





BAROQUE BEAUTY PART 2

In the May issue, **Shaun Newman** introduced us to the history of the Baroque guitar and took us through the first part of the build. Here he goes on to describe how the delicate inner 'parchment rose' is made and put into place



In part one a little of the history of the Baroque guitar was explained as well as materials needed and a build method using a mould. Here, I'll move on to describe the construction and fitting of the soundboard with its outer rosette, and then how the delicate inner 'parchment rose' is made and put into place.

The soundboard

The soundboard is widely recognised among luthiers as perhaps the most important part of the whole instrument. However ornate or well finished the instrument is, the sound must be as good as possible. The instrument described here is smaller than a concert classical guitar of today, so the volume of sound and its projection will inevitably be relatively diminished. It is therefore vital to choose the very best spruce available for the soundboard. I chose top grade Engelmann spruce (see supplier list) which is fine, straight-grained timber that has grown slowly over centuries.

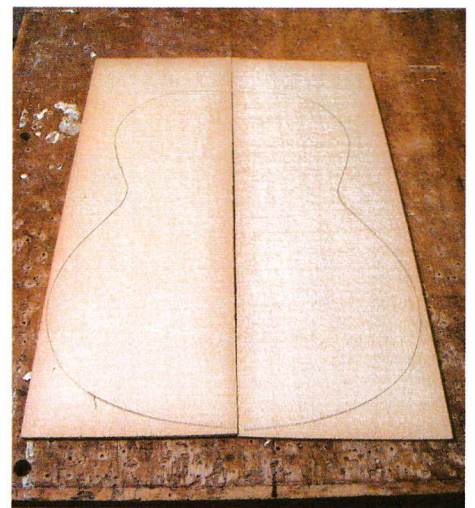
A guitar soundboard comes from the supplier typically as a 'book-matched' set of two pieces around 5mm thick (**photo 36**). Cut from the same log, the two halves appear as butterfly wings when opened like a book. The inside edge of the two boards must be trued to an exact right angle before they can be joined, and along the entire length both sides must meet exactly in the middle. Initially the two boards are held in the vice and planed roughly to form. The boards are then placed on a flat surface with a thin spacer underneath, cramped down firmly and trued to the exact requirement using an old spirit level with abrasive attached to the edges with double-sided tape (**photo 37**). I normally put

some pencil lines on the edges to be trued, and when they have all disappeared you know the job is done.

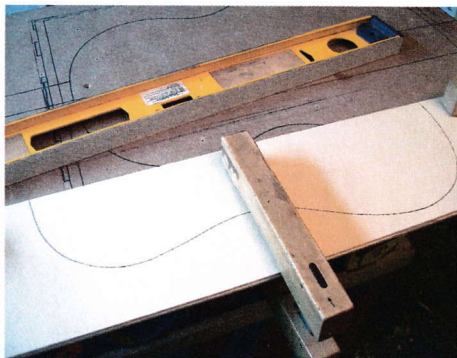
The boards must be joined then, so once again the wedge and lace jig is used. Only a fine bead of Titebond or similar is needed. (**photo 38**).

The outer rosette

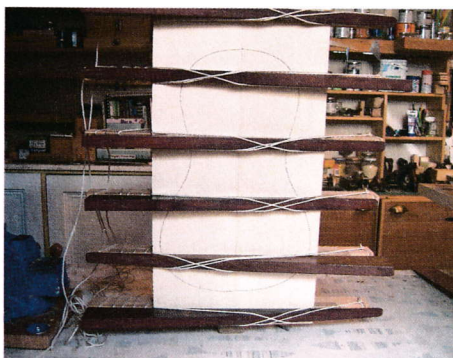
Despite having a complex inner 'parchment rose', almost all Baroque guitars also have an outer rosette. This can be made from just a few simple hoops of purfling, or can be very decorative. I chose something in between, opting to inlay two hoops, but to add 16 mother-of-pearl dots. The reason for choosing to inlay eight pairs of dots has to do with the structure of the parchment rose, which I designed and



