

# THE REPAIR SHOP

## UNIVERSAL SCREW SPRING & STEEL BOARD

What with the wide variety of instrument models and designs found on the market today, it is understandable why today's technician will welcome the *Universal Screw - Spring - Steel Board*. This accessory allows the woodwind repair technician to organize the pivot screws, springs, and long screws of each instrument in such a way that no matter who disassembles the instrument, anyone knowing how this board is organized may reassemble the instrument confidently and correctly. This Universal Board is particularly useful in a shop where more than one individual is involved in the overall repair process.

As you can see, I have placed six index marks on each horizontal line. The index lines on the far left and far right will be where you will drill holes with a #31 drill bit (.120"). Drill the *Pivot Screw* holes (left side) only 1/8" deep and the *Steel* holes (right side) 1/4" deep. Between these two outer locations are four inner locator marks. You will drill a hole at each of these points with a #52 drill bit (.063"), again, approximately 1/4" deep. These four inner holes will be used to hold the springs. The overall dimensions of the block are 8" by 3 1/2" by 1/2" thick. The most efficient way for you to make this block would be to xerox this page and glue the drawing directly onto a piece of wood. You may then cut the block to size and drill the holes as indicated at the index locations. The larger 1 1/4" recess (at the bottom of the board) is to secure a plastic vial containing small parts and may be drilled with a wood spade bit.

I recommend that as each key and lever is removed from an instrument, you replace each pivot and long screw back into its relative post(s). After all keys and levers are removed, begin at the top of the instrument by removing the first long screw and place it in the #1 position on the board. Proceed down the instrument to the next long screw, using the non-threaded post (holding the screw slot-end) as a reference. If you come across a situation where two (or more) long screws fall on exactly the same plane on the instrument's body, then proceed as follows: Begin by removing the steel which is nearest the centerline of the instrument (tone hole alignment), then proceed to the next steel closest to this centerline. On an instrument like an Alto, Tenor, or Baritone Saxophone, treat the top-to-bottom references as though the instrument were stretched out in one long tube. That way, there won't be any confusion when the instrument "folds" back on itself.

Use this same process when placing the pivot screws in the board. Remove them as they are located on the instrument from top to bottom. Where two or more are located at the same plane, remove the one nearest the centerline first, then proceed with the other(s).

Finally, we proceed to the removal of the springs. We will proceed exactly as with the long screws, and pivots. Start at the top and proceed downward. Where two or more springs fall on the same plane, then remove the one closest to the centerline first, proceed outward with the rest. Additionally we will want to indicate which direction each spring points by placing it specifically in the **down** column or **up** column. For example on line #1 the first spring will be placed in either one of the two left holes, or either one of the two right holes. In the situation where we have two springs located at the same post, we have the extra spring holes to accommodate two springs in the same post pointing up or two springs in the same post pointing down. The left hole in each pair would indicate the *top* position where the right hole would indicate the *lower* position. Is this confusing yet? Remember, it's alright to jot down little notes directly on the face of the board (in pencil) to clarify confusing circumstances.

Screws	Springs		Steels
	down	up	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			

1 1/4"  
wood  
bit 1/4"  
deep

Instrument type: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_