



Overview

The BreakIn12 and BreakOut12 are low cost input (A/D) and output (D/A) expansion devices and are part of the SymNet family of products which provide complete signal processing, routing, and mixing solutions for engineered sound applications. When added to SymNet systems, the BreakIn12 and BreakOut12 can drastically reduce total system cost while greatly increasing input and output capacity.

Unlike SymNet 8x8, 8in, and 8out units, the BreakIn12 and BreakOut12 contain no DSP processors, a design feature which accounts for significant cost savings. Because of the tremendous DSP power contained in a single SymNet 8x8 (4 SHARC floating point processors) many designs don't fully utilize the 8x8's DSP potential. The BreakInOut boxes allow you to tap that full potential. For example, by connecting a BreakIn12 and BreakOut12 to a SymNet 8x8 you create a very powerful 20x20 DSP matrix at an extremely competitive price.

The BreakIn12 has 12 analog inputs while the BreakOut12 has 12 analog outputs. Both units exist as nodes with unique addresses in a SymLink ring network. They are set up and controlled over the network from the SymNet Designer application running on a PC connected to the master unit. Mic gain, attenuation, and phantom power are controlled per channel directly from SymNet Designer.

BreakIn12 Specifications

Analog Audio Inputs

- Number of Analog Inputs: 12
- Input Impedance: 6.67k ohm, balanced
- Maximum Input Level: +28dBu balanced, with pad; +22dBu without pad
- Nominal Input Levels: Mic -50dBu, -40dBu; Line -20dBu, -10 dBV, +4dBu
- Mic-Preamp EIN: -125dB, typical
- Phantom Power (per input): +48V
- Minimum CMR: >70dB at 60 Hz

A/D Conversion

- Converter Topology: 24-bit Sigma-Delta
- Sample Rate: 48kHz
- Dynamic Range: >110dBFS, A-weighted
- THD+Noise: <0.003% THD @ -1 dBFS, 1kHz
- Frequency Response: 20Hz to 20kHz, ±0.5dB

BreakOut12 Specifications

Analog Audio Outputs

- Number of Analog Outputs: 12
- Output Impedance: 200 ohms balanced
- Maximum Output Level: +24 dBu, balanced

D/A Conversion

- Converter Topology: 24-bit Sigma-Delta
- Sample Rate: 48kHz
- Dynamic Range: >110dBFS, A-weighted
- THD+Noise: <0.004% at -1dBFS, 1kHz
- Frequency Response: 20Hz to 20kHz, ±0.5dB

Common Specifications

Physical

- Size: 19" x 10.5" x 1.72" (48.3 x 26.6 x 4.4 cm)
- Weight: 6.6 lbs (2.99 kg)
- Audio connectors: detachable Euroblock
- SymLink connectors: RJ-45
- RS-232: DB-9

Electrical

- Mains voltage: 100-240VAC, 50/60Hz, 75W Max
- Power connector: detachable IEC
- Front panel LEDs: signal CLIP (x12), NOMINAL (x12), PRESENT (x12), POWER (x1), COMM (x1), SYMLINK ACTIVE (x1).

