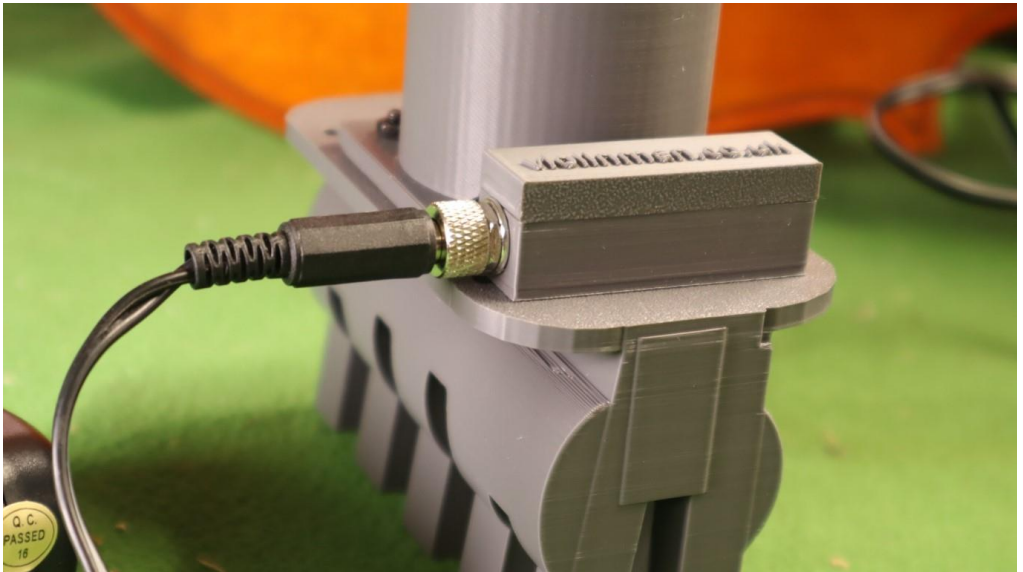


Acoustic Enhancer Mk4 for violin (viola), 'cello and bass

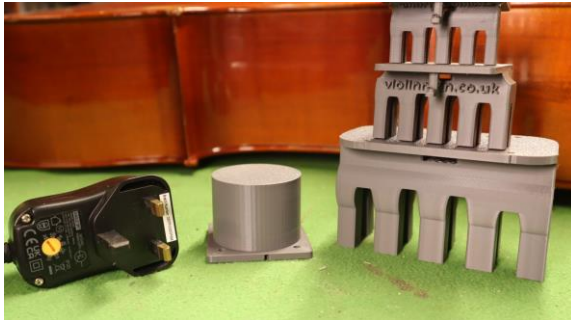


Andrews of Harrogate

Violin repairer

www.violinman.co.uk

Thank you for buying this Enhancer. I hope you will join the many players, makers and dealers who have found it to be of great use in stimulating and preserving the response of their instruments.



This Mk4 version is broadly similar to the Mk2 but is improved in a number of ways. It has been completely redesigned and 3D-printed. It is light, efficient and quieter. Having no

rubber or other damping materials in the vibration path, the bridge and instrument are more easily excited by a lower power. The three adapters for violin (viola), cello and bass can all be mounted easily by the player via four M3 screws. This means a big cost saving to dealers, workshops or collectors with different instruments. There are two Mk4 vibrators – A and B. The B is more powerful but I've been amazed by the effect of the A (lighter) model even on a double bass. The A model with detachable PSU is pictured on the front cover.

Just as the human body or a car engine benefits from exercise, so does a string instrument. The theory behind the AE Mk4 is gentle vibration through the bridge for 72 hours or more, simulating the playing-in needed by a new or rested instrument. It also usefully settles an instrument after bridge or sound post replacement, for example.

