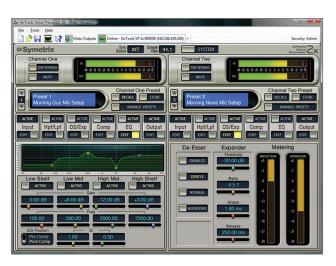# Next generation two channel programmable Voice Processor for today's broadcast professional.

The microphone is a crucial link to the audience. Proper management of that link is essential. Enter the Voice Processor 2x, an outstanding programmable microphone processor that is flexible, powerful, and easy to use.

Chief Engineers treasure its programmability and rich DSP feature set. On-air talent enjoy its simplicity of operation. Studio managers appreciate how it independently processes two microphone channels in one rack space. And, most importantly, everyone loves the sound – including the listening audience.
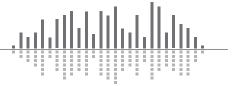
The 2x offers a comprehensive set of voice enhancement tools for any situation. The 2x's Windows® software application enables total control of all essential parameters. Once a desired sound is dialed in, all settings are saved as named presets for later recall from the front panel or remotely. Any mic can be optimized for a diverse air staff with either male or female voices.

Our Voice Processor legacy began with the original model 528, and has continued through the 601, 528E, 628 and 6200. Now you can maintain quality assurance throughout your voice talent signal chains with the Voice Processor 2x, Engineered by Symetrix. Our name has become synonymous with high quality audio processing for over 40 years.

Features

- Two (2) independently programmable channels of ultra-low latency digital microphone processing in one rack space.

- Two (2) Mic/Line inputs, two (2) Mic/Line outputs, two (2) AES3 outputs, Word Clock input.

- Processing modules include Compression, Equalization, De-Essing, Downward Expansion, Highpass and Lowpass filters, and Voice Symmetry.

- Configure named presets for each on-air personality – up to 50, including factory presets – using the included Windows® software over Ethernet.

- Recall presets with convenient front panel controls, optional hardware remote(s), or third-party control protocol.

A&E Specifications

The device shall provide two inputs that are selectable as line or mic level with phantom power and four outputs (two line level analog and two AES3 digital). All signal processing (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel XLR connectors.

The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or Vista operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide display and control of all signal processing and configuration functions including, but not limited to: **Input and Output Gain, Highpass Filtering, Lowpass Filtering, De-essing, Downward Expansion, Compression, Parametric Equalization, Signal Routing, Voice Symmetry and Polarity.**

The front panel shall include input and output level indication as well as indicators for POWER, NETWORK, and REMOTE. Additionally, a front panel LCD shall display certain system parameters and may be used for preset recall via the front panel UP, DOWN and MENU buttons.

External control shall include preset selection and/or comprehensive parameter adjustment, depending upon the particular remote in use, and shall be via industry-standard CAT5 cable with RJ45 connectors to the front or rear panel REMOTE ports. All program memory shall be non-volatile and provide program security should power fail. 3rd party control systems may interface via Ethernet using a published Control Protocol.

Audio conversion shall be 24-bit, 48 kHz with configurable output sample rate. The dynamic range of the processor shall not be lower than 113 dB A-weighted.

The device shall have an IEC power input socket. 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 an model Voice Processor 2x, Engineered by Symetrix.

Performance Data

INPUTS

Nominal Input Level: +4 dBu or -10 dBV line level, to -50 dBu mic level (software selectable) with 20 dB of headroom
Maximum Input Level: +23 dBu
Input Impedance: 6.67 kΩ balanced, > 3.3 kΩ unbalanced
CMRR: > 75 dB @ 1 kHz, unity gain
Mic Pre-amp EIN: > -127 dB, 22 Hz - 22 kHz, 100 Ω source impedance
Phantom Power: +48 VDC
A/D Conversion: 24-bit delta/sigma
A/D Dynamic Range: 116 dB (A-Weighted)
A/D THD+Noise: -102 dB (un-weighted); 1 kHz @ -2 dBFS with 0 dB gain
A/D Latency: 0.25 mS

OUTPUTS

Nominal Output Level:
Analog: +4 dBu line level with 20 dB of headroom
Digital: -20 dBFS. For unbalanced analog output, float (do not connect) the minus output terminal. Unbalanced usage results in 6 dB lower output level.
Maximum Output Level:
Analog: +24 dBu. Digital: 0 dBFS
Output Impedance:
Analog: 200 Ω balanced, 100 Ω unbalanced. Digital: 110 Ω
D/A Conversion: 24-bit delta/sigma
D/A Dynamic Range: 114 dB (A-Weighted)
D/A THD+N: -98 dB (un-weighted); 1 kHz @ -2 dBFS
D/A Latency: 0.2 mS
Mic Level Output Pad (Internal): -42 dB

SYSTEM

Nominal Sampling Rate: 48 kHz
Word Clock Input Range: 22 - 192 KHz
A/D/A Frequency Response: 20 Hz - 20 kHz, +/- 0.25 dB
A/D/A Dynamic Range: 113 dB (A-Weighted)
A/D/A Latency: < 0.7 mS; with all DSP active
Interchannel Crosstalk: > -90 dB @ 1 kHz, typical

Mechanical Data

Space Required:
1U (WDH: 48.02 cm x 23.11 cm x 4.37 cm / 18.91 in x 9.1 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.
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.

Certifications: UL 60065, cUL 60065, IEC 60065, EN 55103-1, EN 55103-2, FCC Part 15, RoHS

Weight: 8 lbs. (3.60 kg)