Jupiter 4, 8, 12

SYSTEM	
Sampling Rate	48 kHz, ± 100 ppm.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 110 dB (A-weighted), input to output.
THD+Noise	< -85 dB (un-weighted); 1 kHz @ +22 dBu with 0 dB gain.
Interchannel Crosstalk	< -90 dB @ 1 kHz, typical.
Latency (A/D/A)	< 1.6 mS, input routed to output.

Introduction

Jupiter packages powerful DSP into a zero learning curve, turn-key audio processing solution drawing its inspiration from the 'apps' paradigm of smartphones like the iPhone. Standing on the shoulders of Symetrix' world-class SymNet DSP platform, Jupiter upholds our commitment to pristine sound.

Hardware: Choice made simple.

The three Jupiter hardware offerings differ only in their audio input and output counts. All three use the same software and DSP processes, making your choice of hardware quick and easy.

Software: Easy from the start.

Just like using productivity apps on your smart phone, you use Jupiter apps to do specific audio jobs with a simple download to Jupiter hardware. Tap into one of the multiple personalities of Jupiter – no design time, zero learning curve. Jupiter handles every task, from automixing to loudspeaker management. The ever-growing library of downloadable Jupiter apps future-proofs your hardware investment.

JUPITER APPS

Mixing and Routing for:

- Houses of Worship
- Courtrooms
- Banquet Rooms

Public Address and Distribution for:

- Transit Stations
- Theaters
- Shopping Malls

Sound Reinforcement for:

- Nightclubs
- Courtrooms
- Lecture Halls

Special Purpose Signal Processing for:

- Broadcast Facilities
- Production Suites

ARCHITECT & ENGINEER SPECIFICATIONS

The device shall provide twelve, eight or four inputs (Jupiter 12, 8 or 4 respectively) that are selectable as line or mic level with phantom power and four, eight or four (Jupiter 12, 8 or 4 respectively) line level outputs. All signal processing, mixing and routing functions (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel 3.81 mm terminal block connectors.

The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or higher operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide the management of apps, device files and display and control of all signal processing and configuration functions including, but not limited to: Input and Output Gain • Highpass Filtering • Lowpass Filtering • FIR Filters • Crossovers • Parametric Equalization • Graphic Equalization • Expansion • De-Essing • Compression • Limiting • Automatic Gain Control • Ambient Noise Compensation • Feedback Elimination • Automatic Mixing • Priority Mixing • Signal Routing • Delay • Polarity.

The front panel shall include input and output signal level indicators as well as indicators for POWER, NETWORK, and ARC.

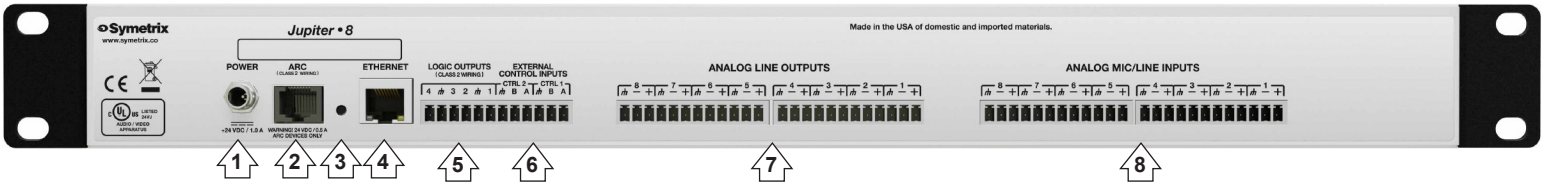
External control shall include preset selection as well as I/O level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors using the optional ARC wall panel remote controls. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on board real time clock to facilitate automatic, timed changing of presets. Third-party control systems may interface over IP using a published ASCII control protocol.

Audio conversion shall be 24-bit, 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted.

The device shall have a captive power input socket for an external 24 VDC supply. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel and moulded plastic, and mount into a standard 19" 1U EIA rack. The device shall be a Symetrix Jupiter model 4, 8 or 12.

(*continued on next page*)

DEVICE DRAWINGS - FRONT AND REAR



1. **Power:** External universal input (100-240 VAC), in-line supply provides 24 VDC @ 1.0 Amperes.
2. **ARC:** Distributes power and RS-485 data to one or more ARC devices.
3. **Factory Reset Switch:** To be used under the supervision of Symetrix technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.
4. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
5. **Logic Outputs:** Four (4) logic outputs with two (2) paired common ground pins. Logic Outputs go low (0V) when active, and are internally pulled high (5V) when inactive and can drive external LED indicators directly.
6. **External Control Inputs:** Two (2) analog control inputs able to be used as 2 potentiometer inputs or as 4 switch inputs (+3.3 VDC reference voltage supplied).
7. **Analog Line Outputs:** Four (4) or Eight (8) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
8. **Analog Mic/Line Inputs:** Four (4), Eight (8) or Twelve (12) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -36 dBu and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

INPUTS	
Number of Inputs	Twelve (12), eight (8), or four (4) switchable balanced mic or line level on Jupiter 12, 8 or 4 respectively.
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu line or -36 dBu mic level (software selectable) with 20 dB of headroom.
Mic Pre-amp gain	+40 dB switchable.
Input Trim	+/- 24 dB.
Maximum Input Level	+23 dBu.
Input impedance	> 18k Ohms balanced, > 9k Ohms unbalanced, > 2k Ohms with phantom power engaged.
CMRR	> 50 dB @ 1 kHz, unity gain.
Mic Pre-amp EIN	< -125 dBu, 22 Hz - 22 kHz, 100 Ω source impedance.
Phantom power	+20 VDC @ 20 mA maximum per input.

OUTPUTS	
Number of Outputs	Four (4), eight (8), or four (4) line level on Jupiter 12, 8 or 4 respectively.
Connectors	3.81 mm terminal blocks.
Nominal Output Level	+4 dBu with 20 dB of headroom.
Maximum Output Level	+24 dBu (+22.8 dBu into a 2k Ohm minimum load).
Output Impedance	200 Ohms balanced, 100 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, 0 dB gain +8dBu output.

MECHANICAL SPECIFICATIONS		
Space Required	1U (WDH: 48.02 cm x 19.05 cm x 4.37 cm / 18.91 in x 7.5 in x 1.72 in), depth is specified from front panel to back of connectors.	Allow at least 3 inch additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	100-240 VAC, 50/60 Hz, 25 Watts maximum. Universal input.	No line voltage switching required.
Ventilation	Maximum recommended ambient operating temperature is 30 C / 86 F.	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	8 lbs. (3.63 kg)	
Certifications or Compliance	UL 60065, cUL 60065, IEC 60065, EN 55103-1, EN 55103-2, FCC Part 15, RoHS	