SAT-2™
User Guide
Thank you for purchasing the SAT-2™, a simple but robust audio attenuator and monitor controller. While the SAT-2 has an intuitive feature set that is designed to be easy to use, please take a few minutes to review this short manual to get the most out of this deceptively powerful device. If you find you have any questions not answered here, please visit our website at www.radialeng.com where we post frequently asked questions and product updates. If you still don’t find the answer to your question, feel free to send us an email at info@radialeng.com and we will do our best to respond promptly.
OVERVIEW

The SAT-2 gives you the ability to set your levels or attenuate hot signals wherever you might need to. It works as a monitor controller between an audio interface and a set of powered speakers, or to attenuate the output of a recording console before the signal is sent to a recording device. The SAT-2 can also be connected between line-level studio devices, taming the outputs of a hot microphone preamp to avoid overloading the inputs of a recording interface without losing any tone or character. With its compact and rugged design and useful feature set, the SAT-2 makes for a great addition to your audio tool kit.
FEATURES

1. **MONO**: Sums the left and right outputs to mono.
2. **MUTE**: Silences the outputs of the SAT-2.
3. **MASTER LEVEL**: Sets the overall output level. Passes signal at unity gain (no attenuation) when turned fully clockwise.
4. **DIM ON**: Used to reduce output levels temporarily without affecting the setting on the master level control.
5. **DIM LEVEL**: Sets the amount of signal attenuation applied when Dim On is engaged.
6. **OUTPUTS**: XLR outputs for a pair of powered speakers or the inputs of a recording interface.
7. **INPUTS**: TRS ¼” or XLR inputs are available for the left and right channels.
8. **NO SLIP PAD**: Provides electrical & mechanical isolation and prevents the unit from sliding around.
MAKING CONNECTIONS

Before plugging in any cables, ensure that your sound system is turned off and all volume levels are turned down. This prevents any plug-in transients from damaging speakers or other sensitive components. The SAT-2 is passive, so it does not require any power to operate.

Each input has a ¼” TRS and an XLR connector to accept balanced audio signals from a variety of different sources. For best results, only use one of these connector types at a time on each channel. The XLR outputs are designed to be connected to the line level inputs of a recording console, powered speaker, or audio interface.

SETTING LEVELS

The SAT-2 is a unity gain device, which means that when the master level control is turned all the way up (fully clockwise) the SAT-2 outputs have the same signal level as its inputs. When first setting levels, start with the volume turned all the way down, and then slowly turn back up until you reach a comfortable listening level.
MONO, MUTE AND DIM

The MONO switch sums the left and right signals together at each of the outputs, allowing you to check for phase compatibility when mixing. You can also use it to take a mono input and split it to two destinations, or use it for parallel processing of a mono signal.

The MUTE switch cuts the signal to the XLR outputs, while the DIM switch allows you to temporarily reduce the output level without changing the position of the master level control. The DIM LEVEL sets the amount of attenuation provided when the DIM switch is depressed. Use the DIM to check your mixes at lower volume levels, or to talk to other people in the control room without stopping audio playback.
**BLOCK DIAGRAM***

RIGHT INPUT
Female XLR and 1/4" Jacks

LEVEL

MONO SUM

LEFT INPUT
Female XLR and 1/4" Jacks

LEVEL

DIM CONTROL

DIM SWITCH

RIGHT OUTPUT

DIM SWITCH

MUTE

LEFT OUTPUT

DIM SWITCH

MUTE

* Subject to change without notice.
SPECIFICATIONS*

Audio Circuit Type: Passive Audio Signal Path
Number of Channels: 2
Frequency Response: 20Hz-20kHz
Noise Floor: -115dBu
Dynamic Range: >141dBu
Maximum Input: >+26dBu
Gain: 0dB
Intermodulation Distortion: >0.001% @0dBu
Total Harmonic Distortion: >0.0005% @ 0dBu
Common-Mode Rejection Ratio: >80dB
Phase deviation: 0° @ 20Hz, 0° @ 1kHz, +2° @ 10kHz
Input Impedance: 110k Ohms
Output Impedance: 1.8k Ohms
Insertion Loss: -0.73dBu
Power: Passive, no power required
Construction: 14 gauge steel chassis & outer shell
Finish: Durable Powder Coat
Size (L x W x D): 5"x3.312"x1.78"
Weight: 0.70kg (1.55lbs)
Conditions: For use in dry conditions between 5°C and 40°C
Warranty: Radial 3-Year, transferable

* Subject to change without notice.
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