

lexicon

PERFORMANCE

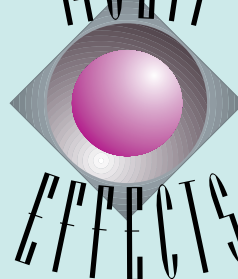
S E R I E S



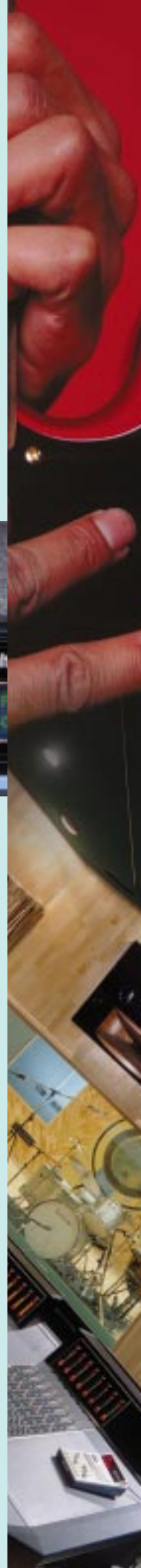
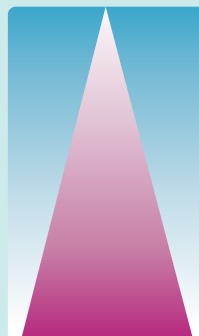
MPX 1

DIGITAL

MULTI



EFFECTS



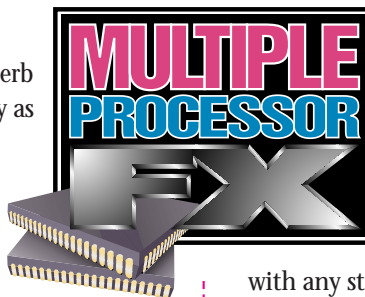
MPX 1 MULTIPLE PROCESSOR EFFECTS

Expect The Best...

The MPX 1 is the processor that fulfills the promise implied by the term, "multi-effects." *Multiple Processor FX technology™* combined with an interactive front panel, creates a new set of standards for others to follow... no less than you'd expect from Lexicon.

What To Expect...

- No compromise stereo reverb in combination with as many as 4 additional stereo effects
- A "goof-proof" system for quickly fine-tuning any program, without having to enter an in-depth editing mode
- Visual feedback to tell you exactly where you are and what features are available; on-board *Help* guides you all the way
- 56 Pitch, Chorus, EQ, Modulation, Delay and world-class Reverb effects.
- Complete flexibility of routing and effect order in every program
- 200 preset programs designed for a wide variety of audio sources and applications — with *database sorting* to let you find exactly what you want
- Layered features; options are there when you need them, and out of the way when you don't
- Dynamic control of all effects parameters with pushbutton access to the patch system



- Extensive MIDI implementation
- Comprehensive audio connectivity

Uncompromised Effects

The MPX 1 employs two separate DSP processors: our proprietary *Lexichip*, dedicated to delivering world-class stereo reverb and ambience algorithms, and a separate, fast-math DSP processor to create the other effects. This means that uncompromised *Lexicon* stereo reverberation and ambience effects are available all the time, whether you're running them alone, or in combination with any stereo pitch, chorus, EQ, delay or modulation effect. Many "multi-effect" processors can't match even this basic requirement. The MPX 1 not only meets this standard expectation, but has processing power left over to run still more effects.

Instant Access

The six effect types in the MPX 1 are accessible at all times via dedicated, back-lit buttons on the front panel. Each effect "block" is totally independent, with its own mix, level and bypass controls. The audio path through each effect is in stereo.

An arsenal of exciting effects for each block (56 in total) is only a button push away, allowing you to easily select a new effect for any program.



Goof-Proof Program Fine-Tuning

The MPX 1 comes loaded with 200 carefully-crafted presets that really show off the the MPX 1's versatility. Fine-tuning any preset to match it to your music or sound track is quick and easy with pushbutton access to a "soft row" designed to hold the most useful parameter combinations for each individual program.

When you want to completely restructure a program, or create a new one from scratch, an Edit mode lets you dive as deeply as you want into an extensive pool of effect and program parameters.

