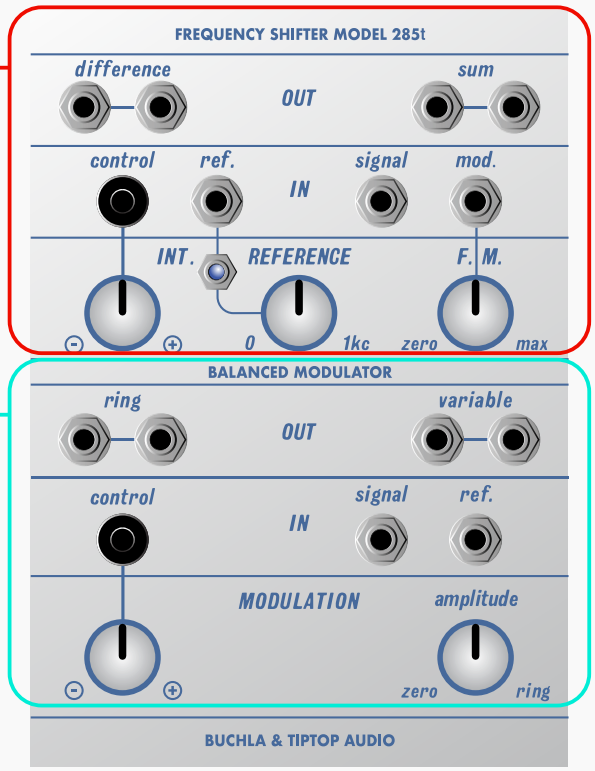
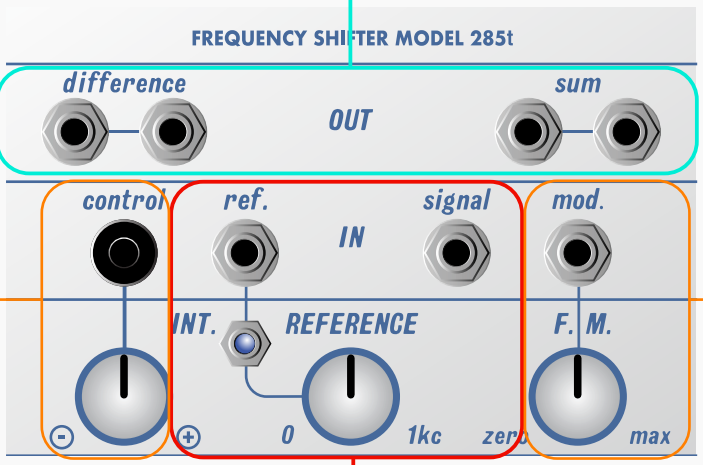
# FREQUENCY SHIFTER - MODEL 285t

FREQUENCY SHIFTER

BALANCED MODULATOR




The resulting shifts are present at the "**difference**" and "**sums**" outputs. There are two identical outputs for each of these.




The **CV input** is sent to the **INT** oscillator only and can be varied with its **attenuverter**.

**FM** receives an audio input and can be applied to **INT**. The **amount** of modulation is determined by the **attenuator knob**.

**The Frequency Shifter** receives and **external audio** at its "**signal**" **input** then shifts it with either its internal oscillator "**INT**" or with an e**xternal oscillator** at the "**ref.**" input. There is a **switch** to choose either **INT** or **ref.** The **INT** oscillator frequency goes from **0** to **1kc**

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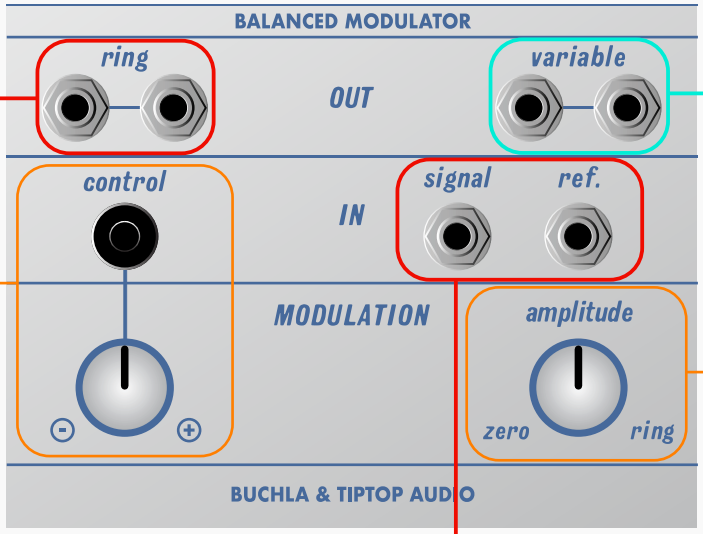
The “**ring**” double output is a pure ring modulation determined by the incoming signal and ref.

The **CV input** and its attenuverter modulates the sweep from “zero-amplitude-ring.”