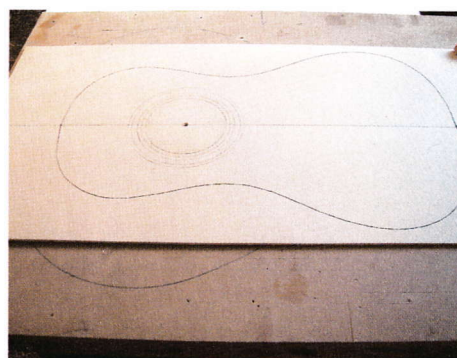
36 A bookmatched soundboard of fine grade Engelmann spruce



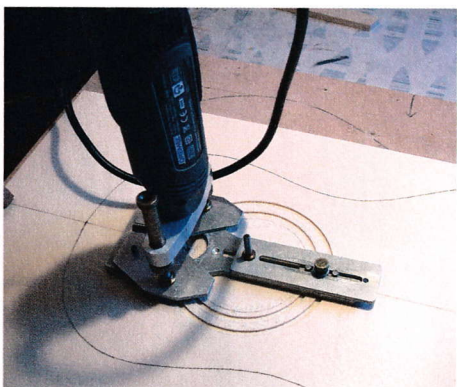
37 Truing the edges of the soundboard



38 The soundboard in the wedge and lace jig



39 The channels for the external rosette marked out



40 The Dremel does the job

will be explained later. The hoops require channels into which they will sit. The channel positions are marked out in pencil using a school compass (**photo 39**). A small Dremel router with a trammelling base is the ideal tool to cut the channels out (**photo 40**). If you do not own such a thing, a small hand-held router (such as the Proxxon) with a trammelling base will do the trick, as long as the cutter has a small diameter. Some makers still go with the traditional method, which

is to scribe two circles with a compass cutter and then to chisel out the channel by hand. This is tricky to say the least as it is very easy to damage the edges of the channel showing up badly when the purflings are inlaid. The channel is cut into what will become the front of the instrument after it has been planed smooth. The soundboard will still be around 5mm thick, and it is best to set the depth of the cutter to no more than 1.5mm so that when the soundboard is brought to its final thickness from the underside to around 3mm, the hoops will still have some spruce at the bottom of the channel to support them (**photo 41**).

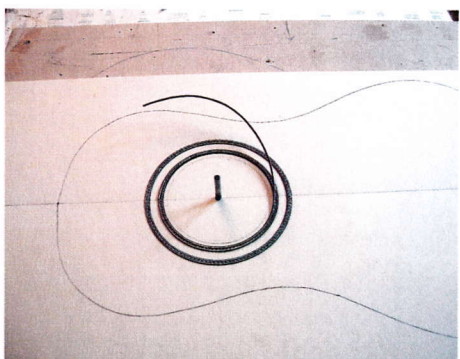
When the hoops are in place I normally steep them with CA adhesive before levelling them with a small thumb plane (**photo 42**). The glue has two purposes: the first being to hold the hoops firmly in position, and the second is to bring out the colours.

The mother-of-pearl dots are each 4mm in diameter and 1.25mm thick. They are spaced along the hoops starting at the top, exactly at the centreline of the soundboard, and then at every 45° (**photo 43**). At this point the soundboard is reduced to 3mm thick and can be cut to shape.

The overall outline is cut out at around 5mm oversize. This will give an overlap when the soundboard is fitted to the ribs, which is later removed with a bearing-guided flush cutter and router. An optional feature seen on many Baroque guitars is the way in which the soundboard extends up into the lower part of the fingerboard. This tradition continues to appear as late as the 19th century with guitars made, for example, by René Lacôte. It is worth bearing in mind that if this feature is included, the fingerboard will eventually have to lie in exactly the same plane as the uppermost part of the soundboard to avoid the strings buzzing on the frets. It is also necessary to be mindful of the fact that the spruce is much softer than the ebony of the fingerboard so reduces more rapidly while being levelled with abrasive.