On-Board Help

A multi-level *Help* system built into the MPX 1 provides guidance through any front panel operation. At any time, simply press and hold any button to display a message explaining the function of the button *without* executing any action. This feature lets you look around and figure out most functions without ever having to open the user's manual.

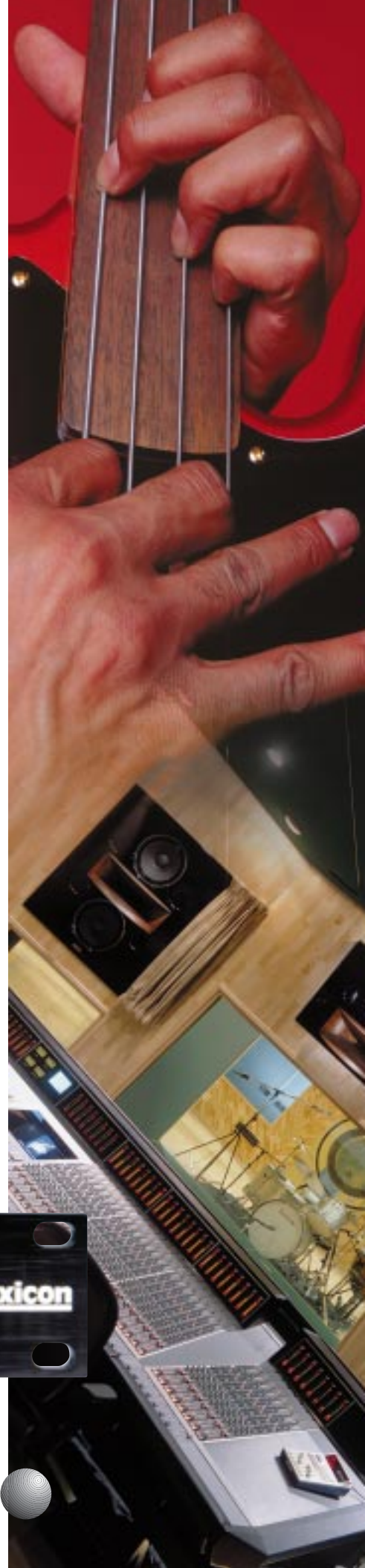
In addition to press and hold *Help*, the MPX 1 has an optional *Sleep* mode help function which you can turn on for automatic display of useful messages when the system is idle.

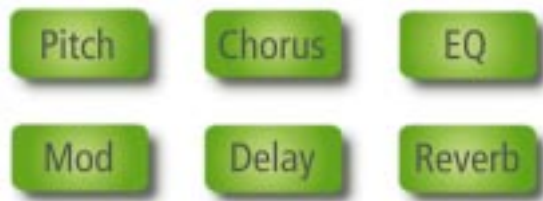
Interactive Front Panel

The MPX 1 front panel speaks for itself — with dedicated indicators and displays to let you know where you are and what features are available at all times:

- *Effect Select* buttons light to show which effects are active in the current program.
- A *Tempo* LED flashes at the current tempo in any program that utilizes tempo-controlled delay times or modulation rates. A *Tap* button lets you change tempo on-the-fly.
- When the A/B LED lights, the A/B button lets you morph between effect or parameter variations.
- A numeric display makes program and patch numbers highly visible.
- An alphanumeric display shows program, parameter and routing displays.
- Dedicated *Mix* and *Patch* buttons give you instant access to mix and level settings of any or all effects, and the MPX 1 patch system. The *Patch* button lights whenever a patched parameter is displayed; simply press it to access the patch directly.
- *Bypass* lets you toggle master bypass.
- The *Options* button lights whenever additional functions and features are available.

*The MPX 1 front panel shows you what's going on at all times. Dedicated back-lit buttons give you instant access to each effect and its essential parameters. Tempo-based effects can be synchronized to the beat simply by pressing **Tap**. Morph between effects or parameters with A/B.*





The Effects

The MPX 1 has 56 pitch, chorus, EQ, modulation, delay and reverb effects, each with the audio quality and control flexibility you'd expect in a dedicated processor. A few examples are:

- High-precision (32-bit) parametric EQ
- Rotary speaker cabinet simulator
- High-quality 2-voice pitch shifter
- Delays and echoes: mono, stereo and dual
- Looper and ducker
- Multi-voice stereo chorus, flangers, phaser, wah, autopanner and much more

Multiple Processor FX technology lets you combine these stunning effects into countless combinations.

