lexicon **PRODUCT INTRODUCTION**

MPX 100 Dual Channel Processor

Stereo 44.1kHz S/PDIF Digital Output

lexicon PRELIMINARY DATA

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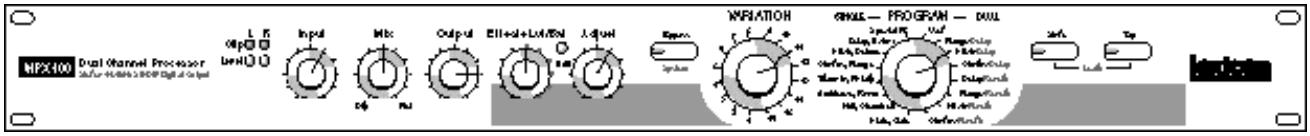
Stereo 44.1kHz S/PDIF Digital Output



The MPX 100 is a true stereo dual-channel procesor with 24-bit internal processing, 20-bit A/D-D/A and S/PDIF digital output. Powered by a new version of Lexicon's proprietary Lexichip,™ the MPX 100 has 240 presets with classic, true stereo reverb programs such as Ambience, Plate, Chamber and Inverse, as well as Tremolo, Rotary, Chorus, Flange, Pitch, Detune, 5.7 second Delay and Echo. Dual-channel processing gives you completely independent effects on the left and right channels.

A front panel Adjust knob allows instant manipulation of each effect's critical parameters and an Effects/Balance knob lets you control effect level or the balance of dual effect combinations. An easy Learn mode allows MIDI patching of front panel controls. In addition, tempo-controlled delays lock to Tap or MIDI clock, and Tap tempos can be controlled by audio input, the front panel Tap button, dual footswitch, external MIDI controller or MIDI Program Change. Other features include dual 2-stage headroom indicators, a headphone output, a software-selectable MIDI OUT/THRU port, pushbutton or footswitch selection of dry or muted audio output and a 20Hz-20kHz ±1dB Frequency Response.

Specifications

Audio Inputs (2)
Level -20dBu
Impedance 500K unbalanced for Direct Instrument input (Unit detects mono input on the right input)
1/4" connectors

Analog Audio Outputs (2)
Level +8dBu typical
Impedance 75Ω: headphone output (Left only used for mono output; Right only used for stereo headphones)
1/4" connectors

Digital Audio Output
Digital S/PDIF output (always active)
Sample Rate 44.1kHz
Connector Coaxial, RCA type

Footswitch
Tip/Ring/Sleeve phone jack for Bypass and Tap (optional)

Frequency Response
Wet/Dry 20Hz-20kHz, ±1dB

THD+N
<0.05%, 20Hz-20kHz

Dynamic Range
A-A >95dB typical, 20Hz-20kHz, unweighted
A-D >100dB typical, 20Hz-20kHz, unweighted

Conversion
20 bits A/D, 20 bits D/A
44.1kHz sample rate

Crosstalk
>45dB

Power Requirements
9VAC, 1A wall transformer provided

Dimensions
19"Wx 1.75"H x 4"D
(483x45x102mm)

Weight
Unit: 2 lbs, 2 oz (0.959 kg)

Environment
Operating Temperature 32° to 104°F (0° to 40°C)
Storage -30° to 75°C
Relative Humidity 95% non-condensing

Specifications subject to change without notice.

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lexicon PRODUCT HIGHLIGHTS

MPX 100 Dual Channel Processor

Stereo 44.1kHz S/PDIF Digital Output

- 240 Factory Programs; 16 User programs
- Classic true stereo reverb programs: Ambience, Plate, Chamber, Gate, Hall and Room as well as Tremolo, Rotary, Chorus, Flange, Pitch, Detune, 5.7 second Delay and Echo
- Dual Effect configurations include Dual Mono, Dual Stereo, Cascade and Parallel with combinations of Flange, Pitch, Chorus, Delay and Reverb
- Front panel Adjust knob allows instant control over the current program
- Easy-to-use Learn mode patches a MIDI Controller or Program Change to as many as 5 front panel controls (Mix, Effects Level/Balance, Adjust, Bypass and Tap)
- Tempo-controlled rates and delay times lock to Tap tempo or MIDI Clock
- Tap tempo can be set by audio Input, the front panel Tap button, optional footswitch, MIDI controller or Program Change
- Dry or Muted audio output can be controlled from the front panel Bypass button, optional footswitch, MIDI Controller or Program Change
- 24-bit Digital Signal Processing
- 20-bit A/D, D/A with a frequency response of 20Hz to 20kHz ±1dB
- Analog outputs provide >95dB Dynamic Range
- S/PDIF digital output provides simultaneous wet or dry 20-bit digital output with >100dB Dynamic Range
- High impedance input allows you to use a variety of instruments from guitars to keyboards
- Left output doubles as a headphone output
- Software-selectable MIDI OUT/THRU port
- System mode provides access to system-wide settings and MIDI features:
    - Assign front panel Bypass button as Input Mute or Bypass
    - Enable or Disable Learned Patches
    - Mute or Bypass during Program loads
    - Wet or Dry Digital Output
    - MIDI OUT or THRU
    - Enable or Disable MIDI Program change
    - Enable or Disable incoming MIDI Clock
    - Global or Program Specific Tempo
    - MIDI Dumps for the current program, all 16 User Programs, or System mode settings

