

# Removing the rumble on a Pro-ject turntable



## Introduction

The below instructions were carefully compiled by Mr Alan Morris, during his comprehensive review of the S/E Upgrade Kit for the blog, [www.theapplechap.com](http://www.theapplechap.com).

To see the full review, click the link on our product page.

The Pro-Ject S/E Upgrade Kit is a straightforward solution for fixing the problem of low-level rumble, and is intended to be perfectly doable by anyone able to wield a screwdriver.



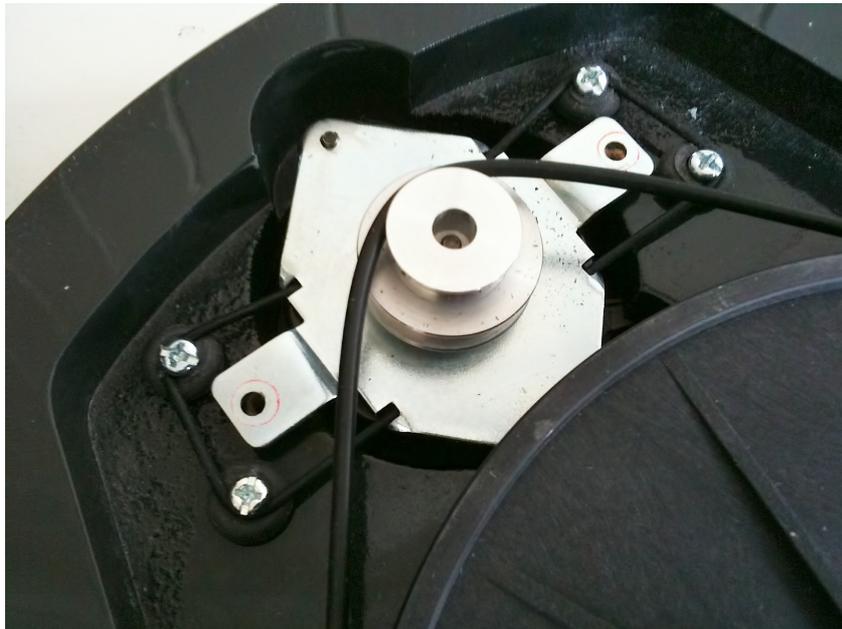
The high quality components in the "S/E upgrade kit"

## The Upgrade Process

As the kit is not supplied with an instruction manual, this document will act as a useful installation guide.

### Step 1 - Remove the turntable platter and mat

This is pretty simple. It slips straight off by lifting it off of the spindle. When done it looks a little like the following picture. It won't be exactly the same as I've replaced the screws, brass collars and belt with my own parts but it should be pretty close.



Motor mount - with platter removed

### Step 2 - Remove the belt and sub-platter

We will be replacing the sub-platter later but we don't need the turntable belt any more. It's best not throw it away so keep it safe in case you need it in the future. Ensure you keep the sub-platter in a clean place as it needs to be dirt free to operate properly once reinstalled.

### Step 3 - Take the rubber O-ring motor-mount off of the brass collars

We need to be able to get access to the motor to remove the pulley and the O-rings only allow restricted access. Lever them off with a flat screwdriver ensuring the rubber O-ring sits on top of the aluminium motor mount to make it easier when we go to refit it.

### Step 4 - Replace the motor pulley

There is a tiny grub screw on the bottom side of the motor pulley that needs to be loosened (do not remove it as it will likely get lost as it is very small). You need to use a very small flat-head

screwdriver (try to get the right size to prevent damaging the screw). The pulley should then just pull off. Again, don't throw it away as you may need it again in the future, so keep it safe with the original motor belt.

Replace with the pulley from the kit. Give the new pulley a good wipe to make sure that it is clean and grease free so that the turntable belt rotates without slipping. Ensure that the screw is done up tight and the pulley is not too close to the motor. Test that it rotates smoothly.

## Step 5 - Install the new rubber grommets

These screw flat-side down under the motor transport holes (the two on the aluminium motor mount). Make sure they are firmly in but do not over tighten else their springy property will be lost. I found it useful to use my spirit level to make sure that I had inserted the screws evenly (see picture below - note that I have removed the screws and brass collars to make the rubber grommet easier to see in the photograph. This is unnecessary for you to do).



Using a spirit level to balance the motor mount (note the new grommets and black screws)

## Step 6 - Replace sub-platter and belt

Slide the sub-platter back into place. You may want to take this opportunity to re-grease the spindle so that it turns freely on the bearing. I use [Grease-it](#) from Pro-ject ([£20, from Henley Designs](#)). Also make sure that the outside of the sub-platter is clean and free from oil which may make the turntable belt slip.

Replace the turntable belt using the small-diameter groove on the new motor pulley. The small diameter is used for 33 1/3 RPM when using the turntable's wall power supply. It is used for both 33 1/3 and 45 RPM when using the Pro-ject Speedbox 2 and Pro-ject Speedbox 2 SE.