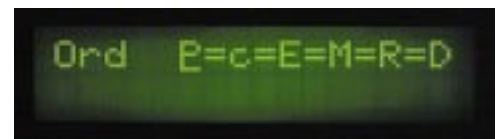
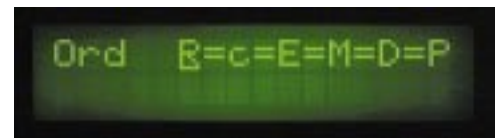
Lexicon Reverberation Algorithms

Lexicon's renowned reverberation algorithms are the sonic foundation of the MPX 1, and we give you a full spectrum: *Ambience*, *Chamber*, *Hall*, *Plate*, *Gate* — all are true stereo with independent processing of left and right inputs. The MPX 1's dedicated reverb processor ensures that you can load any reverb into any program, regardless of what other effects are already running.

The MPX 1 is the first effects processor to offer the Lexicon *Ambience* effect, previously available only in our dedicated reverberation processors (PCM 90, Model 300 and 480L). *Ambience* is a "dry reverb" that can simulate the initial reflections of small through large rooms without the long decay associated with reverberation — an extremely useful effect for vocal and instrument sources and an essential tool for matching dialog or other source tracks.

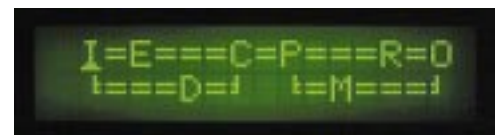
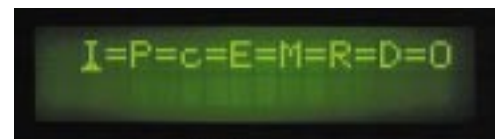
Effect Ordering & Routing Maps

The MPX 1 provides extremely flexible effect ordering and routing within each program. Ordering and routing of the six effect blocks is completely independent in each program. Effects can be placed in any order, simply by "dragging and dropping" them on a simple visual map.



The MPX 1 allows you to "drag and drop" the six effect blocks into any order. The placement of the pitch (P), delay (D) and reverb (R) blocks have been changed in the above examples.

Similarly, a routing map allows you to distribute the six effect blocks across two parallel stereo paths which can be split and merged at multiple points. The routing map is rewired by changing graphic "patch cord" connections.



The six effect blocks can be arranged into literally millions of routing configurations.



Program Library

The MPX 1 provides a large library of programs, crafted to provide a versatile array of sounds designed for a wide variety of performance, sound design and production applications. These programs not only exploit the unique characteristics of each effect, but provide useful examples of the effect combinations that can be created with the MPX 1. In addition, we've left space for 50 programs of your own design.

Having many programs on-board is great, but with a library this large, how do you quickly find what you need? In the MPX 1, a built-in DataBase function makes it easy to find the right program for the moment. This database is completely user-definable, so you can reorganize all 250 programs any way you want. The MPX 1 DataBase *Sort, Search and Show* options include:

- Sort by name
- Sort by number
- Search for source type (*acoustic, drums, guitar, keyboard, live PA, sound FX, tempo and vocal*)
- Search for effect type (*pitch, chorus, EQ, modulation, delay, ambient, chamber, gate, hall, inverse, plate and dual*)
- Search for source & effect (*any combination of source or effect can be selected*)
- Show members of MIDI maps (*Three 128-program maps are available*)
- Show members of program chains (*10-program chains are available*)
- Last 10 programs loaded

Options When You Need Them

The MPX 1 gives you as much control as you're ever likely to want, while keeping the details out of your way until you need them. The *Options* feature is a good example of this. An *Options* button lights whenever there are additional features associated with the current display. Press *Options* to access the optional features. For example, when programs are displayed, press *Options* to access the DataBase *Sort, Search and Show* functions.

