Explore Jupiter

Zero learning curve DSP.

- A turn-key audio processing solution utilizing downloadable ‘apps’ optimized for specific venues and systems.
- App categories include mixing and routing, public address and distribution, sound reinforcement, and special purpose signal processing.
- Pre-designed apps greatly reduce installation time.
- Three hardware versions: 4 inputs + 4 outputs (Jupiter 4), 8 inputs + 8 outputs (Jupiter 8), 12 inputs + 4 outputs (Jupiter 12).
- Two (2) external control inputs and four (4) logic outputs.

Introducing Jupiter.

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 simple.

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.

External Control.

Multiple external control options provide greater end user accessibility. You can use Symetrix RS-485 ARC wall panels for volume control, source and preset selection. Third-party control over IP is quick to implement because Jupiters’ ASCII control protocol is humanly readable with short and simple commands. Logic inputs and outputs integrate with external control hardware like custom indicator panels, life safety systems and remote camera switchers.

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Jupiter In Action

Multiple personalities.

Jupiter comes with amazing apps. Apps give Jupiter hardware the ability to take on multiple personalities (only one at a time, thankfully!). Apps are pre-designed, ready to deploy…and they're free.

Your time is money.

We know that. We've made your learning curve zip. For example, with a simple download to hardware Jupiter morphs to become an automixer for houses of worship, courtrooms, and government chambers. Jupiter manages paging and background music distribution for transit centers, shopping malls, commercial buildings, and fitness centers. Jupiter handles sound reinforcement duties for night clubs, sporting events and theaters and effortlessly functions as a special purpose signal processor for mic or line sources in a broadcast or recording environment.

There's an app for that.

Using Jupiter predesigned apps for audio processing is like using productivity apps on a smartphone. With a simple download, tap into one of the multiple personalities of Jupiter – no design time, no learning curve.

App library.

We've organized the Jupiter app library (found in the dowloads section of the website) into four categories:

- Mixing and routing
- Public address and distribution
- Sound reinforcement
- Special purpose signal processing.

6408 216th Street SW | Mountlake Terrace, WA 98043 USA
T +1.425.778.7728 **F** +1.425.778.7727 | **www.SymetrixAudio.com**

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Mixing and Routing.

Mixing and Routing are essential functions. From straight mono or stereo mixing for lecture halls and banquet rooms to advanced gating or gain-sharing automixing for courtrooms and town hall meeting rooms, Jupiters' elegant interface makes complex signal management effortless.

Public Address and Distribution.

In bustling transit stations, busy retail outlets and noisy restaurants, paging announcements and distributed background music must be intelligible and always at the right volume. Jupiters' priority mixer and ambient noise compensation modules ensure the message is always heard.

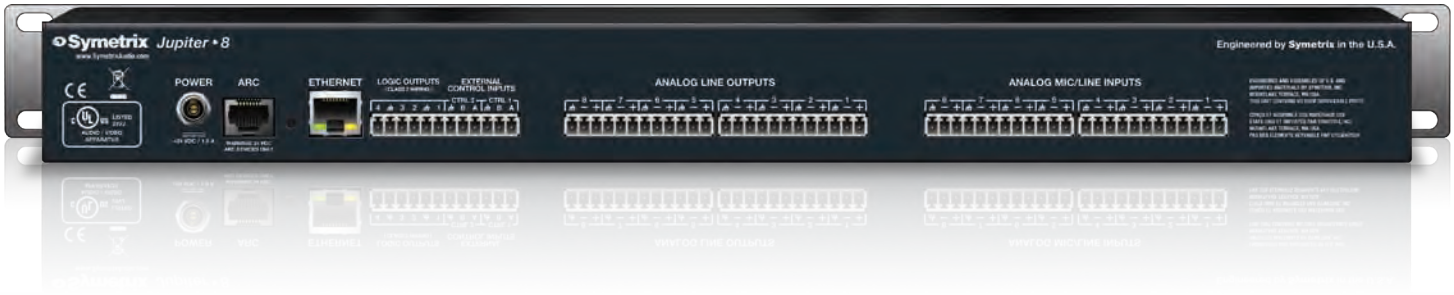
Sound Reinforcement.

Loudspeaker management is the crucial last step in the signal processing chain. A properly tuned system directs the exclusive frequency ranges required by each driver type to the proper drivers, and accounts for driver time alignment, driver/cabinet design anomalies, and room acoustics. Jupiter speaker management apps are built from an extensive pallet of filters, EQ, crossovers, delay, and dynamics modules, pre-configured into common signal chains and ready for deployment in endless venues including houses of worship, night clubs, and theaters.

Special Purpose Signal Processing.

Recording studios, broadcast facilities and production environments rely on extreme processing. Jupiter has a surplus of DSP horsepower for demanding processes such as EQ, feedback fighters, FIR filters, multi-dynamics, and crossovers. Problem solving processes include surgical EQ and multi-mode dynamics to tame your most unruly mic or line signals.

Jupiter 8 (8 inputs, 8 outputs) rear panel shown. Jupiter 4 (4 inputs, 4 outputs) and Jupiter 12 (12 inputs, 4 outputs) differ only by their numbers of audio inputs and outputs.



A&E 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**.

Performance Data

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.
Input Trim: +/- 24 dB.
Maximum Input Level: +23 dBu.
Input Impedance: > 18 kΩ balanced, > 9 kΩ unbalanced, > 2 kΩ 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) switchable balanced mic or line level on Jupiter 12, 8 or 4 respectively.
Connectors: 3.81 mm terminal blocks.
Nominal Output Level: +4 dBu line level with 20 dB of headroom. For unbalanced analog output, do not connect the minus output terminal. Unbalanced configuration results in 6 dB lower output level.
Maximum Output Level: +24 dBu.
Output Impedance: 200 Ω balanced, 100 Ω unbalanced.

SYSTEM
Sample Rate: 48 kHz.
Frequency Response: 20 Hz - 20 kHz, +/- 0.5 dB.
Dynamic Range: > 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: < 1.6 ms, input to output with all DSP inactive.

Mechanical Data

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 inches 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.

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.

CERTIFICATIONS OR COMPLIANCE:
UL 60065, cUL 60065, IEC 60065, EN 55103-1, EN 55103-2, FCC Part 15, RoHS

SHIPPING WEIGHT:
8 lbs. (3.63 kg)

All specifications and features subject to change without notice.

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Jupiter
Engineered and built in the USA by Symetrix

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