12 Channel Media Splitter MS12 Mk2

User manual

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An audio distribution amplifier primarily designed to feed multiple ENG cameras from a single lectern microphone at media events. Available in 12 channels only.

Front panel

- Each output has its own IC buffer amplifier to provide a high degree of isolation between outputs.
- The input and all outputs are transformer balanced using a total of 13 audio transformers.
- Individual level controls on each output are adjustable continuously from mic through to line level.
- Individual earth lift switches on each output.
- Genuine Neutrik XLRs throughout.
- A LED ladder level meter with selectable peak hold provides a visual indication of signal.
- 1kHz +4dB alignment oscillator (rear panel).
- Headphone socket and internal monitor speaker (rear panel).
- Only the output level controls and earth lift switches are on the front panel. All other controls are on the rear panel away from unauthorized fingers.

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The following is mounted on the rear panel:

Rear panel

- Input gain control. Adjustable over the range of -15 to +15dB. The input is nominal line level as it is envisaged that a mixer would be available to drive the local PA system and the Media Splitter.
- 1kHz alignment oscillator. It delivers a fixed +4dB to the output channels. This enables cameras to be setup before the main audio feed is available
- Monitor amplifier. It drives headphones or an internal 2" (50mm) loud speaker. The speaker is intended only as a means of verifying the presence of audio and as a fault finding aid in setting up the system. Connecting headphones to the headphone socket will mute the speaker. The monitor amp has its own level control.

Connections and Setup

Operating Levels.

Output +4dB when fed with +4dB input level. (unity gain)
Test conditions:
Rear panel gain = 0dB, Front panel level = fully CW

The Input

This is a 3 pin XLR male with a parallel female for convenient looping. Because the input is transformer balanced, all 3 pins on the input XLR must be wired. This happens by default if the source is balanced.

If the source is unbalanced, wire pin 2 hot and pins 1 and 3 earth. (Pins 2 and 3 may be swapped if desired)
Failure to wire all 3 pins will run the input transformer "single legged" and will usually result in very little audio.

The Outputs

While the output XLR connectors are wired balanced, unbalanced devices may also be connected. There are several ways to wire an unbalanced cable to a balanced output.

The electronic architecture used in the Media Splitter allows every possible wiring arrangement to work. The preferred wiring for unbalanced loads is;

Pin 2 hot and pin 1 earth.
Pin 3 may be left open or tied to earth.
(Pins 2 and 3 may be swapped if desired).

Pick any two pins and you'll have audio. The third pin can be left open or tied to ground. Phantom Power from a camera can also be fed into the outputs with no problems. It will not cross feed into other outputs.

Setup

Set the output level control of a selected channel on the Media Splitter fully counter clock wise. Connect a camera or similar device to that output. With audio or tone present, increase the channel's output level control until the camera's sound level meter is happy. There is no need to change the camera's normal record levels or its mic/line switch setting. This is a good thing as some camera operators don't even know they have a mic/line switch!

LED ladder

The LED ladder has a selectable peak hold function.
To toggle the Peak Hold function;
i.e. If it is on, turn it off. If it is off, turn it on.
Set the rear panel Oscillator switch to ON. Apply mains power.
Within 1 second, turn the Oscillator switch OFF and then ON again.
The status of the Peak Hold function will be displayed for 1.5 seconds.
If Peak Hold is active, only the Clip LED will light for 1.5 seconds.
If Peak Hold is not active, only the 2 Yellow LEDs (+10 and +5 LEDs) will light for 1.5 seconds.

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Specifications

0dBu = 0.775 volts

Input Level
Line level. +24dBu Maximum.
Rear panel gain control is adjustable from -15dB to +15dB

Input Impedance
20K ohms balanced or unbalanced.
Transformer isolated. Floating input.

Outputs
Transformer balanced with individual earth lift switches.

Output Level
Continuously variable from mic (-45dBu) to line level (+4dBu).

Output Impedance
Less than 300 ohms.

Headphone Output.
Suitable for 8 to 600 ohm headphones.
120 ohm source impedance as per IEC 61938.
Typically 2 volts out with +10dBu input.

Connectors
Output: (Front panel) Twelve 3 pin Neutrik XLR male.
Input: (Rear panel) Two 3 pin Neutrik XLRs.
Male in parallel with a female for convenient looping.

Frequency Response
35Hz to 24kHz +/- 1dB
Test conditions:
Input +10dBu, Rear panel gain = 0dB, Front panel level = fully CW

Total Harmonic Distortion + Noise
Typically less than 0.03% above 100Hz, rising to 0.1% at 30Hz.
Test conditions:
Input +10dBu, Rear panel gain = 0dB, Front panel level = fully CW

Power
110/230/240V 50/60Hz mains power. Specify at time of ordering.
30 watts maximum.

Dimensions.
2 unit high 19" rack mount all metal chassis.
Depth: 270mm with no XLR connectors plugged in.

Weight
5.3 kg (11.7 pounds)

Warranty
The Leon Audio Media Splitter is guaranteed for two years from date of original purchase against defects in workmanship and materials. If such malfunction occurs, the item will be repaired or replaced (at our option) without charge for materials or labour if delivered prepaid to THE LEON AUDIO COMPANY. Unit will be returned prepaid. Warranty does not cover finish or malfunction due to abuse or operation at other than specified conditions. Repairs by other than THE LEON AUDIO COMPANY or authorized agents will void this guarantee.

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