



## BreakIn12

The **BreakIn12** is an analog audio input channel expander for SymLink hardware. It has no onboard DSP, and cannot function in a stand-alone mode. Its sole purpose is to increase system analog input channel count while reducing system cost-per-channel. Each analog input is mic/line-selectable with five coarse gain levels and available 48V phantom power per channel. Onboard SymLink Bus connectors support the interfacing of BreakIn12 devices within a SymLink Ring.

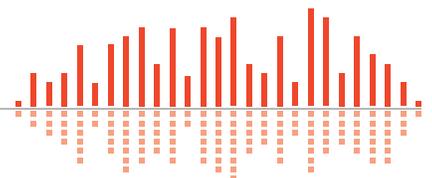
Bus assignments and parameter settings are configured within SymNet Designer software.

While DSP requirements vary among system designs, two BreakIn12 devices can typically be supported by one 8x8 DSP.

All I/O parameters are accessible via outboard control from third-party control systems, ARC Wall Panels, or other control devices properly connected to a SymLink Ring.

### Specifications

GENERAL SPECIFICATIONS		AUDIO SPECIFICATIONS	
SymLink Cable	Shielded CAT5, maximum device to device length = 10 meters	Converter Type	24-bit Sigma Delta
Maximum devices per SymLink Ring	15	Sampling Rate	48 kHz, +/- 100 ppm
Maximum SymLink Rings	31	Frequency Response	20-20 kHz, +/- 0.5 dB
Maximum stored presets	1000	A/D dynamic range	> 111 dB, A-weighted
		Total THD+ Noise	< 0.003% @ 1 kHz, -1 dBFS
		Input impedance	6.67k Ohms, balanced
		Maximum input level	+28 dBu with 6 dB pad, +22 dBu w/o pad
		Mic preamp EIN	-128 dBu typical, 22-22 kHz, A-weighted
		Phantom power (per input)	+48 VDC, 10 mA
		Input CMR	> 70 dB @ 60 Hz
		Channel separation	> 110 dB @ 1 kHz





- 1 Main Power:** Accepts power from detachable IEC power cable (100-240 VAC, 50-60 Hz, 75 Watts max).
- 2 RS-232:** This connection is for factory use only. All communication with the BreakIn12 is via the SymLink bus under the control of a SymNet DSP or CobraLink master device.
- 3 SymLink:** Low-latency 64-channel audio and data bus. TRANSMIT connects to the next downstream SymLink device's receive port. RECEIVE connects to the previous SymLink device's transmit port. This forms the "SymLink Ring". Use shielded CAT5 cables less than 10 meters in length, standard

straight-through wiring.

- 4 Device Config:** Configures the SymLink Master/Slave status and SymLink device address.
- 5 Analog Inputs:** 12 analog mic / line level audio inputs with individually software-selectable phantom power and level of -50 dBu, -40 dBu, -20 dBu, -10 dBV or +4 dBu.

### Mechanical Data

Item	Specifications	Remarks
Space Required	1U (WDH: 48.3 cm x 26.7 cm x 4.37 cm / 19 in x 10.5 in x 1.72 in). Depth does not include connector allowance.	Allow at least 1 inch additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	100 to 240 VAC, 50-60 Hz, 75W maximum.	No line voltage switching required.
Ventilation	Maximum recommended ambient operating temperature is 30 C / 86 F.	Fan on equipment right pulls hot air out of device. Air intake at equipment left. Ensure that the left and right equipment sides are unobstructed (5.08 cm, 2 in minimum clearance). The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths, curtains, etc.
Shipping Weight	6 kg (12 lbs.)	

### Architect and Engineer Specifications: SymNet BreakIn12.

The BreakIn12 analog input expander shall provide twelve balanced mic/line inputs on plug-in barrier-strip connectors. The device shall include SymLink Bus transmit and receive ports on two RJ-45 connectors. Audio inputs shall be analog, with internal 24-bit A/D converters operating at a sample rate of 48 kHz. The device shall have no onboard digital processing (DSP) capabilities. SymLink Bus connections shall allow sharing of digital audio within multi-device systems. Software shall be provided for connecting the device to other DSP system components. The analog input expander shall be CE marked, CSA tested to UL 60065.

The analog input expander shall be BreakIn12.