Lexicon by HARMAN

THE FINEST SURROUND PROCESSOR

THE LEXICON® MC-14
SURROUND PROCESSOR

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A globally recognized brand among studio professionals and in the high-end home theater market, Lexicon is legendary for its many innovations. In fact, the company introduced the world's first digital audio processor back in 1971. Taking a big step into commercial audio systems in 1978, Lexicon also brought out one of the first commercially viable digital reverb systems. Among its many accolades and awards, Lexicon can claim an Emmy in 1984 for its digital Audio Time Compressor and Expander and a Technical Grammy in 2014. Over the years, Lexicon's research and development has concentrated not just on hardware, but also on psychoacoustics – the human perception of sound. This holistic approach to audio engineering led to the first all-digital surround sound processor for home theater systems in 1988. And Lexicon has been a leader in that field ever since.

OVERVIEW

At the heart of your reference quality home theater system is the Lexicon MC-14. With unparalleled clarity and accuracy, the MC-14 delivers the finest sound quality and realism to your music and movies alike.

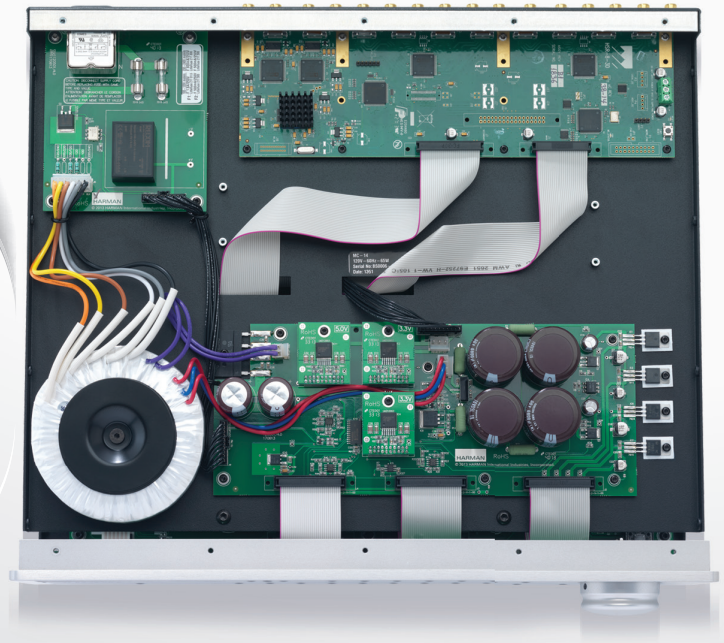
FEATURES

The MC-14 provides control and switching of eight channels of audio, as well as broadcast quality video with pass through of 4K video formats. Independent zone monitoring provides control of source selection for two zones at a time. An HDMI® interface enables the transmission of uncompressed digital audio and video signals through a single connector. The MC-14 can pass digital video signals of up to 4K, 12-bit and 3D, with multiple digital audio channels (7.1 channels) at sample rates of up to 192 kHz through the HDMI interface. The MC-14 also supports the High-bandwidth Digital Content Protection (HDCP) technology that comprises data encryption and authentication of the partner equipment. With two 32-bit floating-point TI DA710 digital signal processing (DSP) engines, the MC-14 offers unparalleled processing power. This processing is available at digital input sample rates of up to 192 kHz, with 24-bit resolution to retain top performance from all input sources and listening modes. High-precision 192 kHz/24-bit A/D converters can be used to convert stereo analog audio input signals to digital signals, allowing the MC-14 to provide the benefits of precise digital signal processing without sacrificing signal integrity. Additionally, all output D/A converters can operate at up to 192 kHz/24-bit and are completely asynchronous from input converters and all digital inputs. This allows the outputs to be completely buffered and internally clocked to a very stable crystal oscillator. This is particularly important in removing jitter from unstable sources, especially HDMI. The MC-14 gives the best possible signal output and maintains the highest possible resolution even on less than ideal sources.

CONNECTIVITY

Apart from the HDMI and standard 7.1-channel audio output connectors, the rear panel also includes auxiliary or secondary center and subwoofer connectors to provide even greater flexibility. All main zone audio output connectors include 24-bit/192 kHz D/A converters operating in dual differential mode.

In addition, the MC-14 includes balanced and unbalanced audio output connectors for all main zone channels. Two connectors are provided for external control: one RS-232 9-pin serial connector and one Ethernet 10BaseT connector, which also acts as a web page server, user interface and firmware update tool.



