

Tonocracy Capture Mode Guide

To create your own captures, we recommended that you use an audio interface with at least 3 outputs and 2 inputs. This allows you to easily switch between capturing and auditioning without needing to swap any cables. *(If you only have a 2-in, 2-out interface, don't worry - you can still capture! The only inconvenience is that you will only be able to monitor through a single mono output channel, since the other is used for sending signals to the amp.)*

To enter capture mode, click the button in the top toolbar. This will take you to the Setup page:



Here you can configure the inputs and outputs that will be used in the capture and audition process, as well as choose the type of capture you will be making.

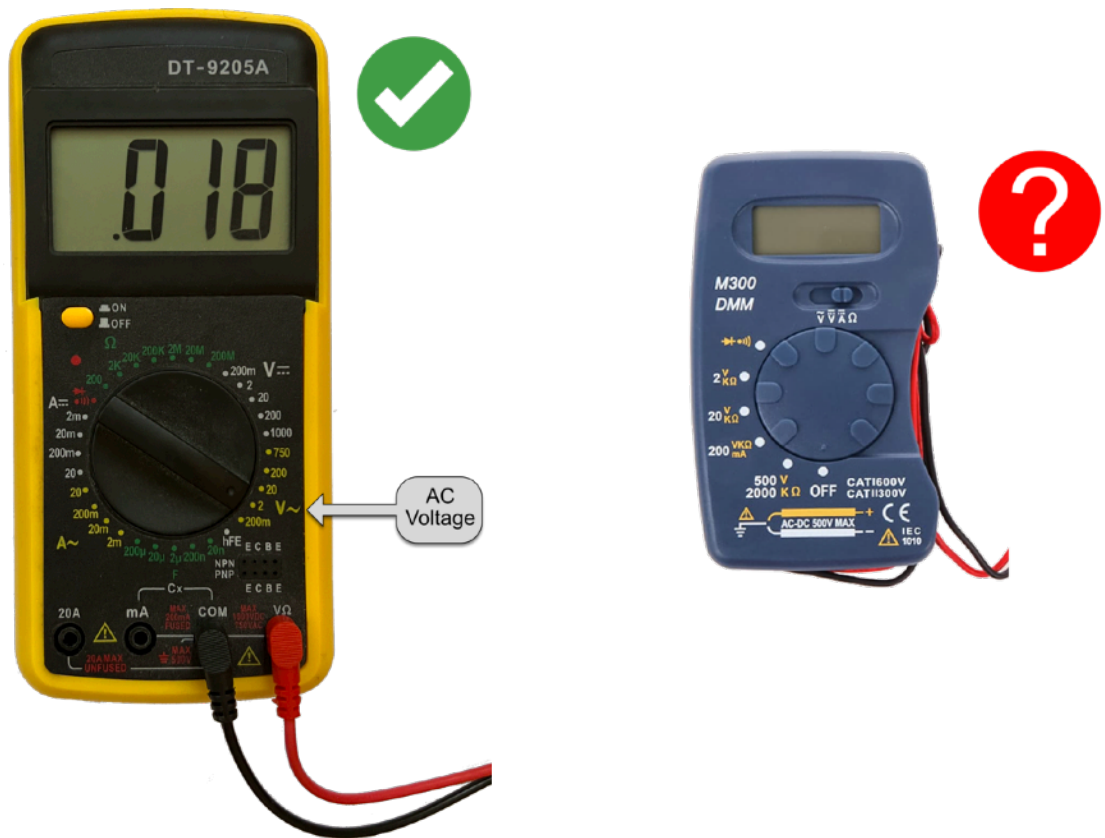
IMPORTANT: *If you are capturing an amp with a mic'ed speaker cabinet, it is important that you select "Amp+Cab" so that the frequency response of the cabinet can be captured in detail. Only use "Amp" for captures made with a load box.*

Calibration

While Tonocracy can produce excellent-sounding captures without any advanced setup, we recommend that you calibrate your audio interface to get the best possible results. This will ensure that all levels are set appropriately and that the resulting capture, when used in a signal chain, will respond to your guitar and pedals the way that you expect. You can skip these steps, but if you intend to share your captures we strongly recommend going through the

calibration process, as this will ensure that anyone who downloads and uses them will automatically have the correct input gain, regardless of any specific audio interface.

To perform the process, you will need a digital multimeter (DMM). These can be obtained for as little as \$25 from online retailers, hardware stores, or electronics equipment suppliers. The only requirement is that the meter is able to accurately measure AC below 1 Volt. A good indicator is if the meter has a dial with multiple AC settings that range from several hundred down to around 2-4 Volts, as shown in the picture on the left:



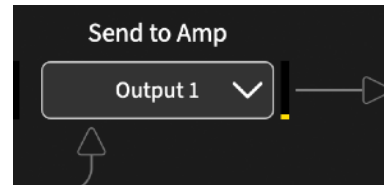
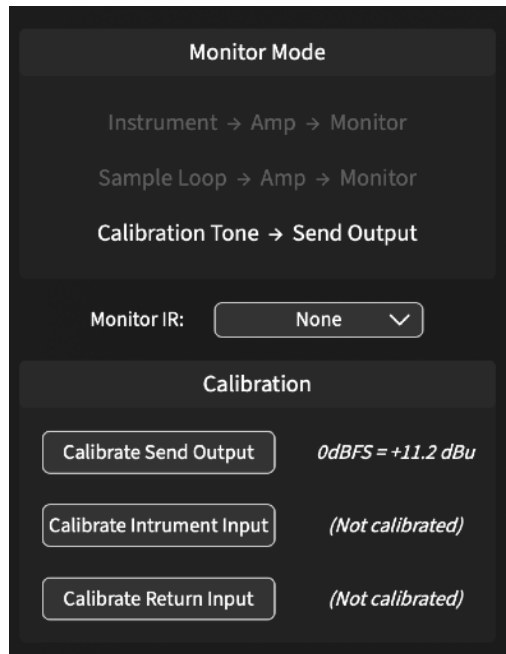
(These specific models/manufacturers are only examples and do not represent specific recommendations)