Additional options include:

• Time Options

All MPX 1 delay parameters have an option which allows any delay time to be displayed in milliseconds, as echoes per beat, or in feet or meters.

• Rate Options

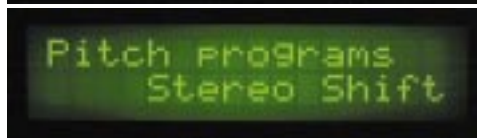
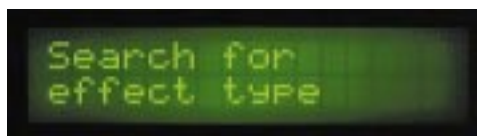
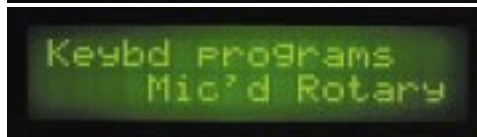
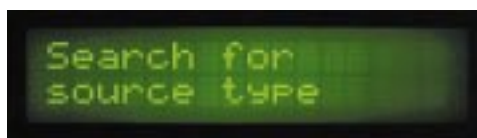
All MPX 1 rate parameters have an option which allows rate to be displayed in Hertz (Hz) or cycles per beat.

• Feedback Options

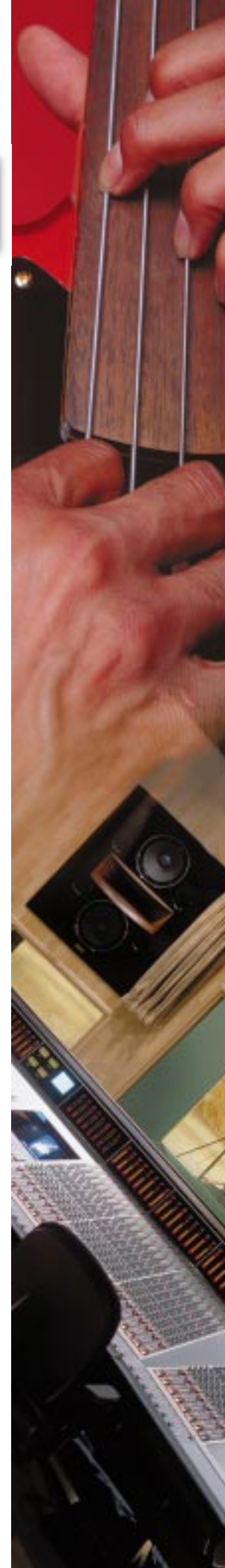
Feedback parameters have an option which allows any combination of effect blocks to be inserted inside delay or echo feedback loops.

• Patch Options

These options allow you to automatically "learn" MIDI control sources and create different control curves.



In the above three pairs of DataBase displays, the upper display of each pair shows the selected Search option; the lower display shows one of the many choices available for that selection.





Patching System

The ability to dynamically control effect parameters is an essential aspect of creating great sounding, useful programs. Aside from the rate and envelope controls built into certain effects, the MPX 1 patch system provides more than 150 controllers that can be assigned to any effect parameter (up to 5 per program). These controllers include: *LFO* (2), *ADR* (2), *Envelope Follower* (2), *Arpeggiator*, *Random Generator*, *A/B Glide*, *Tempo* and *Sample and Hold Generator*.

