Audio Signal Modification Unit
User Manual And Technical Reference

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James Chaffinch

James Chaffinch, CEO

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Description

The Gain unit is an audio signal modification device which implements a simple equation used to affect the amplitude of an audio signal.

The equation is defined as such;

$$\text{output} = \text{input} \times \left(\text{multiplier} \times \left(\text{gain value} + \text{offset}\right)\right)$$

The three values of these equations correspond to the three value sources on the device. See the 'Interface' section for details.

The selection dial allows for a gain value range from -1 to +1. The 'offset' value essentially changes that to a range of 0 to 2. The 'multiplier' value allows for the expansion of this range to -10 to +10 or 0 to 20.

Interface

1. Control Select
   Used to select between using the dial/ voltage input pair (4 and 9), or Audio Signal Control input (6)

2. Value Multiplier
   Used in conjunction with the selected value. This switch can be used to decide if the selected gain should be multiplied by a factor of 10 or not.

3. Value Offset
   Used in conjunction with the selected value. This switch can be used to decide if the selected gain should have 1 added to it or not.

4. Gain Value Dial
   Used for selecting the gain value

5. Audio Signal Output
   The audio signal output connection

   CUIS type: Orange

6. Audio Signal Gain Value Control
   An audio control input connection port used to control the Gain Value. Control is between the values of -1 and 1.

   CUIS type: Orange

7. Value Multiplier Toggle
   A signal control input connection port which directly modifies the Value Multiplier Switch (2). Active signals toggle this value.

   CUIS type: Red

8. Value Offset Toggle
   A signal control input connection port which directly modifies the Value Offset Switch (3). Active signals toggle this value.

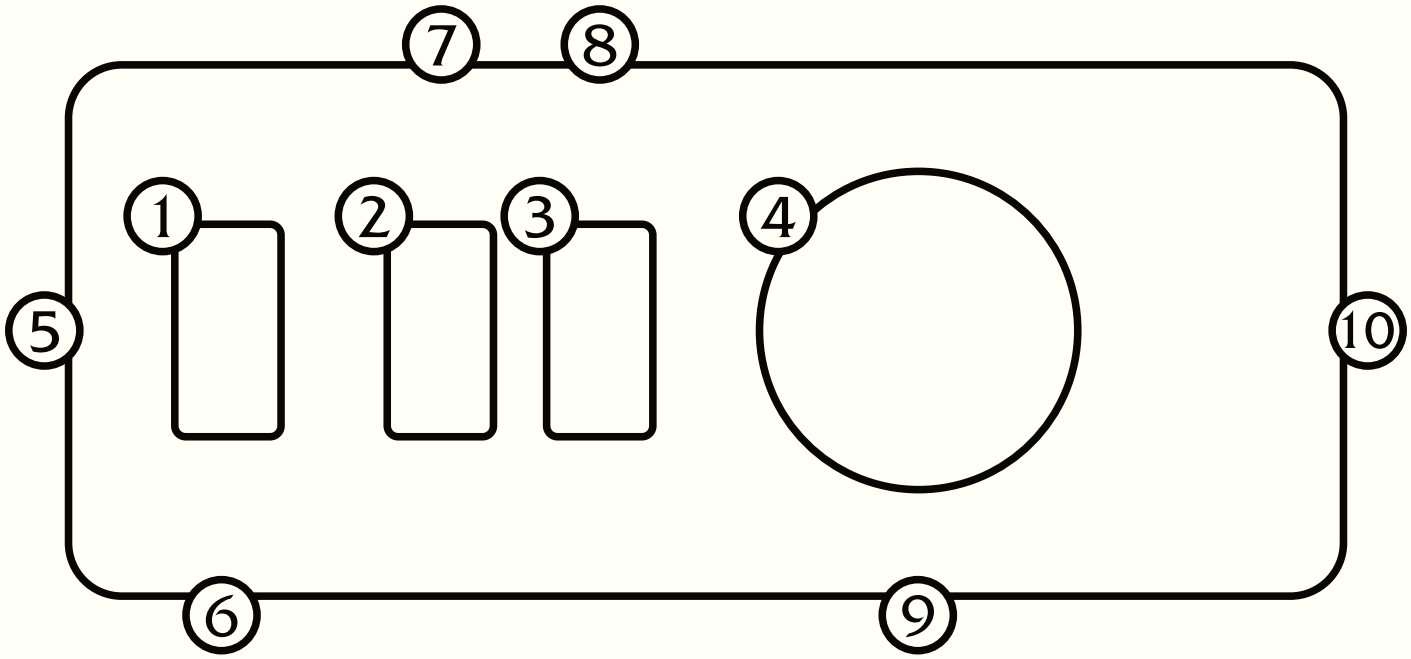
   CUIS type: Red

9. Voltage Gain Value Control
   A voltage control input connection port which directly modifies the Gain Value Dial (4). Control is between the values of -1 and 1.

   CUIS type: Green

10. Audio Signal Input
    The audio signal input connection

    CUIS type: Orange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Unit Specifications