Bracing & shaping the soundboard

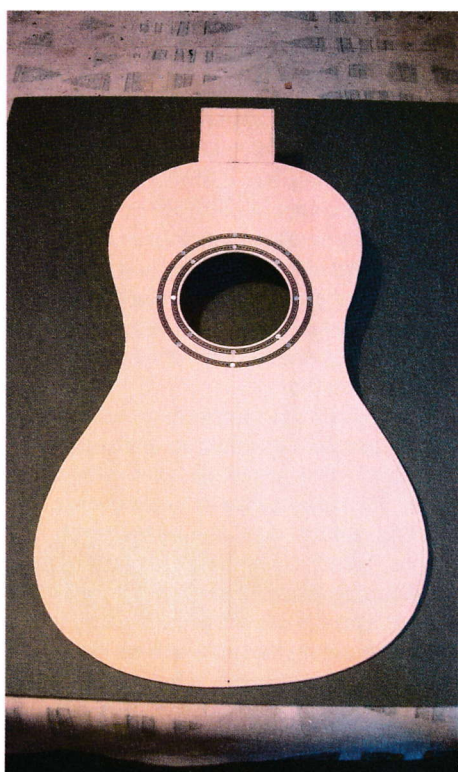
The modern classical guitar can have many bracing struts to help strengthen the front of the instrument and distribute the sound. Jose Romanillos, for example, uses up to 16 struts with three or four additional strengthening cleats.



41 Hoops of purfling are tapped in



42 A thumb plane helps to level the hoops



43 The mother-of-pearl dots are in place



44 Cleats on the inside help to hold the soundboard together



50 Tentellones are put into place with tweezers

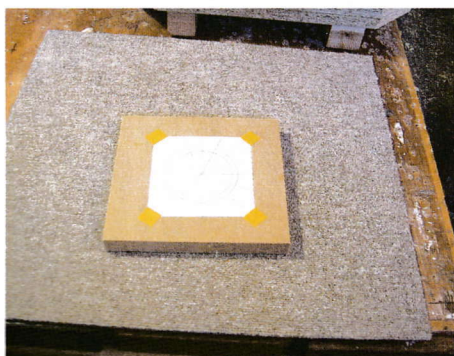
rose I would suggest just using punches and chisels to cut the designs, unless you have a lot of experience in using a scalpel. The rose itself is made entirely from sheets of calfskin vellum, of the type used by Parliament to record the nation's laws. It is expensive but adds so much to the appearance of the guitar that it is really worth it. There are just a handful of suppliers of genuine calfskin, and I find William Cowley the best (see supplier list). For a rose with say just three levels, one sheet around A4 size will fit the bill. For this rose, which has five levels, I used two sheets.

Before starting to make the rose it is fun to experiment with a few symmetrical designs. As I used eight pairs of mother-of-pearl dots on the outer rosette, my designs involved patterns with 4, 8, 16 and 32 spaces drawn across the centre point of a circle, somewhat like the spokes of a bicycle wheel (**photo 51**). Some rose makers will first draw their designs onto paper, place this over the vellum, and punch and chisel the design out through both. I normally draw directly onto the vellum and carefully rub out any pencil marks after the design has been cut out.