Comprehensive MIDI Implementation

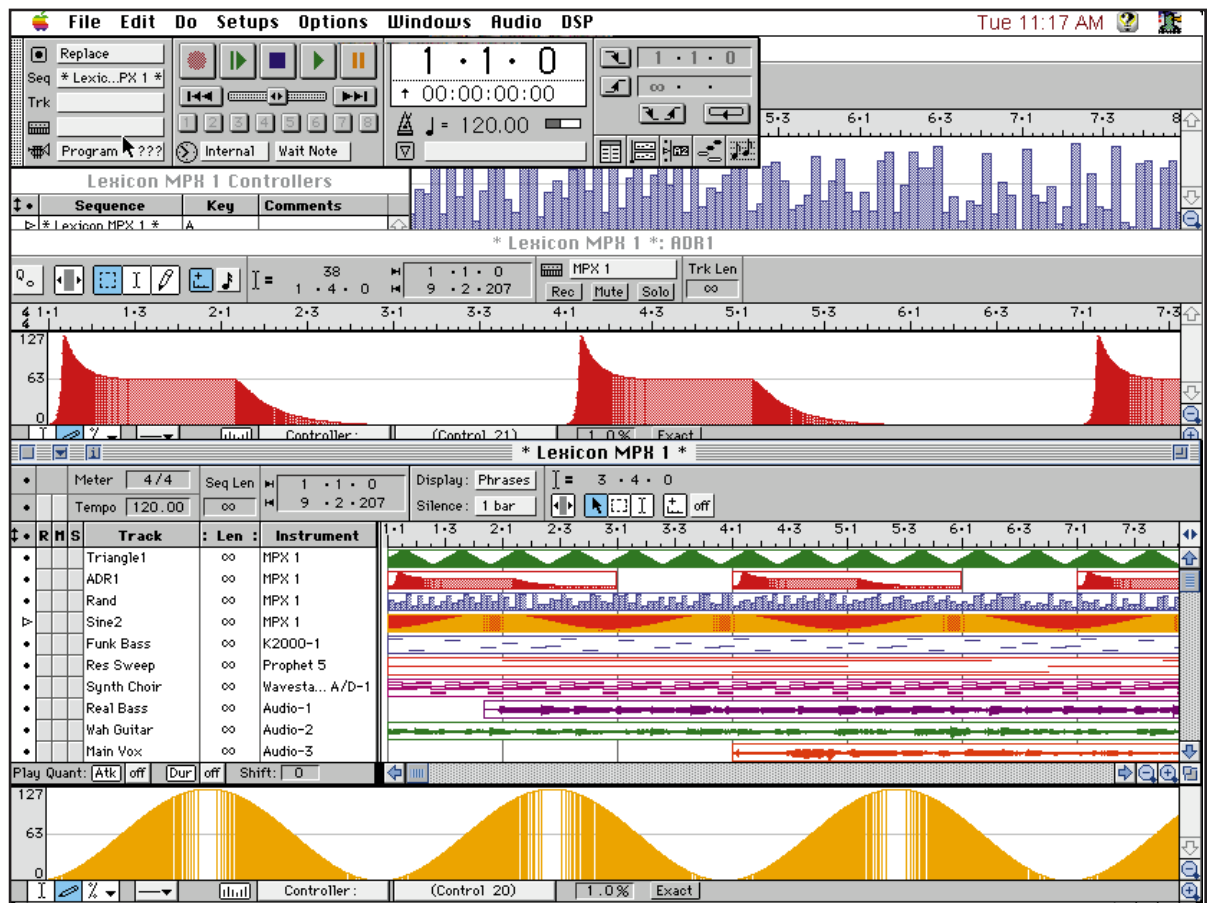
In addition to the requisite bulk data dump and load functions, the MPX 1 provides an extensive set of MIDI control and processing

features. In addition to global MIDI control for both individual and master bypass, mix and level, the MPX 1 gives you MIDI control of *A/B* and *Tap*, as well as all effect parameters.

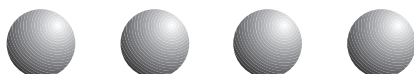
Tempo parameters synchronize to incoming MIDI clock, or the MPX 1 can transmit its own MIDI clock based on front panel *Tap* tempo.

All MPX 1 internal control sources (audio levels, *LFO*'s, *ADR*'s, *S/H*, *pedal*, etc.) can be transmitted as MIDI Continuous Controller messages. A built-in arpeggiator "plays" MIDI sound generators and produces synchronized audio effects.

In addition to separate *OUT* and *THRU* connectors, the MPX 1 supports remote power with a 7-pin DIN connector.



The MPX 1 has the ability to transmit any of its controllers as MIDI Continuous Controller messages — it can even translate audio levels to MIDI data. This capability permits unprecedented synchronization of effects and audio tracks. The graphic above shows an internal *ADR* Generator, *LFO* Sine and Triangle, and a Random Generator captured as MIDI data in a sequencing program (StudioVision™; Macintosh™ screen dump shown).



