

Setting Rane Mixer Level Controls

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Correctly setting DJ mixer level controls is one of the most important contributors to creating an excellent sounding system. Once you master the fundamental principles you'll know how to get the best possible audio quality from your Rane DJ mixer. To ensure proper level setting, Rane DJ mixers are designed with a professional audio metering system much like you'd find in a studio grade mixing console. If you're familiar with pro-audio mixing consoles, Rane DJ mixer metering will be a no-brainer, but if this is your first introduction to professional audio metering it may be a bit different from what you're accustomed.



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RaneNote 171
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Level controls



DJ mixers have a lot of level controls (wouldn't be much of a mixer without them). Knowing the proper setting for each control is a bit confusing, especially when adding a software program to your system. Luckily, audio software and DJ mixers include similar controls. Both include individual gain/trim controls, level meters for each channel, and a master output level control.

Meter levels



Follow the golden rule and keep your level meters out of the red. Think of a level meter as a traffic light. Green means you're ok to proceed, yellow means caution and red means stop. Your goal is to turn the gain controls up so that your level meters are peaking in the high yellow- almost to red but not quite. When level meters hit red, you run the risk of clipping or simply distorting the heck out of the audio. In case you're wondering, both sound terrible.

When using a software program it's important to adjust your level controls properly within the program before tweaking the level controls on your mixer. Once the level meters within the software are adjusted properly (i.e., no red), you're ready to adjust the level controls on your mixer.

Using Rane mixer metering

Rane mixers use Quasi-Peak meters with peak hold. What the heck is quasi-peak you ask? Quasi means, having a likeness to or resembling something, so quasi-peak refers to the peak-like meter function of the Rane meter. The fast responding quasi-peak value (lower portion of the meter) shows you what signal is doing real-time, relative to the dynamic range of the mixer. Audio transients can be relatively fast, making it easy to miss brief overload events, so the meters are designed to hold the maximum value for at least half a second (top portion of the meter).



Like other peak hold meters, the ones found on Rane DJ mixers will appear to have gaps between the average level and the peak levels. This can throw DJs off at first, thinking the meters are malfunctioning, but this is not the case. The LED floating above the rest represents the peak level of the audio and the LEDs below the peak represent the quasi-peak audio level.

The basic idea behind using peak hold meters is identical to using peak meters; keep the top meter out of the red. Using the Deck gain controls on your mixer, adjust the level so that your meters barely hit the red and then back the level down until out of the red. Repeat this process for each Deck channel.



A quick note about Rane master level controls and master meter levels

The main difference DJs may notice about the master output level meter is that the master level control has no affect on the meter levels (see left pictures). This may seem a bit weird when compared to other DJ mixers, but there's a very good reason behind this design. With Rane professional DJ mixers, the master output level meter is the summed total of all Deck channel levels. In other words, the master output meter is a true representation of your combined output mix level. As long as the output level meters stay out of the red, you won't be in danger of clipping or distorting audio. You can still blow the sound system speakers (and your chances of getting booked to play that venue again).

Calibrating your mixer with a sound system

It was mentioned earlier that the main level control has no affect on the master level meter, and this is by design. The design intent is to use the master level control to calibrate the mixer with a sound system. Ideally, during sound check, the sound tech running the sound system will calibrate the system to the output level of the Rane mixer, so that red meters on the mixer indicate red (or almost red) on the main sound board and/or near clipping of the amplifiers.



1. Start with the master level control knob all the way down.
2. Make sure the audio levels meters within the software you're using are not peaking red.
3. Start with the Deck channel 1 fader all the way up and adjust the upper rotary gain/level control so that your meters barely hit the red and then back the level down until out of the red, giving yourself a little room for sudden level peaks. Repeat the same process for Deck channel 2, if using more than two channels, Deck channel 3 and Deck channel 4.
4. While playing audio, using each Deck channel, check the master output level meters. If the master output level meters are in the red make small adjustments to each Deck channel gain control until the master level meter is peaking into the yellow. Now that your mixer level controls are properly set, you're ready to turn up the master level control.

5. Here's where you grab the sound tech running the sound system. The tech may have you do one of the following:

- Increase the mixer's master level control until you're told to stop. If you stop at 8, this is your maximum level output for the mixer and you do not want to exceed this level setting. Increasing the master level control past 8 may cause the sound tech to give you dirty looks, or worse, damage the sound system.
- Turn the mixer's master level control all the way up. Once your master level control is at max, the sound tech will slowly increase the level on the main sound board until the sound system is at the peak level. When it comes to preventing damage to the sound system this is the sound techs safest way to calibrate a mixer to the system.

Wrapping up

Optimum sound quality requires correctly setting software level and DJ mixer level controls. The correct procedure begins by properly setting software level controls and then mixer gain level controls. Once your mixer levels are properly set, calibrating the master output level control with the sound system is the last step. Following these simple steps ensures you'll get the best possible audio quality from your Rane DJ mixer.