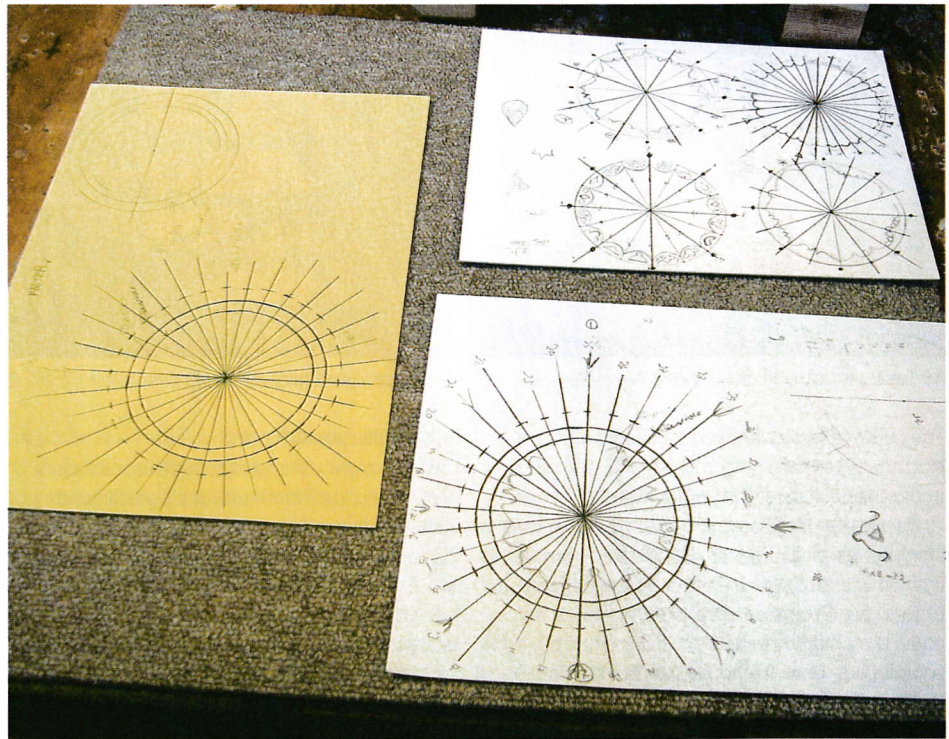
It is possible to make a set of 'micro' chisels



52 Punches, chisels and scalpels... joy!



53 Spokes help to guide the pattern

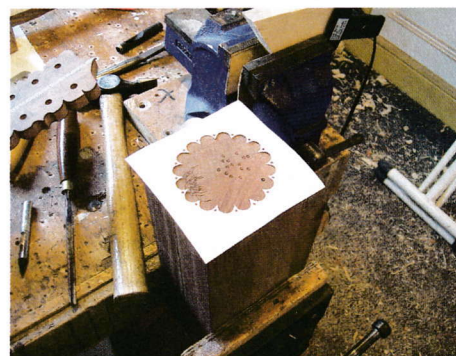


51 It's fun to experiment with patterns

from watchmakers' screwdrivers sharpened to a razor edge. It is also possible to make your own punches, but there are many available commercially and they need not be expensive. If small leatherworking punches are bought, they usually need sharpening before they are suitable for this job (**photo 52**).

To begin with, two pieces of vellum are cut around 20mm larger than the diameter of the sound hole. I usually start off by making them square, which aids the geometry to my eye. The back of one of these two pieces is then painted with a solution of hide glue and water mixed 50:50. If left, the vellum pieces will curl and be difficult to work on, so it is best to tape them to a flat surface where they will stay overnight. I found an old glass shelf out of the bathroom did a good job. When the hide glue is dry, the pieces of vellum are removed from the glass and the pattern is drawn onto one of the sides, which is clear of glue. That face has a couple of circles and 'spokes' (**photo 53**) marked onto it to act as guides for the punched and chiselled pattern. It is then essential that every chisel cut and punch piercing is done over the end-grain of a hardwood block. This ensures a clean edge to every cut.

As soon as the first pattern has been cut out



54 The first cut into the vellum

(**photo 54**), the glue side of that piece of vellum is dampened with a fine-haired paintbrush dipped in water and it is pressed onto a second sheet, placed between two slabs of MDF. These have been coated with parcel tape to avoid gluing the calfskin to the board. Both slabs are then cramped together, and once again left overnight. Once removed from the slabs work can begin on the under layer of the top of the rose. This is where the imagination can kick in, as from this point you can take the design in any direction, using the first cuts as a guide. The pattern just appears over time, and the fact that each one is going to be unique is very satisfying.