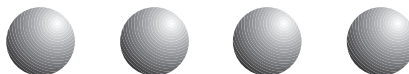
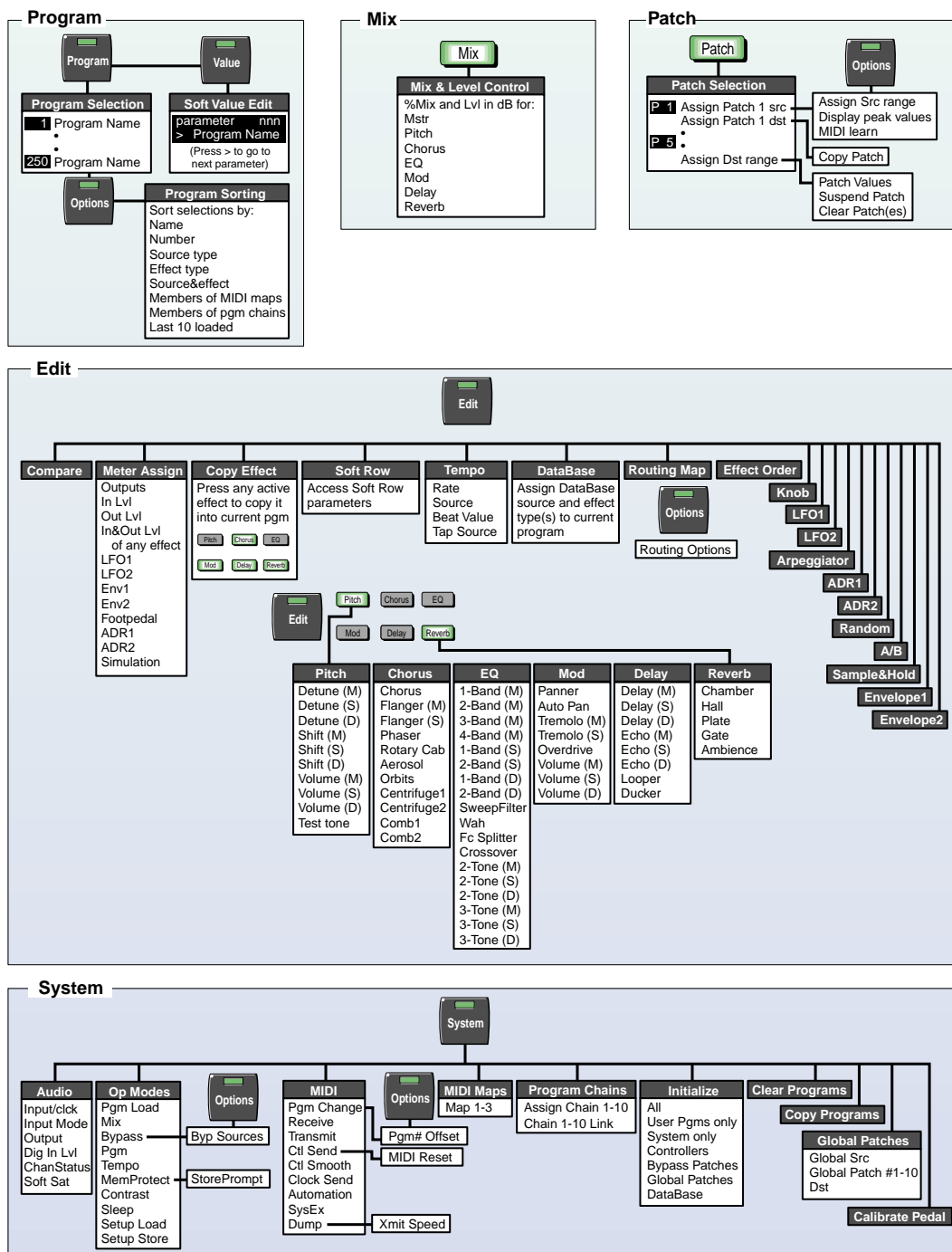
Audio Connections

The MPX 1 is ready to plug and play in any situation: in a stage rig for guitar or keyboard, in a PA rack, in the studio or plugged into a digital workstation.

