# Vacuum Bridge Clamp


**OVERVIEW**:
Vacuum is the best way to get a superior joint between your bridge and the top of your guitar. Moisture is removed through the vacuum process which really speeds up dry time. The design of our Vacuum Bridge Clamps - SPVBC(SS, CL, UK) makes a tedious task fast and simple.

Our Vacuum Bridge Clamp is designed to provide simple, safe, and effective vacuum clamping. It features a translucent, finish-safe, flexible silicone vacuum membrane which aids in the initial set up and provides the ability to monitor your clamping visually. The custom gasket sandwich — developed after extensive testing — is made from an industrial closed cell foam (EPDM) bonded to a think layer of non-reactive film (PTFE). The frame is CNC machined from Richlite - a rigid 100% recycled industrial paper composite made in the USA!

Choose vacuum bridge clamp size to fit your need - Ukulele, Steel String, or Classical.

The 1/2” foam gasket, affixed to the bottom surface of the frame, conforms to the top/soundboard which, when under vacuum creates an airtight seal for clamping. The flexible, yet firm gasket can even form a seal when a portion of the clamp is placed over a pickguard or when the top is very arched. And, of course, the foam bottom gasket does not mark or harm the top or finish.

The clamping fixture is designed to pull vacuum in the area between the membrane and the guitar top surface under the membrane. There is a vacuum outlet in the frame below the transparent membrane and this air outlet hole is connected to a push-to-connect fitting on the perimeter of the frame. The fixture is connected to the vacuum pump by a 1/4” hose attached to this connector. The 1/4" hose has a quick-turn coupling plug (part number SPVQTS18) attached which can be used for a  quick connection to your vacuum supply hose.

In operation, air is pulled from under the membrane by the vacuum supply and the vacuum created sucks the membrane down to the guitar top surface.

These instructions are not intended to demonstrate the complete bridge gluing process but rather to show how it is used in the clamping portion of this process. All other steps - preparation of the top and bridge surfaces, locating the bridge accurately, pinning the bridge in place, glue clean up, etc. - are the same as for gluing a bridge down with ordinary deep-throat clamps.

This vacuum clamp can be used to re-glue a bridge in a repair situation or to clamp down a new bridge during construction. We demonstrate here the use of this clamp in a repair situation, re-gluing a bridge onto a Martin 00-21. The clamping procedure is the same for attaching a bridge to a guitar in construction.

**These instructions show the process of gluing a bridge using a former version of our Vacuum Bridge Clamp. The process is the same.**

# The Clamp in Use

The Vacuum Bridge Clamp (prior version pictured here) has been connected to the LMI Vacuum Pump (SPVP) by inserting the pump's hose into the push-to-connector at the end of the bridge clamp fixture. The hose is  pushed into the connector - it locks in place. The hose is released from the connector by pushing in the ring on the connector and pulling the hose free.

The vacuum pump and Vacuum Bridge Clamp are ready for use. The guitar top and the bridge bottom prepared for gluing. The plastic bridge pins (PI1K) will be used to pin this bridge in place during gluing. There are a variety of ways to pin the bridge in its exact location, this is a simple one that can be used when re-gluing a bridge that was originally in the correct location for accurate intonation.

The bridge has been glued and placed into position. The top of the bridge pins have been clipped off so they won't protrude above the bridge during clamping.

The clipped bridge pins have been pushed into the outside string holes and the bridge is now secure from movement during clamping.

Tape has been placed over the bridge pin holes to seal the vacuum during clamping. Without sealing these holes into the guitar body the vacuum clamp will never create vacuum pressure. This hole sealing process is not needed if the pin holes haven't been drilled out.

With the bridge fitted, glued, and pinned in place the clamping will begin. Carefully place the Vacuum Bridge Clamp over the bridge as shown here with the bridge in the middle of the fixture.

Turn the vacuum pump on. Gently press down around edges of the Vacuum Bridge Clamp to create a solid seal with the top all around the fixture.

On this repair we are clamping the bridge down with the pickguard attached.  The pickguard is under one corner of the fixture. The foam gasket seal on the bottom of the fixture must be pressed down tight around the pickguard before the clamp will create vacuum pressure and begin pressing down on the bridge. The moment that a good seal to the top is created the vacuum will begin and will suck the membrane down over the bridge as shown in the photo.

**Glue Cleanup** - After about 10 to 15 minutes of vacuum pressure on the bridge, turn the pump off and carefully remove the Vacuum Bridge Clamp from the guitar top. By this time the glue squeezed out along the edge of the bridge is beginning to harden and this is the best time to clean it away. This glue cleaning should be done quickly with a damp cloth and soft probes - DO NOT use an abundance of water. At this stage excess water can dilute the glue under the bridge. With the visible glue removed, place the Vacuum Bridge Clamp fixture back on the top over the bridge and turn the vacuum pump on. Press the clamp frame down around the edges until vacuum pressure is once again clamping the bridge to the top, as in the photo.

**Clamping Time** - It is best at this stage to continue the vacuum clamping pressure at least 45 to 60 minutes - longer if you like. Most water soluble glues will have firmly tacked and set enough by this time to allow clamp removal without harm to the joint. Of course, it is best to let it cure more fully overnight before any other procedures on the bridge or instrument.

The Vacuum Bridge Clamp is removed from the bridge and locating pins are removed. The bridge is firmly glued to the top.