## Step 7 - Replace the rubber O-ring on the brass collars

Lever the rubber O-ring over the brass collars, ensuring that the motor is central within the cavity in the plinth. You may want to re-use the spirit level to make sure everything is as even and level as it can be.

## Step 8 - Replace the platter and turntable mat

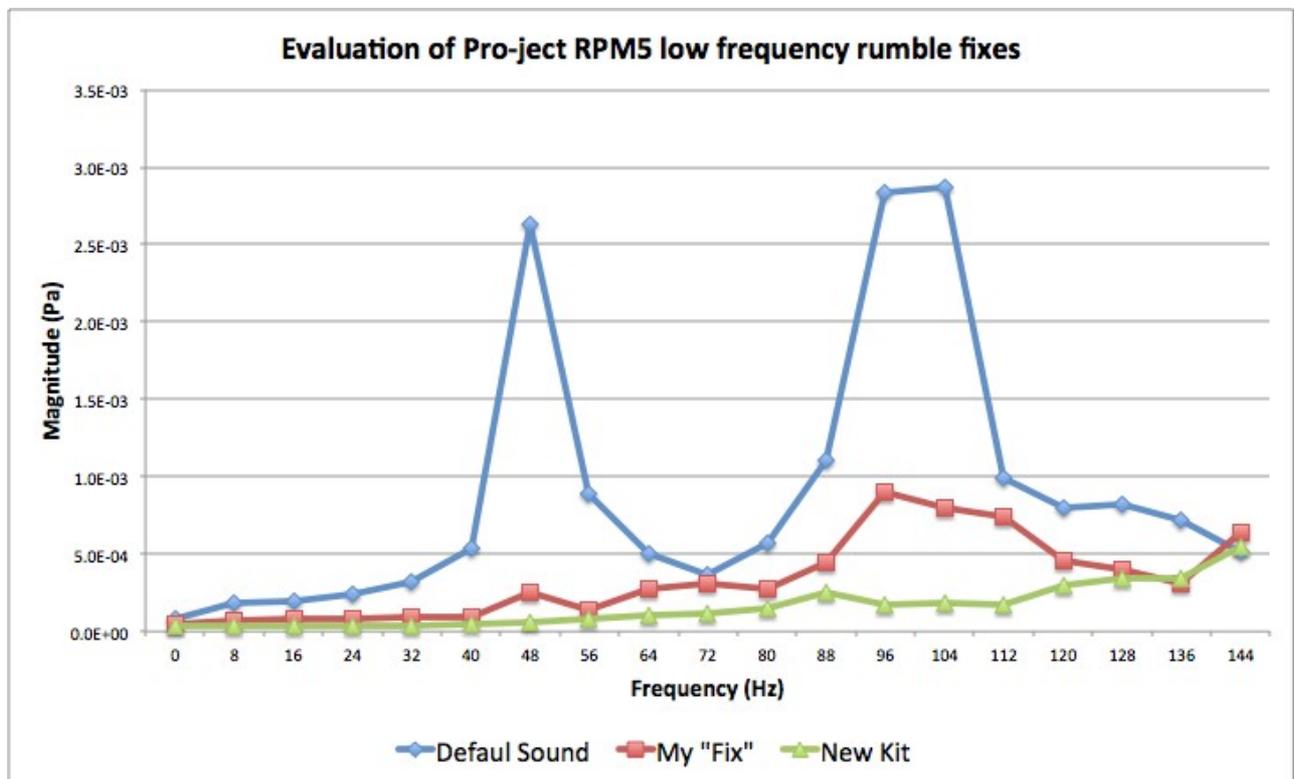
You should be good to go!

## The Results

I waited with baited breath as the tonearm lowered onto the "blank" track of my "HiFi News Analogue Test LP", I admit that I was a little worried that what I would hear would not be up to the task. I feared that it would not even reach the acceptable level of silence that I was able to achieve with my transatlantic do-it-yourself fix.

So ..... silence ..... absolutely nothing! So I tried turning it up, right up to 100%, a level that would previously have had the 'speakers going apoplectic. Just the hiss of the phono amp (no longer an issue since I replaced my old one with a shiny new Musical Fidelity V-LPS with battery power ; see Switching from a Pro-ject PhonoBoxII USB to MF V-LPS+V-PSU, but please come back).

OK, I figured, maybe I wasn't hearing all of the low frequency stuff, so out came my sound measurement equipment (in the shape of an iPad2 with SignalScope Pro - £42.99). I carefully measured the sound with arm down on the "blank" track a few times to ensure the sound was not coming and going like before and to allow me to create a statistically significant average for the graph below.



So ..... what do we have? Well I think the results speak from themselves. Measured against the default sound of the turntable and that of my fix, the new system produces a sound that is practically unmeasurable against the sound of the amp and the room. Certainly nothing that could be audible whilst playing a record.

In all honesty I never thought that it would be so effective. The stories of "noisy Pro-ject motors" abound on the forums so I figured that something must get through. It is clear that all routes from motor to stylus have been effectively blocked.

Thanks to Alan Morris for his agreement to re-print his guide and findings.