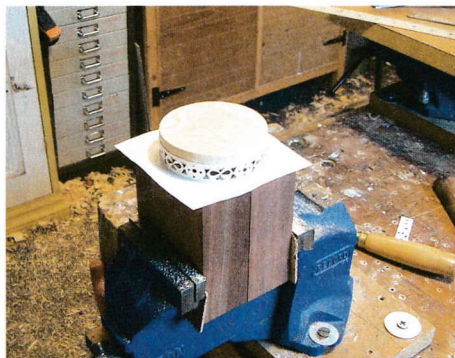
Next comes the wall that will separate the first layer of the rose from the second giving it a three dimensional effect. It is made from a strip of vellum around 18mm wide and has a symmetrical pattern chiselled and punched into it. When bent into a circle and the ends are glued (**photo 55**) it is kept to a circular shape with a softwood caul, which is slightly tapered to keep the wall tight (**photo 56**). The wall is then placed on the underside of the front of the rose, held down with the circular caul (the wooden block that was made to fit exactly into the hoop) and is glued into place either with hot hide glue or CA adhesive (**photo**



55 The first 'wall' is made and the ends are glued



56 A softwood caul keeps the wall in shape



57 The first layer is glued up



58 The second layer being made

57). CA adhesive is very effective – after all, vellum is skin....

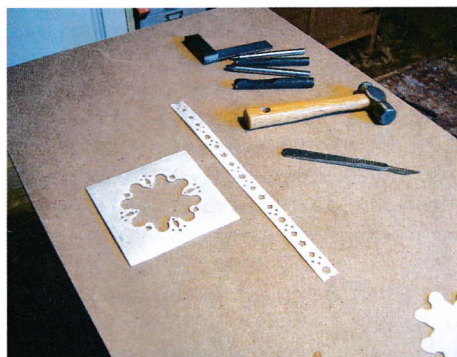
While the first level of the rose is left to dry the process is repeated, using different patterns with the second sheet of vellum that had been painted on the back with hide glue and water. This time the concentric circles are made smaller than the first time as the rose has to give a slightly conical appearance as it is seen from above (photo 58) and a second layer is prepared. As the levels are built up and a fresh wall is created for each layer (photo 59), each must be held in place with a light wooden weight just to keep it from moving

as the CA adhesive dries (photo 60). After the desired number of layers have been glued together the base sheet can be made.

When all is complete and the edges of each level are trimmed neatly, the rose can be fitted.

NEXT TIME

In a future issue, and the final part of the build, Shaun constructs the back of the instrument, bridge and 'mustachios', fits the frets, strings up and tunes, before making a custom carrying case



59 Each layer is made up from a wall and a double sheet flat bottom



60 The rose layers slowly build



61 The completed rose is fitted

It has to be exactly central to the sound hole (photo 61), and can be held in place with Titebond or similar and pinned down with small weights as the adhesive cures. ✕

SUPPLIERS

These suppliers stock everything from Baroque guitar tuning pegs, through to strings, finishes, tools, timbers, bindings, purflings, calfskin vellum, drawings/plans and books and videos on guitar making and in the one case (Elena Dal Cortivo.... and just look at her work!) complete parchment roses made in traditional patterns

- www.stewmac.com – for all materials, tools, plans, drawings and accessories, and in particular bearing-guided router cutters for purflings and bindings
- www.tonetechluthierssupplies.co.uk – for timbers, tools and rosettes (not parchment roses)
- www.luthierssupplies.co.uk – for timbers, tools and plans
- www.madinter.com – for tools, exotic timbers, Baroque guitar pegs and many accessories
- www.tonewoods4luthiers.co.uk – for beautiful, exotic timbers and inlay materials
- dictum.com – for fine quality luthier tools and some fine timbers (especially Alpine spruce)
- www.smallwonder-music.co.uk – for inlay materials, purflings and m.o.p materials
- www.eurofinishes.com – for 'General Finishes' acrylic resin
- www.luthiersnook.com – good for Baroque guitar pegs
- www.williamcowley.co.uk – calfskin vellum for the 'parchment rose'
- www.schreinerhistoricalguitars.com – information source for help building a Baroque guitar
- www.harmonialutherie.com
- www.cincinnatiearlymusic.com – as above
- www.parchmentroses.com – just look at her work on parchment roses and gasp!
- www.graphtech.com – for 'Presentation Style' bridge pins with m.o.p inlays
- www.earlymusicshop.com – gut and similar strings for early instruments
- www.stringsdirect.co.uk – for D'Addario strings in full or part sets