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Edward Klein Guitars | Luthier Interview

By Terence Tan | September 30, 2009

Edward Klein has been building for a number of years now but is just beginning to become well known primarily for his unusual, modern guitar design and aesthetics. I caught up with Edward to chat about construction techniques and about his new designs.

TT - Thanks for taking the time out from your busy schedule for this interview, Ed. I must admit I have only recently heard of your work, mostly through the Montreal show but I understand you've actually been building for quite some time now….

EK - Even though I have been to some degree active in lutherie for almost ten years now, and have maintained a website for the past four, most people have come to know of me through the last three Montreal Guitar Show exhibitions. A web magazine interview such as this will help to broaden the exposure of my work to an online audience, so I thank you Terence for this opportunity.

I kinda feel what I am doing now is really an extension of what I started more than 20 years ago. I consider myself fortunate to have had a varied background before becoming a guitar maker. Prior to this I was involved in studio furniture making, and before that mechanical engineering. Since my education and experience had encompassed both technical as well as artistic pursuits, designing and building musical instruments was not too far of a sideways step.

In fact I think 'cross pollination' in this regard is a good thing. The three years I spent studying crafts and design at Sheridan College in the late 80's was most valuable as it influenced the way I see and think, offering a solid foundation in art and design fundamentals not to mention wood shop practice..

TT - So you're more or less self taught?

EK - Yes. I read as much as I can on the subject. The quarterly publication from the Guild of American Luthiers is a good resource, and there are decent books on the topic. I seek the opinion of accomplished players and fellow luthiers. Their feedback is important and it usually ends up in a nice dialogue, maybe even over a beer or two. Experimenting also teaches me a lot, and I always keep open minded about the possibilities.

TT - Okay I guess it's time to ask- you're quite well known for unique and unusual designs and construction could you take us through some of them?

EK - My current classicals adhere more to tradition, although I still impart my own aesthetic in details to this instrument with an emphasis on elegance. Work that I did on earlier nylon string instruments involved an offset soundhole, internal tubular support and sterling silver inlay.

For any new project, I start with lots of sketching and lateral thinking. At this stage nothing is too crazy to discard immediately, and I try to avoid getting locked into a linear direction too quickly. After I decide on an idea the development can also take some time especially if there is supportive tooling to consider. I use the computer extensively for the working drawings. There may be some latitude in the acoustic guitar world for designs that challenge convention, as interest in my 'ellipse' and 'evolution' guitars are encouraging.

For example, I was curious about the notion of having an adjustable neck for action, and wanted to offer my version of a cutaway, so one thing led to another and the 'evolution' guitar was the result. The neck rotates around the fastener axis, and has very good neck to body coupling due to surface area contact. Vacuum forming techniques were used to make the curved plywood access panel components which are strong and lightweight. The pinless bridge featured individual saddles and metal hold down studs.

The ellipse is a lovely shape that worked well as a thematic repeating element in my latest guitar. A fanned fret fingerboard was central to the concept and so I had to come up with a jig to accurately cut these slots on my tablesaw. Using Steinberger tuning machines allowed the layout for the head I was after. Lacquer with transparent dyes complete the look with playful surface graphics. The prototype was introduced as a 'crossover' steel string appealing to

classical players accustomed to a wider neck and lower tension. But this ellipse design can easily translate into a nylon or higher tension steel string model.

TT - How about internally and structurally? Are your instruments more traditional in those respects- such use of an X brace for example?

EK - I use scalloped X-bracing for acoustic steel string and fan bracing for classicals. I have adopted my own variations on these common bracing strategies. My linings are laminated to add stiffness to the body structure, and necks are reinforced with carbon fibre or a double acting truss rod. The ellipse guitar has a bolt-on neck that is absent of a heel, allowing the thumb of the fretting hand more room to travel up the neck when playing the higher frets.

TT - and are your braces laminated vertically ie: stacked or horizontally ie: side by side?

