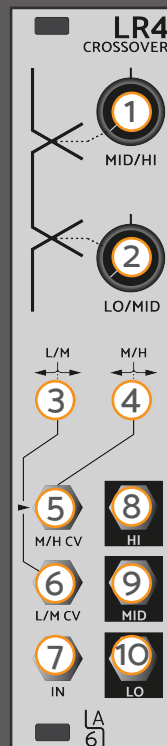# LR4 CROSSOVER
USER GUIDE

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MULTIBAND PROCESSING

The LR4 allows you to split a mono signal source into 3 separate frequency bands: low, mid, high. The crossover points between bands can be adjusted manually or by control voltage.

Think of the LR4 as the front end of a patchable multiband processor. Add varying amounts of compression to each band, or mix and match how you effect the lows, mids, and highs. You can even patch the outputs through VCAs for parametric amplitude modulation. Whatever multiband application you have in mind, the LR4 is designed impart a minimal sonic footprint, opening the door to further sonic sculpting.

Technical specifications

· 6hp
· 25mm depth
· 45mA/+12v, 45mA -12v current draw
· reverse power polarity protection

1 MID/HI knob sets the crossover point between the mid and high frequency bands.

2 LO/MID knob sets the crossover point between the low and mid frequency bands.

3 L/M CV attenuverter sets the gain and polarity of the L/M CV input.

4 M/H CV attenuverter sets the gain and polarity of the M/H CV input.

5 M/H CV input controls the mid/high crossover frequency. Positive CV raises the crossover point, while negative CV lowers it. This input is normalled to the L/M CV input when not patched.

6 L/M CV input controls the low/mid crossover frequency. Positive CV raises the crossover point, while negative CV lowers it.

LR4 CROSSOVER

- 1 MID/HI
- 2 LO/MID
- L/M M/H
- 3 4
- 5 M/H CV
- 6 L/M CV
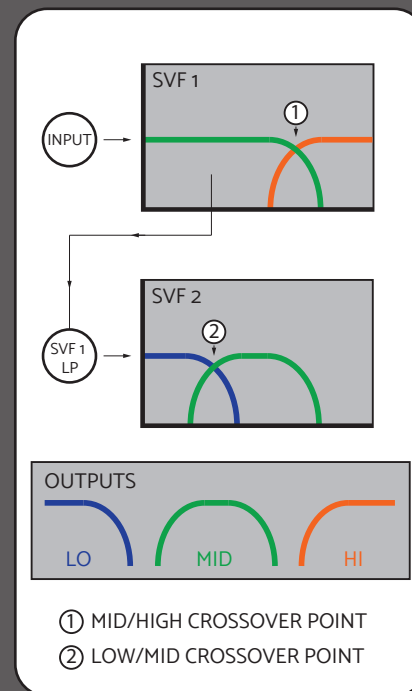- 7 IN
- 8 HI
- 9 MID
- 10 LO

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THE LR4 CIRCUIT

The LR4 Crossover comprises two state-variable filters in series. The high-pass from the first SVF gives the HI output, while the low-pass serves as the input to the second SVF. The high-pass of the second SVF gives the MID output, and the low-pass the LO output.

It is possible for the crossover points of each filter to overlap, affecting adjacent frequency bands.

7 IN audio input.

8 HI output band as determined by the M/H crossover point.

9 MID output band as determined by the L/M & M/H crossover points.

10 LO output band as determined by the L/M crossover point.

LR4 BLOCK DIAGRAM

SVF 1
1

INPUT

SVF 1 LP

SVF 2
2

OUTPUTS
LO   MID   HI

1 MID/HIGH CROSSOVER POINT
2 LOW/MID CROSSOVER POINT

NB: The -12v supply line is indicated on the backside of the module → -12v