Inexpensive or older meters often have only one AC setting, designed for measuring the mains voltage which is around 120 or 240 VAC. These kinds of meters are less likely to work, because they may not have been designed to detect low voltages. If you have a basic meter with only a few settings, and this reads 0 Volts even when you are certain there is an audio signal present, you will probably need to obtain another with the appropriate specifications.

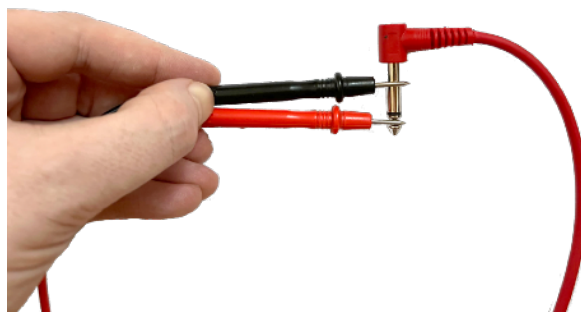
(If you are unsure how to use your DMM, please consult the user manual from the manufacturer)

How to calibrate

After setting up your IO and routing in the capture mode Setup page, click on the text "Calibration Tone → Send Output". This will send a sine wave signal to the output of your audio interface that you have chosen as the Send Output to your amp or pedal.



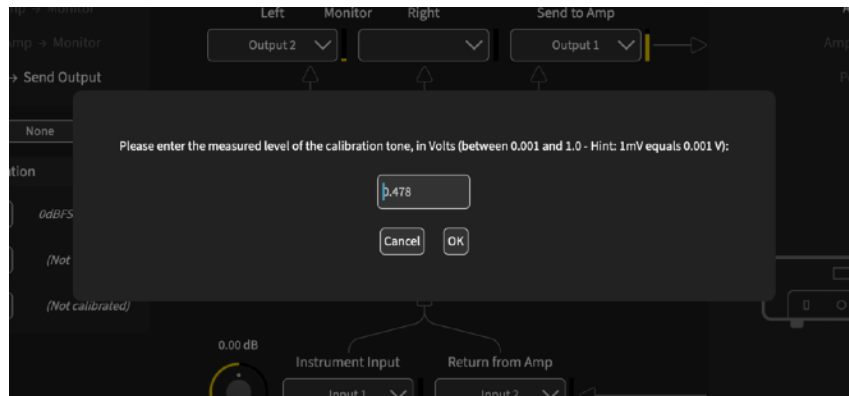
Next click the button labelled "Calibrate Send Output". This will prompt you to measure the actual voltage of this signal. Take a patch cable, plug one end into the appropriate output jack of your audio interface, and measure the AC voltage present at the other end: (Hint: you may need to press firmly to get a good reading)



Ideally, this signal should be around 500 millivolts (mV), or 0.5 Volts. Adjust the analog output level of your interface (if it has one) until your measurements are in the range of 450 - 550 mV (it doesn't need to be exact). If you can't reach this range even with the volume control turned all the way up, don't worry! Tonocracy will still be able to correctly capture your gear. The only downside is that your resulting capture may not respond quite as well if you feed it with a very strong signal, such as from a boost pedal turned all the way up, or very hot active pickups. The

capture will still respond authentically to signals coming from passive single-coil and humbucker pickups.

Once you have made any adjustments and obtained the final reading, click "OK" and then enter the measured value. (NOTE: The value should be in Volts, not millivolts - to convert from millivolts to Volts, simply divide by 1000).



Next, you should calibrate the Instrument Input. While the accuracy of the capture is not affected by this step, following it ensures that when in setup or audition mode your guitar signal reaches the real amp or pedal with no additional gain or attenuation coming from your audio interface. This makes tweaking (prior to running the capture) and evaluation (when auditioning) easier, since the signal reaching your amp or pedal will be the same as if you plugged in directly.

To do this step, click the "Calibrate Instrument Input" button. Take a patch cable and connect from the Send Output (which you just measured with the multimeter) back into into the Instrument Input of your interface, forming a loop. Make sure that any analog gain or trim control is set to zero. Then click OK - Tonocracy will now measure the digital level of the input signal and adjust it's internal signal flow to compensate for any gain or attenuation that your interface may be introducing.

The third calibration step is only required if you are capturing a pedal. You can skip it if capturing an amp with a direct box, or and amp and speaker cabinet with a microphone. The procedure is the same as for the instrument input, except that the patch cable is connected from the Send Output back into the Return Input, instead of the Instrument Input.

Once calibrated, you are ready to capture at the highest accuracy!

NOTE: Keep in mind that if you make any changes to your setup (such as switching to a different audio interface, adding/removing a reamp box, changing analog trims, or changing preamp gain), you will need to go through the calibration process again. If you are just changing out the gear that you are capturing, there is no need to recalibrate.