

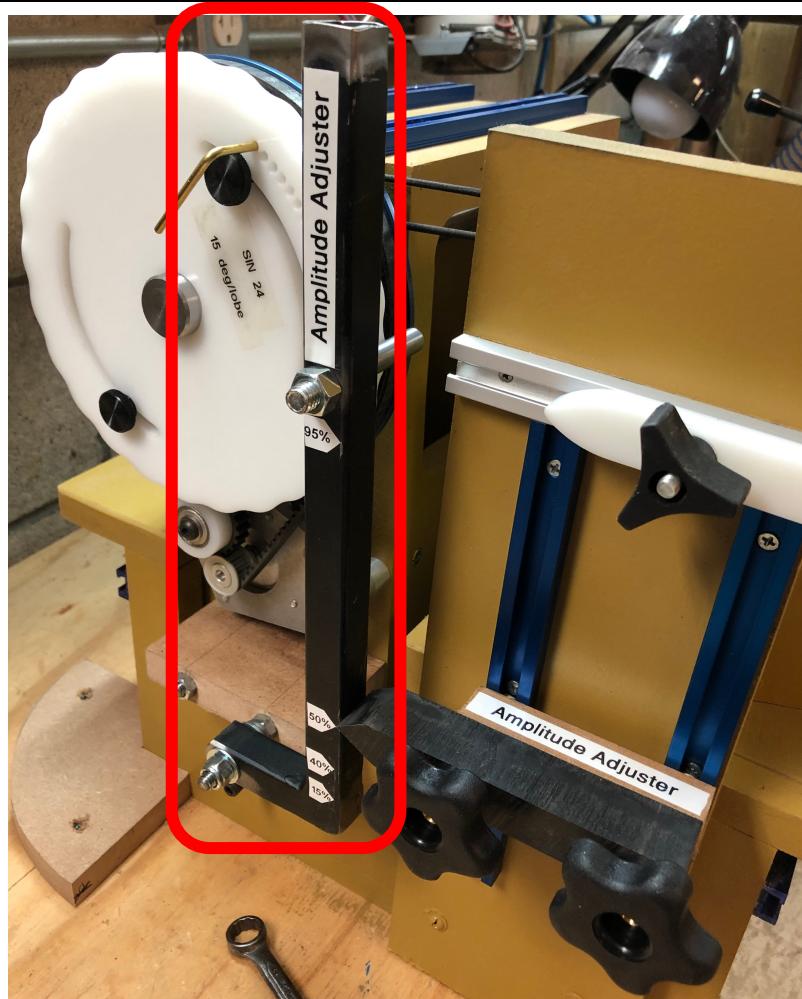
## Amplitude Adjuster for an MDF Rose Engine

This article is about the amplitude adjuster I made for my MDF rose engine. The picture of the fully installed parts is shown in picture to the right.

The black **lever arm** (with the vertical label "Amplitude Adjuster") is made from 0.75" square steel tubing. Nothing is magical about that : I just had it around.

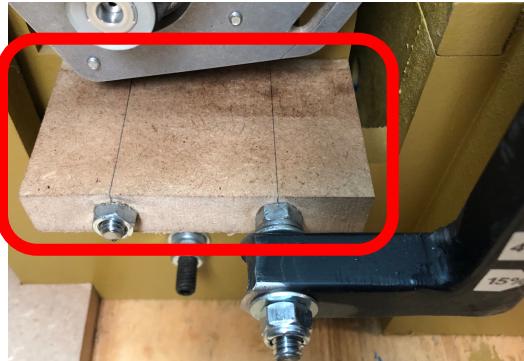
The bottom part of the arm is 3" long, and the vertical part is 12" long.

The other parts needed to make this for my machine are outlined below



A **block** had to be made to move the steel lever arm 2.5" out from the headstock. This was to ensure the lever had room to clear the rosettes. This block (the unpainted MDF in the picture to the right) is 4" x 2.5" x 0.75".

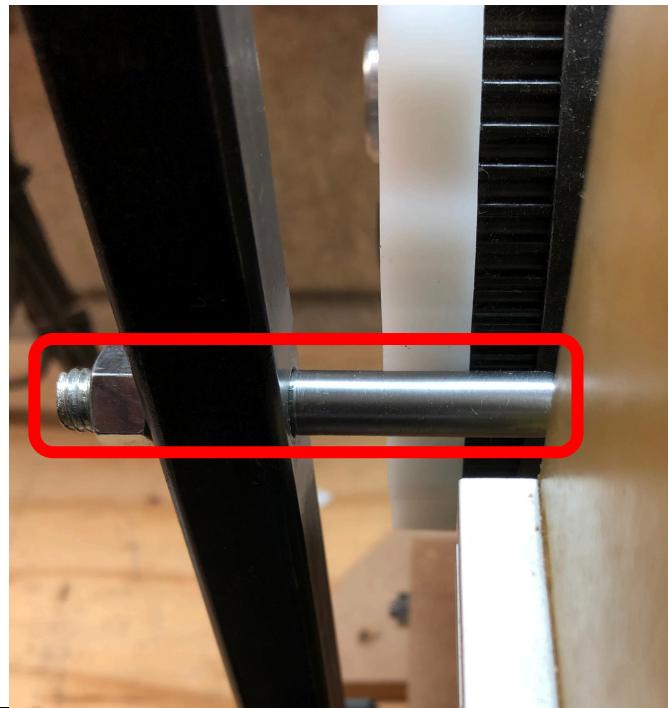
The bolts attaching this block to the headstock are 5/16" – 18 carriage bolts. The left one is 3.5" long; the right one 5".



The bolt on the right is held in place with a standard nut, and the steel lever arm is held in place by a lock nut. The use of a lock nut allows the lever arm to pivot back and forth without loosening the nut.

The **rosette rubber** (the chrome part shown in the picture to the right) is a partially threaded, hex head,  $\frac{3}{8}$ -16 screw with the head cut off. Part number [91257A636](#) from [McMaster-Carr](#) is an example.

This hole for this is drilled in the arm so that it is vertically aligned with the spindle's axis. In my case, that was 8.5" up from the bottom of the lever.



The **amplifying rubber** shown here is made from [Delrin](#), but it could also be made from aluminum. (If using aluminum, a roller end is a good option worth exploring.)

It slides up and down, and is affixed in place using T-track (the blue parts).



It also has slots cut in it to allow it to slide in and out (left and right in this picture). This is to allow it to align the headstock properly.

The one I made is 5.25" long, 1" wide, and 0.75" thick (same as the MDF spacer).

The MDF spacer (the unpainted MDF in the picture with the label, "Amplitude Adjuster") is used to align the amplifying rubber with the lever arm. It is 3.75" long and 0.75" square.

