

[Print this topic.](#)**Topic Title** Carving a scroll step by step (or almost)**Date Posted:** 02/18/2008 01:03 PM**Posted By:** MANFIO (Enthusiast)

I'm taking some pictures while I'm making my new viola scroll, and I'll put them here with some explanation of the process I use. This is the way I carve my scrolls, others certainly carve them differently. The basic idea is giving some notion about the process I use.

My photo abilities are far from being perfect...

This scroll will be inspired on Andrea Guarneri, from the PRIMROSE viola pictured in Bein & Fushi monograph, but I'll make it without shoulders (that we call "ganasce", in Italian), since many violists don't like them and I want a light scroll also.

I start planning the surface that will receive the fingerboard, here I'm using a RECORD NO. 7 plane with a Japanese laminated blade (the upper side of the block is already paralell):



This is my neck block with the planned upper face. I'm using flamed wood but plain wood is recommended for beginners, since it's more easy to carve:



Now I'll reduce the neck block to its final thicknesses, that is the maximum width of the scroll, that corresponds to the eyes or last turn, in my case 46 millimeters. Since my block is parallel, I'll use a bandsaw to make two square cuts (with the planned fingerboard side down, facing the bandsaw's table) that will reduce my neck block to 46 mm.

Since the blade will make both cuts square, I'll have no need to square the upper face of my block with the side faces. I'll not touch the side faces with a plane again, since want to keep it square, just the small circle of the last turn will be visible when the scroll is finished and I can refinish this small part later. Working with the plane now would require more time too, and I have to work fast:



Now I'll trace a center line ("mezzzeria") in the fingerboard face with this Japanese tool. This line is made by a small knife and wo will be permanent:



Now I'll take a xerox copy (real size) of the side views of my scroll model. I had just one view of this scroll, so I had to make a "negative" drawing of the other side. I find it an easy way to work, because I don't have to make models and I'll make no mistake while transferring the outline to my neck block. Many books (such as Biddulph's on Del Gesù) have both side views of the instruments pictured real size.

I'll align, center and glue (hide glue) these copies over my neck block, of course both sides must be perfectly aligned to each other. I apply hide glue also over the paper:



Now I use a template to mark the neck, the neck root, and a special square to mark the final angle of the neck root:



Since we can't replace cut wood, I'll check all lines prior to cut it, mainly the distance from the fingerboard/upper nut line to the end of the neck line. Bear in mind that you will dovetail the neck to the upper block, so, if your neck length is 150 millimeters (as in my case) you will have to have about 8 millimeters more for the dovetail. I check it visually with one of my instruments:



Double, triple check everything prior to cut it.

This is a view of the neck block with the main lines:



Now I have to rest for a while!!!

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/18/2008 01:16 PM
Posted By: KenPollard (Senior Member)

Thank you, Luis. Great photos and the text has nice details of your method. We know you have wonderful results. Looking forward to reading (and seeing) more of it.

Cheers,

Ken

<http://www.owyheemountainfiddle.com>

Date Posted: 02/18/2008 01:48 PM
Posted By: Doug Rice (Member)

Thank you Luis! I really appreciate this. Doug

Date Posted: 02/18/2008 02:49 PM
Posted By: David Tseng (Enthusiast)

Thanks, Manfio, I would love to see how you carve the scroll.

Date Posted: 02/18/2008 03:27 PM
Posted By: Licastro (Member)

Many thanks Manfio! Great!!!
Pause for a rest and some espresso?

Date Posted: 02/18/2008 03:32 PM
Posted By: MANFIO (Enthusiast)

Now I will cut the outline in a bandsaw. I start cutting the neck root, I use an angle guide to make a precise cut:



I continue cutting, I'm cutting near the line (risky) so that I'll have less work to refine my outline. The "throat" is an important aspect of the style of the maker:



This wood is generous in size, perhaps I'll be able to make a violin scroll with the rest of the wood:

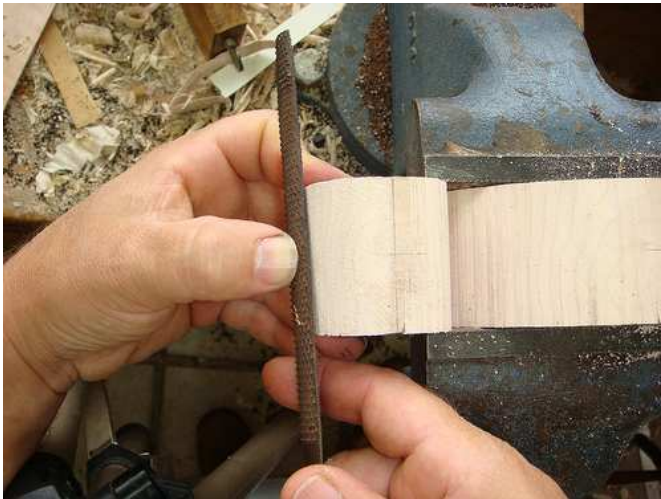




Now I use a big, coarse rasp to take off the saw's marks, it removes wood fast, I have to work quickly:



Here, with a smaller coarse rasp I work on the volute region. I have to keep the rasp flat over the surface to cut uniformly, notice the position of my hands, specially the left hand thumb applying some pressure over the rasp:



MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/18/2008 at 03:35 PM by MANFIO

Date Posted: 02/18/2008 04:48 PM
Posted By: Rob Fowler (Junior Member)

Your timing for this article is impeccable Luis. I just started my first neck today! I'm going to be following your photos and procedure with great interest. Thanks so much for taking the time to do this.

Rob Fowler

Date Posted: 02/18/2008 05:58 PM

Posted By: MANFIO (Enthusiast)

Now I'll trace the middle line all over the scroll. The remains of this line cut with this marking tool can be seen in many instruments of the Italian school.



With dividers I'll mark the position of the fingerboard:



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<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/18/2008 07:25 PM

Posted By: kubasa (Junior Member)

Manfio, you are always so willing to share. I appreciate it greatly!

Date Posted: 02/18/2008 07:56 PM

Posted By: MANFIO (Enthusiast)

Hi! Thank you all! Yes, I like to share, it's my way!

Now I'll glue my finished fingerboard to my neck block, and I'll not remove it anymore, I'll varnish the instrument with the glued fingerboard, in the same manner Strad, Del Gesù and other old makers worked. I'll protect the fingerboard with a piece of thick leather when I clamp it in my vise:



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<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/19/2008 at 08:30 AM by MANFIO

Date Posted: 02/18/2008 08:12 PM

Posted By: MStearns (Junior Member)

That is a great tutorial! he bet I ahve ssen

<http://z15.invisionfree.com/DM...st=0&#entry1549689>

Underway

Date Posted: 02/18/2008 08:16 PM

Posted By: MANFIO (Enthusiast)

Can you see the last photo, the fingerboard being glued with clamps? I loaded it from my Picasa web album but I can't see it in my post, can you see it?

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/18/2008 08:23 PM

Posted By: Roderick_Quiros (Senior Member)

Manfio, you're the Man. Awesome thread.

rq

Date Posted: 02/18/2008 08:25 PM

Posted By: MANFIO (Enthusiast)

Hi Roderick? Can you see the last photo, the fingerboard being glued, I can't see it in my computer...

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/18/2008 08:27 PM

Posted By: Licastro (Member)

can't see the picture Manfio.

Date Posted: 02/18/2008 08:39 PM

Posted By: MANFIO (Enthusiast)

Hummm... my uploads on flickr are almost full... and I can't upload from Picasa... I'll have to find another place to upload my photos, but I'll do that tomorrow... Buon notte!

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/18/2008 11:25 PM

Posted By: Roderick_Quiros (Senior Member)

Hi Manfio:

I guess no one can see those last photos, but sounds like you've got it figured out.

ciao

rq

Date Posted: 02/19/2008 01:24 AM

Posted By: NewNewbie (Enthusiast)

Can you tell us: Is the neck root angle 85 degrees?
Hard to see from the picture.

What are the neck thicknesses that you use?

Thanks

"There are no secrets better kept than the secrets everybody guesses." - Mrs. Warren's Profession by George Bernard Shaw

Date Posted: 02/19/2008 04:33 AM

Posted By: MANFIO (Enthusiast)

Ok, now the fingerboard being glued. I used some of my bass bar clamps to do that. I also use the hot glue to seal the endgrain on the neck root.



MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 04:41 AM
Posted By: MANFIO (Enthusiast)

Hi Newnewbie! Neck thicknesses: 19 (or 18.5) in the thinnest point and 21 mm on the thickest (neck plus fingerboard).

The fingerboard is 24.5 and 45 mm wide.

I have no idea about the angle and I don't have the tool to measure it but the lower part of the neck root will penetrate a bit more deeply in the dovetail.

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<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 05:12 AM
Posted By: Bassbow40 (Member)

Ciao Luis,
grazie per la tua disponibilità alla condivisione.
Grande!!!

Provando e riprovando

Date Posted: 02/19/2008 05:45 AM
Posted By: MANFIO (Enthusiast)

Ciao! Non c'è di che! Come ho imparato a fare strumenti da solo - e perciò so come è difficile - voglio condividere la mia scarsa conoscenza con tutti.

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 07:16 AM
Posted By: Tim McTigue (Senior Member)

Manfio, this thread is spectacular - easily one of the best on this whole forum! Thank you for posting it - it's a real thrill to watch over a Master's shoulder.

Date Posted: 02/19/2008 08:45 AM
Posted By: catnip (Member)

Manfio, your pictorial tutorial of carving a scroll is excellent. I especially like the fact that you glued xerox copies on both sides of the maple block; I think it may be better than pin pricking the scroll from a template.

Your thread is a great benefit those of us who just starting out and trying to learn established techniques of experienced builders

Thanks!!

Date Posted: 02/19/2008 08:51 AM
Posted By: MANFIO (Enthusiast)

Hi, thank you all! I'm having problem in linking photos form PICASA here, the URL PICASA gives for a photo is, for instance:

<http://lh6.google.com/lmanfio/...aQfC9Ew/DSC00596.JPG?>

then I do the same as I do with flickr but does not work... Can you help me? If I could use PICASA I would be able to show much more photos here. Thank you in advance!!!

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 09:07 AM
Posted By: Neil_004 (Junior Member)

You could try photobucket. I use them to host my pictures for another forum and have not had any problems yet.

Date Posted: 02/19/2008 09:14 AM
Posted By: Carlos Juan (Junior Member)

Perhaps your images are not allowed to be shared, as I cannot access the link you have just posted. You can create an account and upload your images to <http://photobucket.com/> . I like it because it easily generates the IMG codes to be attached to your messages. Hope this helps.

Carlos

See the process of my first violin being made
carlosjuan.jimdo.com

Edited: 02/19/2008 at 09:18 AM by Carlos Juan

Date Posted: 02/19/2008 12:19 PM
Posted By: MANFIO (Enthusiast)

Well, I changed for photobucket now, let's see if it works.

With the same hot glue I used to glue the fingerboard I size the endgrain of the neck root. If you don't do that, when you glue the neck to the soundbox the glue will penetrate in the

endgrain, weakening the glue force:



Now I'll cut the wood from the fingerboard's sides till its end, I'll cut it with my bandsaw, near the line, of course the fingerboard must not be damaged by the saw.



This is what I have now:



Now I'll make the sides of the neck flush with the fingerboard, I'll use a wide gouge to do that initially, a coarse rasp can do that too but, again, don't touch the finished fingerboard:



Here I'm working in the neck root part with a wide Japanese chisel (nami)



Now I'll trace the circle lines to start removing the wood from the sides of the pegbox. Notice how the back of the soundbox starts with a relative parallel lines and then tapers. Some pegboxes are formed by a continuous tapering of the sides, making them a bit "triangular", I don't like this type of soundbox back, I prefer this type I'm making that is found in the best Italian School:



Photos from photobucket are being shown cut here...

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/19/2008 at 12:39 PM by MANFIO

Date Posted: 02/19/2008 01:38 PM

Posted By: Seth_Leigh (Enthusiast)

Oh Manfio, you are making me feel the pain of my crappy bandsaw most acutely. I have major bandsaw envy right now. I couldn't do a neck the way you're doing with my crappy saw. Too much wander and so forth of the blade. Sigh.

Also, who's your wood supplier that's giving you such meaty neck blocks that you can cut the sides vertical on your bandsaw like that? All my neck blocks are angled and probably not meaty enough to go vertical on both sides from resting the planed surface (where the fb will go) flat on the bandsaw.