- Operating levels from -10dB to +4dB
- Analog I/O has balanced XLR and TRS 1/4" connectors
- S/PDIF digital I/O

Great Expectations

The MPX 1 is designed to exceed your expectations. With a well-balanced mix of high-quality audio effects, interactive control and intuitive operation, it has the sound, the flexibility and the feature depth to take you as far as you want to go — quickly and creatively. The menus shown below give you a hint of what's in store for you behind the front panel.



MPX 1

MPX 1 SPECIFICATIONS

Audio Input

Connectors: ¼ in T/R/S phone jacks (2)
XLR 3-wire balanced (2)
Impedance:
+4dB/BAL switch position: 100 kΩ
-10dB/UNBAL switch position: 50 kΩ

Levels:
+4dB/BAL switch position: -2 dBu min full scale, +20 dBu max
-10dB/UNBAL switch position: -14 dBu min full scale, +8 dBu max

CMRR:
+4 dB/BAL switch position: 40 dB minimum, 10 Hz to 20 kHz

Audio Output

Connectors: ¼ in T/R/S phone jacks (2)
XLR 3-wire balanced (2)
Impedance: 600Ω, unbalanced

Levels: +18 dBu max, full scale

A/D Performance

Frequency Response: 20 Hz to 20 kHz ±1 dB
Crosstalk: -60 dB max
S/N Ratio: 90 dB min, 20 kHz bandwidth
THD: 0.01% max, 20 Hz to 20 kHz
Dynamic Range: 90 dB, 20 kHz bandwidth
Delay: 55.5 samples (1.25 ms @ 44.1kHz)

D/A Performance

Frequency Response: 20 Hz to 20 kHz ±1 dB
Crosstalk: -60 dB max
S/N Ratio: 95 dB min, 20 kHz bandwidth
THD: 0.01% max, 20 Hz to 20 kHz
Dynamic Range: 95 dB min, 20 kHz bandwidth
Delay: 25 samples (0.57 ms @ 44.1 kHz)

A/A Performance

Frequency Response: 20 Hz to 20 kHz ±1 dB
Crosstalk: -60 dB max
S/N Ratio: 95 dB typical, A-weighted
THD: 0.01% max, 20 Hz to 20 kHz
Dynamic Range: 95 dB typical, A-weighted

Digital Audio Interface

Connectors: Coaxial, RCA Type
Format: Conforms to S/PDIF CP-340 Type II
Sample Rate: 44.1kHz

Internal Audio Data Paths

Conversion: 18-bit A/D, 20-bit D/A
DSP: 32 bits
SP/DIF I/O: 24 bits

Control Interface

MIDI: 7-Pin DIN connector for MIDI
IN/powered bidirectional remote
5-pin DIN connectors for MIDI
THRU & OUT

Footswitch: ¼ in T/R/S phone jack for 3
independent footswitches

Footpedal: ¼ in T/R/S jack (10kΩ min -100kΩ
max impedance)

Remote Power In: 2.5mm barrel for 9VAC remote power

General

Dimensions: 19.0 in W x 1.75 in H x 9.0 in D
(483 x 45 x 289 mm), 19 inch rack
mount standard, 1U high
Weight: Net 6 lbs 2oz (2.8 kg)
Shipping: 9 lbs 3oz (4.2kg)

Power Requirements: 100-240VAC, 50-60 Hz, 25 W,
3-pin IEC power connector

EMC: Emissions: FCC class B EN55022
Class B
Immunity: EN50082-1, IEC 801-2,
IEC 801-3, IEC 801-4

Environment:

Operating Temperature: 32° to 104°F (0° to 40°C)
Storage Temperature: -22° to 160°F (-30° to 70°C)
Humidity: Max 95% without condensation

Electrical Approvals:

Safety Compliance: UL1419 and CSA 22.2 No.1-94 (UL
and C-UL marks)

EN60065 (TUV-GS and CE marking
per Directive 73/23/EEC)
EMC Compliance: FCC Class B, EN55022 Class B and
EN50082-1(CE marking per
Directive 89/336/EEC)

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MPX 1 Rear Panel

Lexicon

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