



Industry Standard Downmix Compatible Upmixing

Linear Acoustic®
UPMAX™
5.1 Channel Upmixer



UPMAX™ delivers smooth transitions. Listening viewers are aware of programming changes, especially when the image shifts due to cases where stereo programs can only be reproduced from the Left and Right channels of a 5.1 channel program. This is commonly found in situations where it is not possible to switch the Dolby® Digital (AC-3) encoder. UPMAX is the simple, well-proven, cost-effective solution.



- Industry standard UPMAX algorithm
- Fully downmix compatible
- Upmixes stereo/dual mono, bypasses discrete 5.1
- Cost effective and reliable
- Extremely low latency (3.5 msec typical)
- LoRo/LtRt encoder
- Full-time 5.1 and stereo outputs
- AES and/or SDI I/O
- Automatic, Manual, GPI or metadata control
- Dual power supply option

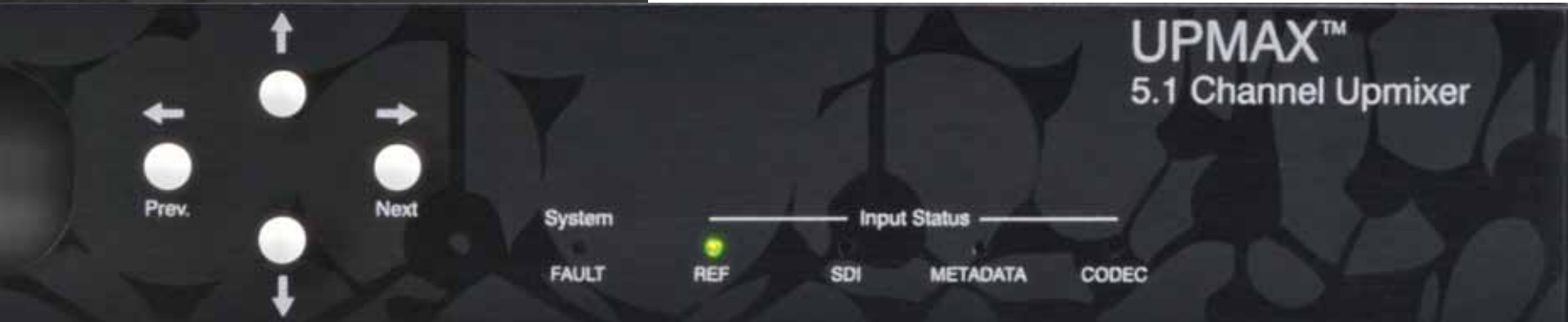
UPMAX



Based on the original UPMAX 2251, the IRU UPMAX offers the most stable and trusted algorithm in use today for both production and unattended upmixing. Output is completely downmix compatible and the downmixed result is nearly indistinguishable from the original two channel input.

The resulting "Surroundfield" can be infinitely adjusted via the Center Channel Width control and the Surround Depth control. This allows programming ranging from simple stereo to LtRt to be appropriately reproduced from a 5.1-channel playback system.

An optional bass enhancement signal for the LFE channel is derived from the Left, Center, and Right channels allowing quick creation of a subwoofer channel without compromising the downmix. Factory presets are included for typical applications such as music and commercials. Further adjustment is simple and new results can be stored as user-defined presets.



UPMAX includes a utility encoder which accepts 5.1 channels and produces a two channel LoRo or LtRt output. This encoder can be independent or it can be fed by the same channels applied to the upmixer.

UPMAX is rugged and perfect for remote OB trucks, post production facilities, network operation centers, local station production, virtually anywhere upmixing is used.

Upmixing can be controlled via the front panel, GPI inputs, or metadata from serial or VANC (SDI) sources applied to the unit. Smooth bypass of 5.1 channel signals is accomplished automatically via the AutoMAX-II algorithm

A bright LED display, rotary encoder, and four control keys provide straightforward menu navigation and function adjustment. Dual, redundant, auto-ranging power supplies are standard to allow for world-wide operation. Bypass relays are provided for trouble-free operation in transmission critical environments.

UPMAX Specifications:

Audio Processing

Linear Acoustic UPMAX™ with AutoMAX-II™

Latency

3.5 msec (SRC bypass), 6 msec (SRC On)

AES I/O

48kHz, 24-bit; Signal levels per SMPTE 276M/AES-31D-2001;

All connectors are 75-Ohm BNC female with internal 75-Ohm termination

HD/SD-SDI Auto Sensing Input and Output

De-embed up to 16 channels from applied SDI signal, process and/or re-embed up to 16 channels. Signal levels per SMPTE 292M/259M. Supports SMPTE 2020 A and BVANC metadata. Up to 1080p/60/59.94/50Hz supported.

Serial/Metadata Input

9-pin female D connector, 115 kbps, pinout per SMPTE 207M (RS-422/485)/RDD6

Parallel GPI/O Control Port

9-pin female D connector, 0-5V TTL levels to control upmixing

Front Panel Controls and Indicators

Rotary encoder and control keys plus bright dot matrix LED display

Power Requirements

Dual, redundant 100-264 VAC, 50/60Hz, auto-sensing, 35W maximum

Dimensions and Weight

One rack unit- 1.75"H x 19"W x 12.5"D (44 x 483 x 317 mm) Net weight: 6 lbs (2.72 kg), approximate. Shipping weight: 8 lbs (3.62 kg), approximate.

Environmental

Convection cooled. Operating: 0 to 50 degrees C, non-operating –20 to 70 degrees C.

Regulatory

North America: Designed to comply with the limits for a class A digital device pursuant to Part 15 of the FCC rules (CFR). Designed for U.S. and Canadian listing with UL; Europe: Designed to comply with the requirements of Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC (CE). Designed for RoHS and WEEE compliance.

Warranty

Standard Linear Acoustic two-year limited parts and labor

Available Factory Installed Options

Option 02 - Dual power supply (second PSU)

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