The bottom MODULATION section applies to the “**variable**” double output.

The **knob** manually sweeps from zero (the pure incoming “**signal**”) through amplitude modulation ending in pure ring modulation. When this knob is set fully CW to “**ring**” it is the same signal as the “ring” outputs.

The **Balanced Modulator** receives an **audio signal** at the “**signal**” input. This can be thought of as the carrier while the “**ref.**” input receives a different audio signal (the modulator).

**Size: 18HP - Depth: 45mm - Power: +12V 50mA / -12V 44mA**

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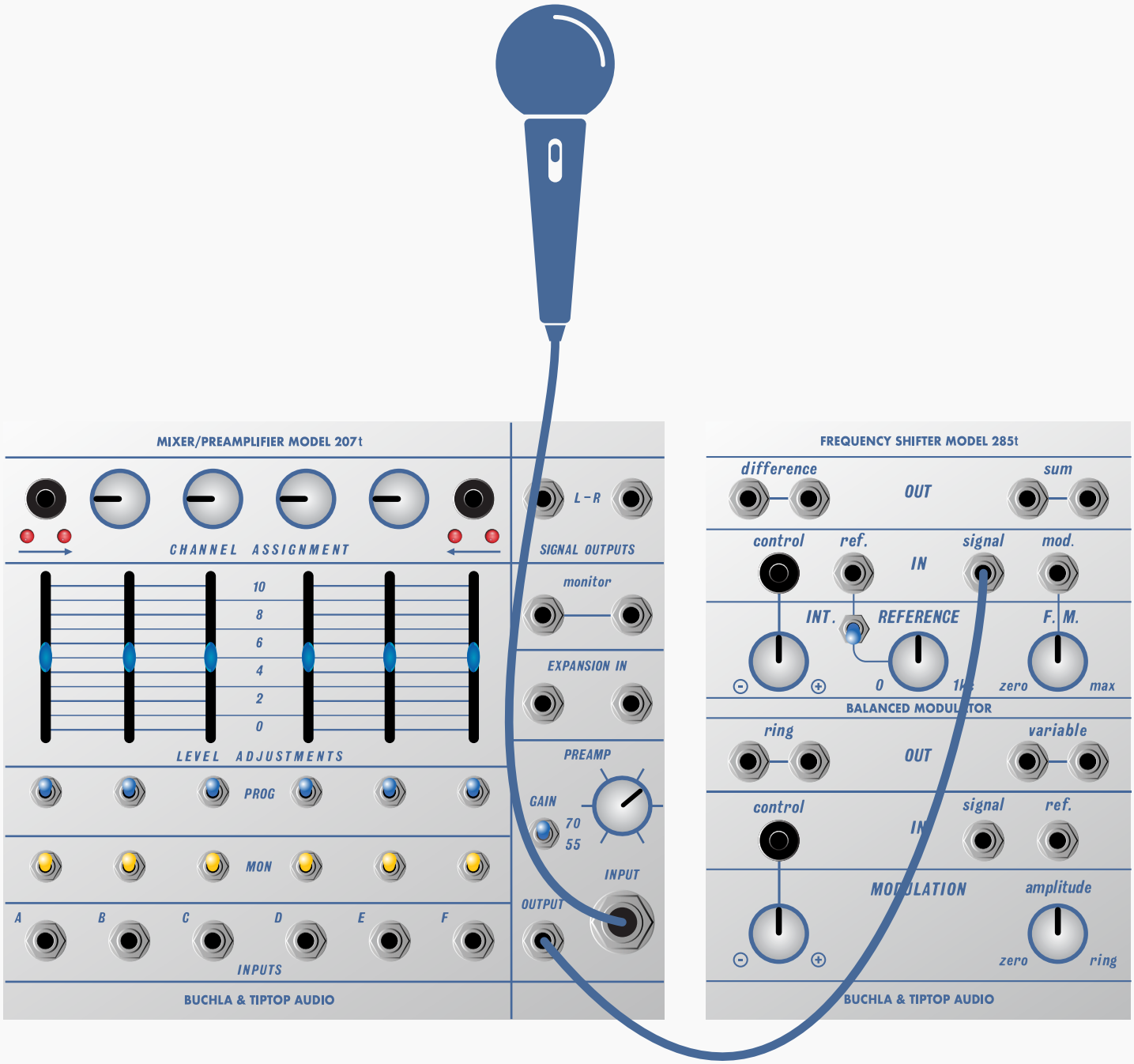
The **285t Frequency Shifter** is an interesting module for processing audio samples or live voice input via a microphone through the **207t Mixer/Preamplifier** module. The "**sum**" and "**difference**" outputs from the 285t can then be routed to the **292t Quad Lopass Gate**, creating dynamic tone shaping. By further splitting the processed signals into the left and right channels, this setup allows for a rich **stereophonic effect**.

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