Edited: 02/19/2008 at 01:41 PM by Seth_Leigh

Date Posted: 02/19/2008 02:39 PM

Posted By: Jacob (Enthusiast)

Seth, I've got the same band-saw as you. What kind of blade have you got? A coarse blade (about 6 teeth per inch) can up the performance of the saw big-time.

J N van Soelen

<http://www.briscdisc.co.za/violins>

Date Posted: 02/19/2008 02:56 PM
Posted By: **magnus nedregard** (Enthusiast)

Piacevole, vedere le foto del tuo lavoro così sistematico in un ambiente così disordinato 😊 Ottimo lavoro, Manfio!

<http://www.nedregard.net>

"I am not young enough to know everything."
Oscar Wilde

Edited: 02/19/2008 at 02:57 PM by magnus nedregard

Date Posted: 02/19/2008 03:06 PM
Posted By: **MANFIO** (Enthusiast)

Hi Seth! I have alow profile bandsaw... I just learned how to work with its problems... Jacob is correct, a finer blade works better.

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<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 03:11 PM
Posted By: **MANFIO** (Enthusiast)

Ciao Magnus!!! Sono un degno continuatore della tradizionale "bottega casino" Italiana!!! Mia moglie qualche volta fa un intervento militare nel mio laboratorio, con conseguenze disastrose alla mia organizzazione anti tedesca...

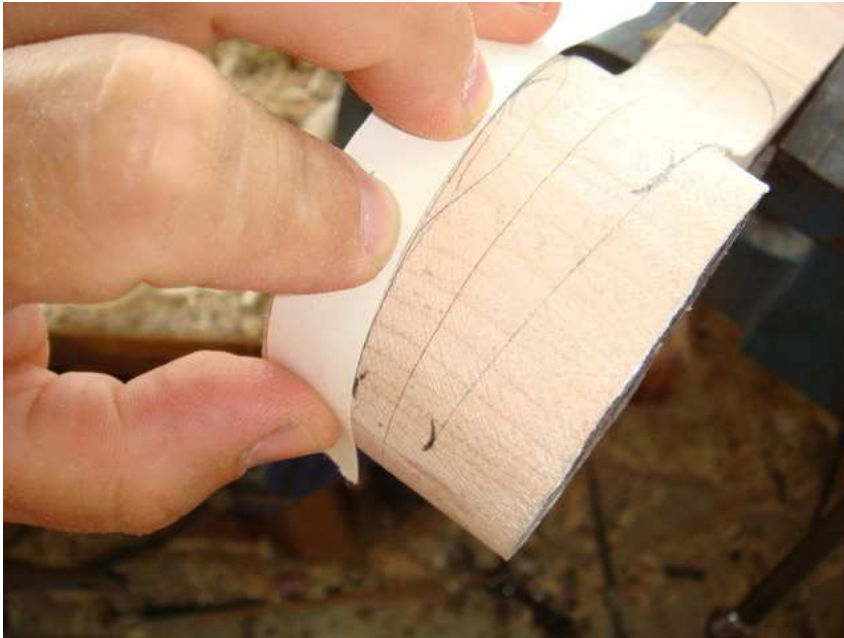
MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 03:39 PM
Posted By: **MANFIO** (Enthusiast)

Now, with the fingerboard faced down (and protected by a piece of leather) and with the top of the scroll facing down the table of my bandsaw, I make two cuts following the pegbox lines, take care to don't touch the part of the scroll you are not seeing and is facing the table of the bandsaw. When the cuts are done I have this





Here the front view. Notice that I left the front side of the pegbox wider than the part in the end of the fingerboard, in order to make it with "cheeks":



Now I continue tracing circles to mark the limits of my next saw cuts. I connect the outer points of the circles with a line with the help of a piece of paper:



Now with a Japanese saw (I think it's a Dozuki (or Kabata) rip saw) I make the following cuts. Take care again with the scroll beneath. This Japanese saw makes a fine cut, less than one millimeter, much less I think. Notice also how the piece is hold in the vise:





MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/19/2008 03:45 PM
Posted By: **zinomaniac** (Senior Member)

This is fascinating to follow - thank you!