HIGHLIGHTS

- 192 kHz sampling rate on all analog inputs
- Up-sampling to 192 kHz on all digital audio inputs including HDMI
- Internally buffered and de-jittered D/A output stage
- Class-A discrete audio circuits
- Analog bypass mode
- Separate digital and analog power supplies
- Dolby® TrueHD decoding
- Dolby Digital Plus, Dolby Digital EX, Pro Logic IIx decoding
- DTS-HD® Master Audio decoding
- DTS Neo6, DTS, DTS-ES decoding
- Support for all HDMI 1.4 video formats including 3D pass through of HDMI 1.4a mandatory 3D formats
- HDMI video 12-bit deep color and xvYCC (x.v.color) supported up to 1080p (225 MHz equivalent)
- 2x pairs of single-ended, unbalanced RCA loop-through (TV, digital video recorder)
- 4x pairs of single-ended, unbalanced RCA inputs (BLU-RAY™, SAT/CBL, GAME, MEDIA)
- 2x pairs of balanced XLR (female) inputs (CD, balanced 2)
- 4x coaxial inputs (RCA) 75 ohms (SPDIF)
- 3x optical inputs (TOSLINK)
- 2x AES/EBU inputs (XLR) 110 ohms
- 1x USB 1.1 type-B input
- 10x balanced XLR male main zone outputs
- 10x single-ended (unbalanced) RCA main zone outputs
- 2x single-ended (unbalanced) RCA zone-2 outputs
- 1x headphone output (not available in all regions)
- 8x HDMI inputs (audio and video)
- 2x HDMI outputs
- 1x TOSLINK optical output
- 1x USB (Type-A) input for audio
- One 12V input and 3 programmable trigger outputs
- 1x infra-red sensor; remote control receiver
- 1x mini (3 mm) phone jack (2-conductor) for auxiliary infra-red control data input
- 1x ethernet (RJ45 connector): bilateral data, software download etc.
- 7.1, 6.1 and 5.1-channel surround sound
- Dolby Volume to control listening level
- Second zone output via single-ended pair, allowing for separate audio from another source
- RS-232 serial data port for remote control via Crestron, Savant, AMX or similar control systems
- Rack-mounted (19" standard), 3 RU high
- Texas Instruments DA710 dual DSP audio-processing chipset
- 3-year warranty (U.S.A. only)
- 100-hour burn-in process during manufacturing

GENERAL

A/D conversion	24-bit, 192 kHz Delta-Sigma
D/A conversion	24-bit, up to 192 kHz Delta-Sigma
DSP engine	Dual TI DA710
Power supply	Separate off-line standby PSU and main linear power supply with toroidal power transformer

HDMI INPUT AND OUTPUT CONNECTORS AND PERFORMANCE

HDMI inputs	8x HDMI Type-A (19-pin) connectors
HDMI outputs	2x HDMI Type-A (19-pin) connectors
Video resolutions	Full support for HDMI v1.4 including 3D pass-through and all mandatory video resolutions 12-bit deep color and xvYCC (x.v.Color) supported up to 4K (300 MHz equivalent) Full HDCP compliant
Audio resolutions	Up to 7.1 channels and up to 192 kHz sample rate at 24-bits bit depth Internal decoding of all HDMI 1.4 audio formats including: Dolby TrueHD, Dolby Digital Plus DTS-HD Master Audio

ELECTRICAL SPECIFICATIONS

Power	120VAC & 230VAC models
Max power consumption	65 watts
Standby power consumption	<0.5 watts (ethernet OFF in standby) 1.5 watts (ethernet ON in standby)

AUDIO INPUT AND OUTPUT CONNECTORS

Analog audio inputs	4x stereo single-ended/unbalanced pairs (CD, GAME, SAT/CBL, BLU-RAY) 2x pairs single-ended, unbalanced TV inputs (RCA) 2x pairs of balanced XLR (female) inputs
Digital audio inputs	8x HDMI 4x coaxial (RCA) 75 ohms (SPDIF) 3x optical (TOSLINK) 2x AES/EBU inputs (XLR) 110 ohms 1x USB 1.1 type-B analog audio
Analog outputs	10 balanced XLR males: Left, Center, Right, Left Surround, Right Surround, Left Back, Right Back, Left Auxiliary, Right Auxiliary and Subwoofer 16 single-ended (unbalanced) RCA: Left, Center, Right, Left Surround, Right Surround, Left Back, Right Back, Left Auxiliary, Right Auxiliary, Subwoofer, 4 TV outputs, 2 zone-two outputs
Digital outputs	2x HDMI 1x TOSLINK optical

DATA AND CONTROL PORTS

Trigger inputs/outputs	One 12V input and 3 programmable trigger outputs
IR remote control	Front-panel IR sensor 1x mini (3 mm) phone jack (2-conductor) for auxiliary infra-red control data input
Ethernet	1x ethernet (RJ45 connector): bilateral data, software download etc.
RS-232	1x 9-pin (DB9 female) for control and system feedback

PHYSICAL SPECIFICATIONS

Dimensions	19" (48.3 cm) W x 14.3" (36.3 cm) D (not including knobs and connectors, or rack ears) x 5.3" (13.3 cm) H (not including rubber feet) 19" (48.3 cm) W x 15.4" (39.1 cm) D (including knobs and connectors) x 6.3" (16.0 cm) H (including rubber feet)
Rack mount	19" (48.3 cm) W standard rack mount width 3 RU high without rubber feet
Weight	Gross 26.7 lb (12.1 kg) Net 20.0 lb (9.1 kg)
Environmental	Relative humidity: 95% maximum without condensation

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