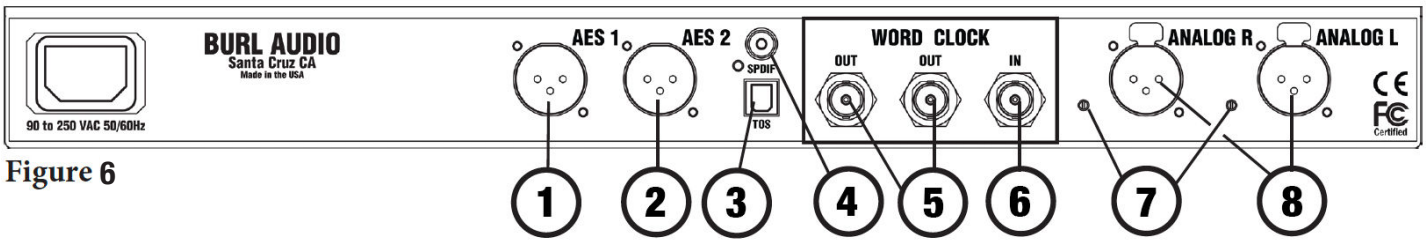


Figure 6

1. **AES 1:** Digital Input for channels L & R (No Dual Wire support)
2. **AES 2:** Digital Input for channels L & R (No Dual Wire support)
3. **TOSLINK:** Digital Optical SPDIF Output for channels L & R. Not ADAT Lightpipe protocol.
4. **SPDIF:** Digital Coaxial SPDIF Output for channels L & R.
5. **Word Clock Output:** 2x BNC Word Clock outputs.
6. **Word Clock Input:** BNC input for an external Word Clock.
7. **Analog Input Trim:** For fine tuning output levels.
8. **Analog Input:** Standard XLR output.

B2 BOMBER ADC

Getting Started

1. Connect XLR cables to Line Level analog inputs on rear panel.
2. Connect cables from desired digital output (AES, SPDIF Coaxial or Toslink) to compatible equipment.
3. Connect Word Clock cables if clocking from an external Word Clock source.
4. Set clock to INT (recommended) or EXT if using Word Clock.
5. Set Sample Rate on front panel when Clock Source is set to INT.
6. Set Dual Wire switch to ON. if using dual AES cable protocol.
7. Set Input Level. **BURL recommends starting at -18 dBfs.**

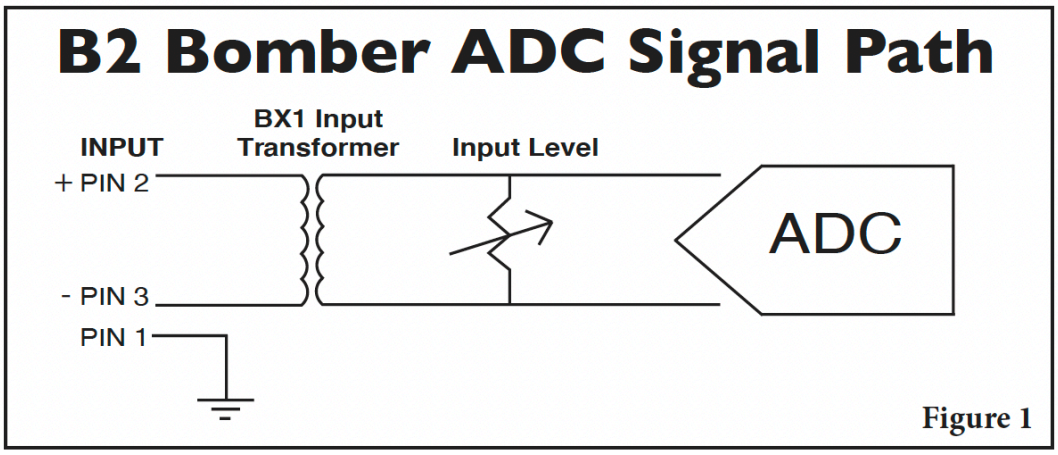


Figure 1

B2 BOMBER DAC

Getting Started

1. Connect XLR cables from Line Level analog outputs on rear panel to compatible equipment.
2. Connect desired digital Input Source (AES, SPDIF Coaxial or Toslink).
3. Connect Word Clock cables if clocking from an external Word Clock source.
4. Set Input Source : AES1, AES2, SPDIF Coaxial or Toslink.
5. Set Clock Source to INT, EXT (Word Clock) or DIGITAL IN (AES1, AES2, SPDIF Coaxial or Toslink).
6. Set Sample Rate on front panel when Clock Source is set to INT.
7. Set Output Level attenuator.

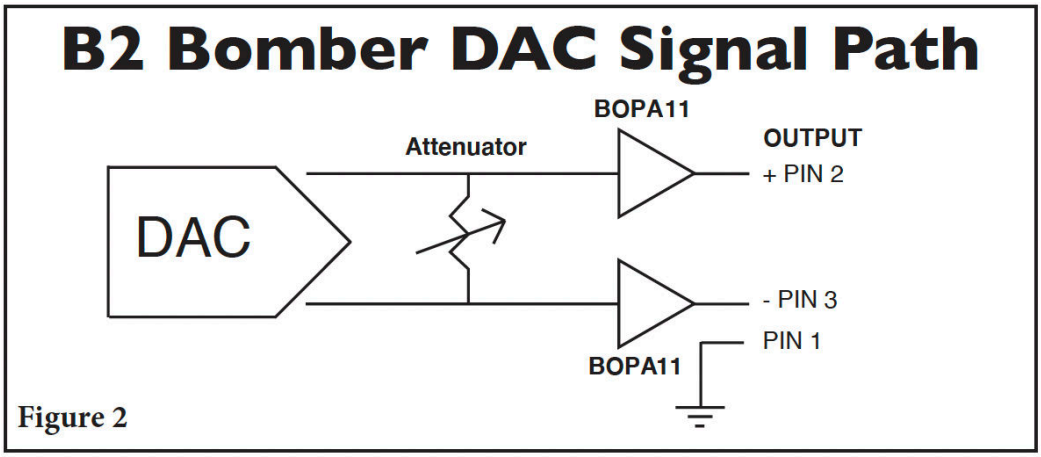


Figure 2