Date Posted: 02/19/2008 04:25 PM
Posted By: **Doug Rice** (Member)

A word to the wise: pictures tend to disappear on the internet. If you want to preserve this (and I definitely do!) you should make a Word document and save it on your computer. Doug
 Grazie Luis

Date Posted: 02/19/2008 04:49 PM
Posted By: **Mike Thomas** (Junior Member)

Or even better, print it and keep it next to your copy of Johnson and Courttnall.

 Mike Thomas

Date Posted: 02/19/2008 07:00 PM
Posted By: **MANFIO** (Enthusiast)

Thank you!



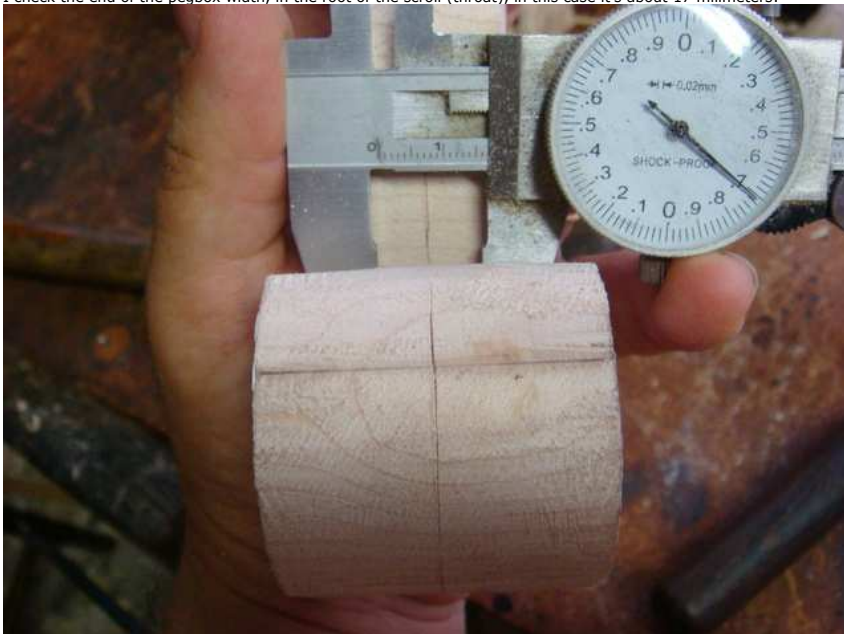
Now I correct the outline of the beggining of the first turn with a rasp:



Now with an almost flat gouge I taper the front face of the pegbox. The pegbox is tapered also from the back to the front side. Some Italian makers made the pegbox (front view) parallel or almost parallel, Del Gesù made some instruments with this feature:



I check the end of the pegbox width, in the root of the scroll (throat), in this case it's about 17 millimeters:



I continue tracing circles to guide my cuts. The scroll measurements can be found in Strad posters and other books, such as Biddulph's on Del Gesù. I'm not following any given measurements

to make this one, I'm a bit guided by my eye, but I check sometimes with one of my own scrolls:



I continue cutting with my Japanese saw. The cuts must be made in a square angle, so be sure that your neck block is clamped in a correct position in your vise:



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<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/19/2008 at 07:11 PM by MANFIO

Date Posted: 02/20/2008 03:53 AM

Posted By: AlixD05 (Member)

wow, excellent Manfio.

Date Posted: 02/20/2008 05:25 AM

Posted By: MANFIO (Enthusiast)

Her I'm cutting the walls with a gouge.



More cuts:



Again the use o small rasp to reach the line, then I use the gouge again:





Making it deeper:



Correcting the curves with a small sculptor's curved rasp:



Now the front view. The scroll is tridimensional, so allways check it visually in different angles while you are working, front view and side view mainly. The lines most flow harmoniously without hills and valleys:



Back view:



Side view. Just advance to the next part when you have your work clean and cut to the line:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/20/2008 10:39 AM

Posted By: saintjohnbarleycorn (Member)

truly a gift to give. Does anyone know how to download all the pics at once? I am doing a copy each image. If I do a save web page it doesn't seem to take. thanks manfio.

Date Posted: 02/20/2008 01:05 PM

Posted By: Mauricio (Senior Member)

Yes, Manfio has a history of being very generous with his knowledge.

