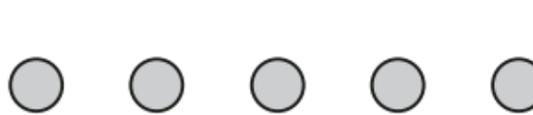
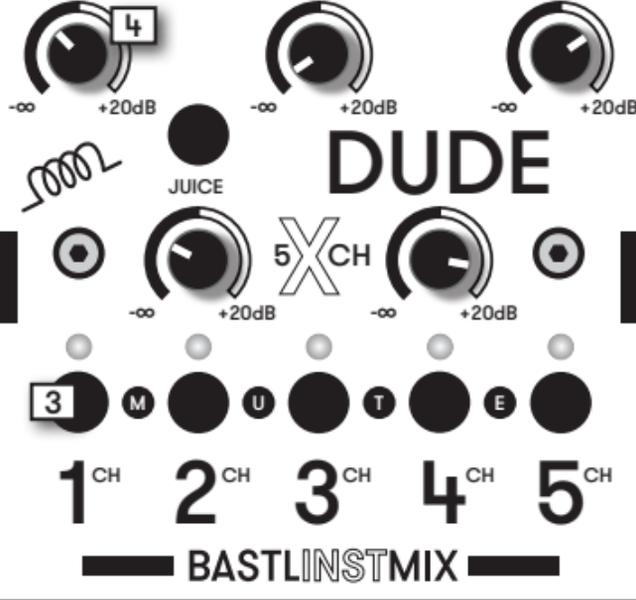
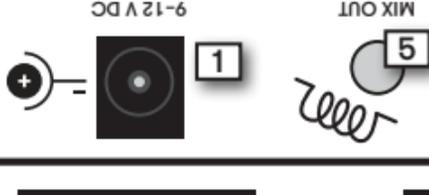


# BASTLINSTMIX



IN

## POWER

**0** DUDE is powered by 4xAA batteries or by external power supply 9-12VDC - center positive polarity - 2.1mm barrel. Inserting a power jack disconnects the batteries and powers Dude from the external supply.

**1** Press the JUICE switch button to turn DUDE ON or OFF. To check whether the device is powered press some of the MUTE button switches to check if their light comes ON. If not check the polarity of the batteries / power supply.

## MIXING

**2** There are 5 mono input channels on DUDE. Each channel has an input jack at the front. Mono or stereo signal/cables can be inserted, but DUDE will only listen to the left channel.

**3** The signal of each channel goes thru the MUTE switch button. When light at the channel is ON it means the signal is passing and the channel is active.

**note** The MUTE switch buttons are purely mechanical which means that switching signals with low harmonic content (sinewaves) might produce audible clicks.

**4** The gain knob for each channel sets amount of amplification (center and CW) or attenuation (center and CCW). Maximum gain per channel is +20dB / 10x gain.

**5** The signal from all channels is fed to the active summing stage and mono to stereo splitter with separate output buffers for Left and Right channels. This allows the output jack to be used with headphones and mono or stereo cables without any problem.

Both inputs and outputs are AC coupled.

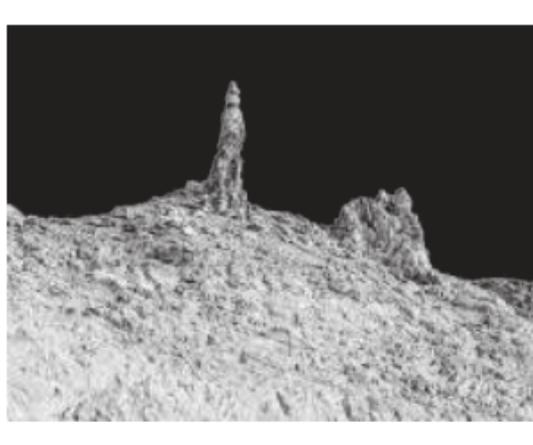
## FEATURES

- © 5 channel monophonic mixer
- © up to +20dB (10x) gain knob on each channel
- © dedicated mute button switch per channel (not click less)
- © dual mono output for driving headphones
- © powered by 4x AA battery or external adaptor 9-12VDC

# D

# B

## ABOUT DUDE



# B

Dude is a portable battery operated 5 channel audio mixer with mini jack inputs and output. Each channel has a dedicated mute button and up to +20dB gain to boost weak signals and saturate line level signals. Dude is a monophonic mixer but can drive your headphones and therefore is perfect for small, portable rigs or submixes on stage. It runs on four AA batteries or external power supply and is almost as small as the battery pack itself. Because each channel has gain (and the mix output is non-inverting) Dude can be used as a feedback processor and tone generator by feeding the output back to an input thru a passive eq and other simple circuits.

## APPLICATIONS

### DUDE AS A MIXER OR AS A SOUND PROCESSOR

When the gain knobs for each channel are in the safe zone of not amplifying too much, DUDE is a very clean sounding mixer. As the signals get boosted more they begin to saturate and start fighting for dominance of the overall mix. This can result in a saturated mass of sound where the different input signals push and pull on each other in interesting ways. Also clean waveforms can be waveshaped by adding gain, which will add odd harmonics to the signal.

### DUDE AS A MODULAR MIXER

When DUDE or several DUDEs are used in combination with passive signal splitters they can be configured into many different mixing scenarios. An effect send chain can be realized with two DUDEs. Mixing groups can be achieved in any free combination. See the website for more information.

### DUDE AS A TONE GENERATOR

DUDE is a non-inverting mixer which means it doesn't invert the phase of the signal. Therefore the output can be fed back into any of the inputs to create oscillating tones. By running the signal thru a simple EQ the pitch and character of the tone can also be modified. When more sophisticated effects are used in the feedback loop (such as chorus or phaser) the whole sound generation process gets much more interesting. Using passive signal splitters at the input/output jacks is very much recommended since applying the same signal to several inputs with different gain creates a playable (and tunable) instrument when interacting with the MUTE button switches.



## NOTE ABOUT BATTERIES AND HEADROOM

Both rechargeable and non-rechargeable (alkaline) batteries can be used with DUDE. Please note that the rechargeable batteries give less headroom (4x 1.5V alkaline give 6 V which gives +/-3V power ~ +/- 2.7V headroom vs. 4x 1.2V rechargeables give 4.8V which gives +/- 2.4V power ~ +/- 2.1V headroom). When used with an external power adaptor the power is regulated down to 6V which gives the same headroom as alkaline batteries. The headroom is a threshold for the signal before it starts clipping - which might or might not be desirable. When used with line level signals +/- 1V the provided headroom is sufficient even for +10dB boost or more. Batteries getting discharged might lower the headroom, but also produce more unique kinds of saturation. When used with a modular synths +/- 5V signal levels, the headroom is way too low. Therefore for dedicated operation with modular synth levels the overall gain can be decreased by adding one more resistors to the circuit board.

See [bastl-instruments.com](http://bastl-instruments.com) for more information.