EK - It is my linings that I strip laminate, using core and cavity forms, into the curved plantilla shape. I prefer this over kerfed linings, although more work to make. They are not only stronger but look very nice inside the guitar when viewed through the soundhole. Actually, I use the same technique (gluing up thin layers of spruce side by side in forms) if I want to incorporate curved braces on the soundboard. Why should braces be limited to always being straight?

TT - Sort of a sound is round concept?

EK - No, I like to think of this simply as a viable alternative. I don't currently use curved braces, but have tried it briefly in the past and may again in future. Looking at Kasha style bracing and what Steve Klein was doing with that, as well as the work of Gary Southwell and his A series guitar, prompted me to think about curved elements and how they can fit nicely into a bracing strategy. There are so many different ways to build a guitar it really is very interesting.

TT - Okay so I guess it's time to ask about your favored tonewoods…

EK - I like using East Indian rosewood not only for the tonal properties, but because of good availability and still reasonable pricing. The surface graphics on the ellipse guitar called for a blonde wood, so curly maple was my first pick here. For tops I have used Western Red cedar, Sitka and Engelmann spruce.

I would like to try other species, it's all a matter of what I can get my hands on that I think is of outstanding quality. Having said that, I look to purchase from reputable suppliers and hope that

what I end up building into my instruments is wood that comes from responsible logging practice.

TT - So is Indian still your favorite back and sides wood? How about top woods? I have some friends who swear by cedar and others by spruce…

EK - Presently Indian rosewood is a favourite and my standard for back and sides. I have never had the opportunity to build with Brazilian as the pre-cites stock remaining is ultra expensive and really good stuff hard to come by. I would like to construct at least one guitar in my life with this legendary wood just for the experience, but I would not encourage a commission. Koa and Ziricote are on my wish list.

Perhaps in time I will develop stronger preferences, but for now I don't have such biases towards spruce vs. cedar. Players will often have formed their own opinions and want one over the other. I try to be sensitive to the material chosen and build accordingly. More of my classicals to date have cedar tops. I do like the stability of cedar, and the more immediate openness with good volume. But greater care must be taken both during construction and in use as it is softer. And how can one not be thrilled with the remarkable figure in Bearclaw Sitka spruce!

TT - Some luthiers are really keen on Bearclaw Sitka- some reckon it sounds better- what's your take?

EK - I too have achieved good results, and would like to believe there may be some correlation between this rare irregular growth pattern and its sonic properties, but hesitate to make such claims until I gather more experience using it. There is no denying the visual impact, yet the look can at times be 'over the top'. It is not for everyone regardless of its tonal potential.

TT - Ok, how about we move onto finishes….

EK - I finish with nitrocellulose lacquer and French Polish the tops on my classicals. I would like to move away from the solvent based lacquer and switch to waterborne in the near future for health and environmental reasons. Better products are being developed as industry moves in this direction. In any case, I think it is practical to use a finish that is repairable.

TT - Do you feel that the finish contributes greatly to the tone?

EK - The finish is an integral part of construction and its affect on tone needs to be considered. We necessarily put a finish on to enhance beauty and provide some protection, but add mass and stiffness in the process. Finishes continue to cure or harden over time, affecting to some degree the sound of the instrument with age. My aim when spraying lacquer is to build only enough finish to be able to level and buff. Too thick of a finish of any kind will dampen and restrict. The traditional French Polish is a very good choice from an acoustic point of view since the shellac film can be applied so thin, but needs to be handled with more care due to its delicate nature.

TT - Thanks for that, Edward! I was wondering if you had any interesting projects coming up you might like to share with us?

EK - This has really been a pleasure Terence. I am glad to share some of my experiences with you and your readers. Upcoming projects will have me working on building other versions of the Ellipse guitar, both steel string and nylon. I look forward to participating in future exhibitions with intention of showing these new developments. Thanks again for your interest in my work, it is most appreciated.