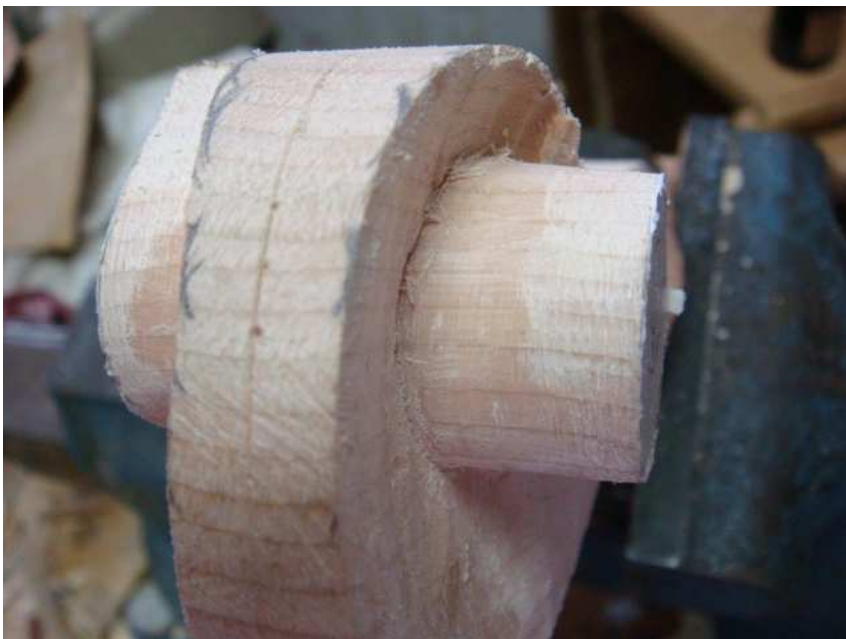
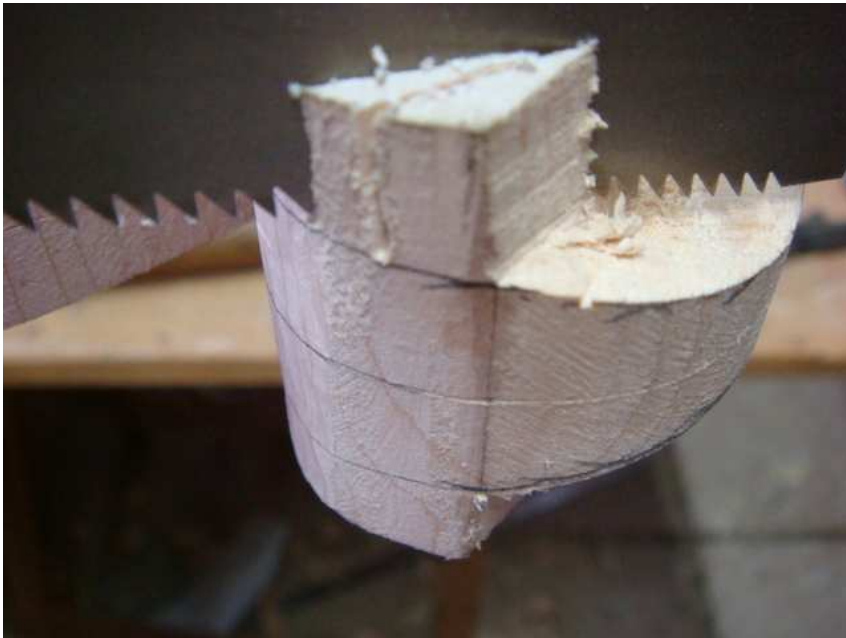
Only pure essential oil of white spirits of gum Venetian turpentine. Anything else is a substitute.

Date Posted: 02/20/2008 01:43 PM

Posted By: MANFIO (Enthusiast)

Thank you all!

