

**REZZX™**  
**RESONANCE MODULATOR**  
**MODEL L - LUTHIER KIT**  
*US Patent 7678979*

**1-**The original **REZZX™** resonance modulator works with special high power magnets to alter the mass distribution of the resonating instrument plates. **REZZX™** is useful in taming annoying wolf notes and is also an effective and easy way to change and potentially improve the resonance of various stringed instruments such as the violin, viola, cello and bass.

**2-**The advantage of the **REZZX™** is that it can be attached to an instrument in seconds with ease and without damage or modification to the instrument. It can be infinitely adjusted to fine tune the resonance of the instrument. The fine grain leather provides protection for the instrument finish as well as providing grip to minimize movement during play.

**3-**The **REZZX™** will affect the complex acoustic system of the instrument both positively and negatively. The object will be to experiment with positions and varying weights to find the best balance for the specific instrument. The approximate weights of the **REZZX™** components in grams are as follows:

#1- 1/8 X 1/8 rod	0.2 gr.	#5- 3/8 X 1/10 disc	1.3 gr.
#2- 1/4 X 1/4 rod	1.4 gr.	#6- 1/4 X 1/10 disc	0.6 gr.
#3- 1/2 X 1/4 rod	2.9 gr.	#7- 1/2 X 1/8 disc	2.9 gr.
#4- 1 X 1/4 rod	5.8 gr.	#8- 3/4 X 1/8 disc	6.7 gr.
#9- 5/8 knob	13.8 gr.	#10- 7/8 knob	23.5 gr.

Begin by separating the segments and avoid allowing the segments to attach directly to each other. If that should occur, separate the segments by sliding them apart sideways. Placing them against a sharp edge such as a board or the edge of a door helps to slide the segments apart. Be sure to not damage the leather against the edge. Place the leather lined segment (outer magnet) against the outside of the body beside the f-hole (making sure to keep the leather next to the varnish finish for protection), slide the remaining segment thru the f-hole immediately beside the outer magnet and it will pick up the inner magnet and hold it in place. By moving the outer segment, the inner will follow. Depending on the nature of the tonewood and accuracy of the carving in the instrument, you will need to experiment to find the location that most approximates the effect you desire. Generally, the maximum effect is in the region of 3 to 4 cm around the bridge, and areas approximately 3 to 4 cm above and below the f-holes. Least effect is found in the regions next to the corner and end blocks. All other areas of both the top, back, and ribs have a variable effect. Experiment by combining different weights, and test various locations to find the best combination of weight and location to approximate the desired acoustic effect. In the case of wolf notes, sometimes they may be eliminated and in other cases, the wolf may move to a different less problematic scale position.

**4-**Be sure that the first inside segment touching the instrument body is no larger than:  
1/4 inch for violin and viola; 1/2 inch for cello; 3/4 inch for Bass.

**5-**When adding inner weights do not add them one at a time such that in the combined state they are too large to remove thru the f-hole. It will be difficult to separate magnets that are stuck together while they are inside the instrument!

**6-**In the case of cellos and basses, be careful to not let the magnet segments drop freely into the body as they will attach to the end pin and may be difficult to remove. If this should happen, tie a string of suitable strength and length (unwaxed dental floss is ideal) to the "Rescue Magnet" (the one with the hole) and lower it into the instrument body such that it will attach to the magnet which is stuck to the end pin. Pulling on the string will release the stuck magnet from the end pin.

### **WARNING**

**THE HIGH MAGNETIC POWER OF THE **REZZX™** RESONANCE MODULATOR CAN BE DANGEROUS TO YOUR PERSON AND EQUIPMENT. TO AVOID POSSIBLE MAGNETIC LOSS OF DATA & EQUIPMENT DAMAGE, KEEP AWAY FROM ALL ELECTRONIC EQUIPMENT SUCH AS HEART PACERS, COMPUTERS, AND MAGNETIC STORAGE DEVICES SUCH AS CREDIT CARDS AND ZIP DRIVES. HANDLE SEGMENTS WITH A FIRM AND DELIBERATE GRIP AND DO NOT LET THE COMPONENTS FLY TOGETHER FREELY AS THE POWERFUL MANETIC FORCES CAN GENERATE A SPEED AND FORCE THAT CAN CAUSE PERSONAL PHYSICAL INJURY OR MATERIAL DAMAGE.**

**TO MINIMIZE ANY RISK OF DAMAGE FOR SOME INSTRUMENTS WITH SOFT VARNISH, REMOVE THE **REZZX™** FROM THE INSTRUMENT AT THE END OF EACH DAY OF USE.**

### **WARRANTY & LIMITATIONS**

**REZZX™** products due to their simplicity and low cost are sold as is with no express or implied warranties or guarantees. The user is solely responsible to ensure **REZZX™** products are handled safely, used for the purpose intended as described above, and kept away from children and pets. Modification of the product may pose a health and safety risk. The user accepts full responsibility to evaluate and accept all risks and consequences associated with the use of **REZZX™** products.