

# tubedrive

First of all, thank you for purchasing this stereo 500 module.  
The tubedrive is a stereo tube distortion and saturation unit for the api 500 series.

## Some safety warnings first:

**Vacuum tubes require lethal voltages (+240VDC) to work. Capacitors can hold this charge even after the module is powered off. The unit will discharge itself in a few minutes when powered off. However, still exercise caution.**

**Singular Audio is not responsible for any injuries or bodily harm. There are no user serviceable parts inside. Please, if you are not 100% sure about what you're doing, leave it to a professional.**

A simplified overview of how the module works is located at the bottom of this page.

Some things to take note of when using the tubedrive:

- The unit is installed like any other 500 module. The back of the module slides into the card edge connector in the back of your 500 series rack. Please switch off your 500 series rack before installing. The frontpanel can be fastened with M3 screws or the screws that came with your 500 series rack. When powering on the tubes take about 10 seconds to heat up and pass audio.
- Tubedrive has the following power consumption. Please check if your 500 rack and other modules can provide this: (+16V = 200mA, -16V = 150mA, per slot).
- Tubedrive creates a not insignificant amount of heat from the 4 tubes, please take this into account when choosing where to put the module in your 500 rack.
- The input level control ('in') controls how much audio is sent to the overdrive tube.
- The boost switch boosts the signal going to the overdrive tube with 15dB for extra distortion.
- The triode/pentode switch controls if the overdrive tube is operating in triode or pentode mode. In triode mode the distortion is 'warmer' and has primarily 2nd harmonics ('even harmonics'). In pentode mode the tube has more gain and compression and has more 3rd harmonics as well ('odd harmonics'). In short, triode mode is smoother and pentode mode is more aggressive.
- The 'bias' control controls the tube biasing. It sets the operating point for the overdrive tube. At lower and higher settings this introduces asymmetrical clipping and the sound is more 'choked off'. The smoothest overdrive with the most symmetrical clipping is around 12 o'clock on the biasing control.
- The output level control ('out') controls the audio level coming out of the distortion tube. This only affects the 'wet' audio signal.
- The dry/wet control ('mix') controls the balance between the 'dry' (undistorted) signal and the 'wet' (distorted) signal, for parallel processing. Please note the dry signal is unprocessed by any level controls (the signal is split before the input control).
- The bypass control hardware switches the circuit out of the audio path completely, using a relay.
- The tubedrive uses a EF86 pentode and 6AS6 triode/pentode tube per channel (4 tubes total per unit).
- Recall sheets can be downloaded as a pdf on [www.singularaudio.nl/shop/tubedrive](http://www.singularaudio.nl/shop/tubedrive)

I hope you make some great music with the tubedrive.

Please keep an eye on [www.singularaudio.nl](http://www.singularaudio.nl) for new products, and follow @singularaudio on Instagram for everything I'm working on.