There are two connected units. The power unit (PSU) plugs in to the mains (100-230v AC) and produces a selectable and safe DC voltage of between 3 and 12 (<300mA). The PSU is either hard-wired to the vibrator or pluggable with a locking ring. The other unit – the vibrator - attaches to the bridge of the violin, viola, cello or double bass via an adapter with four "fingers", rather like a mute. The unit can be secured by a Velcro strap or rubber band under the bridge and over the unit to



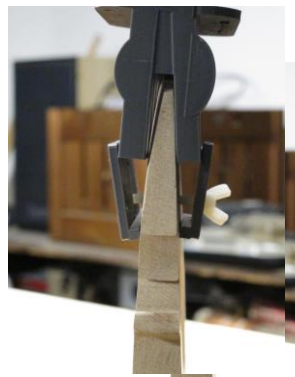
prevent any tendency to “walk” off the bridge as it vibrates. If one of the fingers touches a string, slacken the string slightly and move it to one side whilst the Enhancer is being used.

To allow the violin to vibrate as freely as possible, it’s best left in its case for safety. Attach the shoulder rest and the back will be raised up from the case, allowing free vibration.

A cello or bass can rest on its side without too much damping. The instrument should be strung, tuned up to pitch, with the bridge

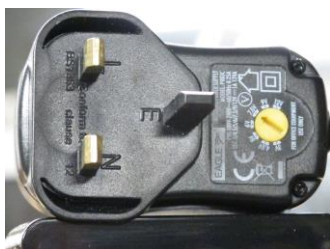


vertical. Two anchor plates are supplied which can be fitted each side of the bridge below the strings with the screw through the centre hole of the bridge. Don’t over tighten the nylon screws and wing nuts. They’re made of nylon so when accidentally dropped onto the belly of the instrument or disappear through the f holes, they do no damage! The top of the plates should just nip the fingers of the adapter. They



provide a positive mechanical connection between the adapter and the wooden bridge, enhancing the transmission of vibrations whilst minimising noise.

Attach the Enhancer to the bridge. Push it down gently. On all instruments you might secure with a Velcro strap or rubber band under the bridge and over the vibrator or use the two hooks on the base plate.



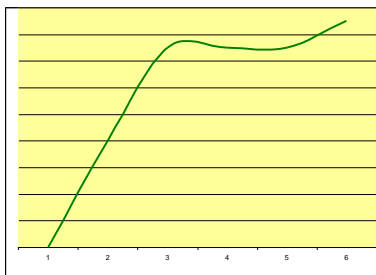
Set the voltage by turning the yellow selector on the inside of the power unit to 6 and plug in to the mains. Increase the voltage until you feel vibration throughout the instrument. *Settings 6 or 7.5 for violin and perhaps higher for cello or bass seem good compromises between strength of vibration and quiet running. The unit is quite safe up to the maximum 12 setting but is working most efficiently before it starts to

sound lumpy. If you hear an unusual vibration check that the lead connecting the two units is not touching the body of the instrument. You may get rattles from anything loose on the instrument also. The units are quite robust but don't drop them or allow them to get wet. The Enhancer can be run indefinitely but the greatest improvement will occur after 3-6 days.

To change the adapter to suit another instrument, undo the four M3 nuts and bolts and carefully remove the adapter from the vibrator. Avoid disturbing the wiring and don't operate the vibrator while disassembled, for safety's sake.

I've had occasional reports of the vibrator not working after a while. Check that the power unit is switched on and its red light is visible. If no red light the power unit has either failed or the output is shorted. Remove the short-circuit and power will be restored.

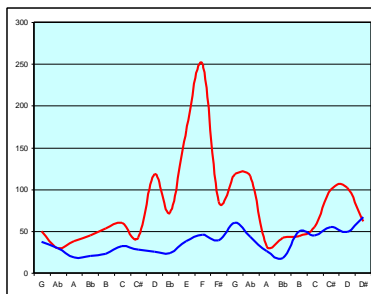
* Depending on the motor used, it might run on the 3 and 4.5 settings, but 6 or 7.5 and above are usually most useful.



In tests, a sensor on the violin belly at the top end of the bass bar measured improvement in acoustic "conductance" over 6 days. The graph (left) shows 3 days as optimum for this particular violin.

The second graph (below) shows the

peaky response of a new violin **day 1** compared with the much more even sound on **day 6**. Measurements were taken from G up to Bb (1st position chromatic scale).



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