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APPLICATION NOTE

Tap Tempo

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The MPX 100 Tap Tempo feature allows you to set delay times to the beat of the music. To set the tempo from the front panel, simply press the **Tap** button twice in time with the music. That's your tempo. No more dialing up what "could be" the delay time in milliseconds — just tap twice — the MPX 100 will figure out the time for you. When you want to change tempo, just tap twice again in the new rhythm.

You can also use audio input to set the tempo of the MPX 100 delay rate.

1. Press and hold the **Tap** button. (The optional dual footswitch lets you press and hold **Tap** without taking your hands off your instrument.)
2. While holding down **Tap**, play 2 short notes in rhythm, then release the **Tap** button.
3. Rhe MPX 100 automatically calculates the tempo from the space between your two notes.

For live performances this is a must — an easy way to set delay rates to follow your rhythm.

Each factory preset is stored with its own tempo rate. You can tap in a new tempo (and store your version with the preset in a User location) or set the MPX 100 to always recall the last tempo used and apply it to every preset. To do this, set the Tempo parameter to Global in the MPX 100 System mode*.

1. Enter System mode by pressing and holding the **Bypass** button for 2 seconds.
2. Turn **VARIATION** to **8**. (This selects the Tempo parameter.)
3. Press **Store** to toggle the Edit LED **On** (Program specific tempo) or **Off** (Global tempo).

When you select Global Tempo from the MPX 100 System mode, the last tempo tapped in will be applied to all programs. You can freely load presets and, if they have tempo-controlled parameters, they willl load with the current tempo. (You will know if a preset is tempo-controllable because the **Tap** button LED will flash when the program is loaded.)

When used in conjunction with the MPX 100 *Learn* feature, Tap can be set remotely from any MIDI device. MIDI controllers, such as Lexicon's MPX R1 Foot Controller, can be used to send Continuous Controller messages or Program Changes to the MPX 100 or you can send Continuous Controller or Program Change messages from the button and fader modes of many mixing consoles. The MPX 100 will Learn these messages and allow you to set tempo via MIDI.

The MPX 100 can also receive and utilize MIDI Clock. So, when used with a MIDI sequencer or drum machine, the MPX 100 automatically adjusts its internal tempo to match.

*All System mode parameters are shown on a Quick Reference Card shipped with the MPX 100 and designed to fit on top of the unit.

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APPLICATION NOTE

MIDI Learn

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The MPX 100 offers a powerful, easy to use, remote editing feature called **Learn** which allows you to remotely control as many as 5 of the front panel controls. By sending standard MIDI Continuous Controller or Program Change messages to the MPX 100, you have complete control over the wet-to-dry Mix ratio, Effects Level or Balance, Bypass, Tap, or the primary aspect of the preset — the Adjust knob.

To use **Learn**:

1. Simultaneously press **Tap** and **Store**.
2. Move **Mix**, **Effects Lvl/Bal**, **Adjust**, **Bypass** or **Tap** to assign it to a MIDI controller. For this example, we'll move **Mix**.
3. Now, send a controller message to the MPX 100. For this example, we'll move the Mod Wheel on a connected MIDI keyboard. The **Edit** LED will flash to show MIDI activity.
4. Press **Store**. The embedded **Store** light will flash rapidly.
5. Press **Tap** and **Store** simultaneously to exit. (To clear, repeat without sending a MIDI message.)

In our example, we now have Mod Wheel control over the MPX 100 wet/dry Mix. As the effect of Learn is global, the Mix ratio of every MPX 100 program can now be controlled by the Mod Wheel.

When used with a MIDI device, such as the Lexicon MPX R1 MIDI Remote Controller, all 5 front panel controls can be adjusted and every preset can be loaded remotely. The MPX 100 will also Learn the individual MIDI Channels associated with each controller. This means that it can operate on up to 6 different MIDI channels (one for loading presets and 5 for the front panel controls), allowing you to use it with multiple MIDI devices.

As a gigging musician, you never have to touch the front panel during a live performance. In a MIDI studio, the controls can be automated and recorded into any sequencing software allowing for complete automation of MPX 100 presets.

A System mode parameter allows you to disable and enable Learn. This lets you temporarily turn off Learned controllers without having to clear them.

Front panel controls and the control sources which can be Learned:

	Control sources		
		MIDI	
Front Panel control	**MIDI Controller**	**Program Change**	**Footswitch**
Mix	X		
Effects Lvl/Bal	X		
Adjust	X		
Bypass	X	X	X
Tap	X	X	X

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