I continue sawing with my Japanese saw:



Notice the pin marks left by the dividers on centerline. These marks can be seen in many Cremonese instruments, including Stradivari, as pointed out by Sacconi in his "I Segreti di Stradivari":



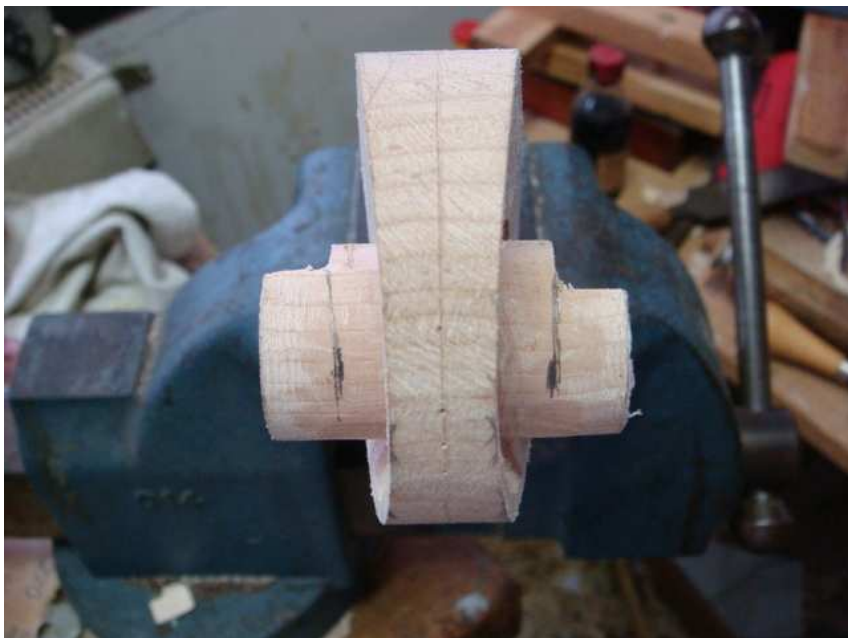
I continue cutting:



Back view:



Another view:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/20/2008 06:46 PM

Posted By: MANFIO (Enthusiast)

Undercutting the turns... notice that I'm leaving a flat area near the edge of the turns to be chamfered later. The gouge (a small gouge, Stubai, with a small mushroom handle) rotates around the turns, the sweep of the gouge must conform to the turns diameter. The gouge is rotated "down" the turns:



I draw a small circle with a divider for the last turn. The pin mark of the divider can be seen in many Italian scrolls. You can leave it or scrap it:



For the last turn, in the eye, it's impossible to work with the saw, So I work with a gouge that has exactly the same diameter of the eye. I rotate the gouge upright and then undercut:



I use a small chisel here:



to get this:



The last gouge stroke in the end of volute is quite important. The eye of the expert will be directed to this point instinctively. I do that with two gouge strokes, the idea is making this, and making it deeper:



I will undercut a bit more:



Here I have cleaned the surfaces with a small shaped scraper and now I'm reworking the throat, quite an important region in terms of style. Notice for instance how the throat on Del Gesù's (Catarina Guarneri, more probably) Leduc points down:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/20/2008 at 06:58 PM by MANFIO

Date Posted: 02/20/2008 08:59 PM

Posted By: luthier9010 (Member)

Manfio,

I'm following your thread and think it's great. I'm greatfull for your willingness to document your method.

Berl Mendenhall

Date Posted: 02/21/2008 12:43 AM

Posted By: Komparu (Junior Member)

Manfio, I am another amateur who would like to thank you for this thread; I completed my first scroll before it started, but am glad I did, for now I am in a position to see the value of what you are showing us here. I look forward to embarking on my second scroll with renewed vigor. This is doubly interesting to me, as I have marveled in the past at the beauty of your instruments. Noel

Date Posted: 02/21/2008 05:09 AM

Posted By: MANFIO (Enthusiast)

I continue scraping the surfaces:



This is the front view, I'm going to rework it a bit in the next steps:







MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/21/2008 06:05 AM

Posted By: MANFIO (Enthusiast)

Now I drill holes to carve the pegbox:



Notice the position of the chisel in this area, as well as the sawn neck block backing the scroll to suport it:



Here the upper nut is already glued:



Shaping the pegs:



Oooops!!! I've forgotten to take some pics!!! And now the pegs are already in their place...



Cleaning the surfaces with a shaped scraper:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/23/2008 at 05:15 PM by MANFIO

Date Posted: 02/21/2008 09:29 AM

Posted By: Seth_Leigh (Enthusiast)

Hmm, interesting, so it looks like you've got your pegholes done before completing the final thickness of the pegbox walls. I can see how that would help to "clean up" the edges of the pegholes, if that was needed at all. Luis, you've got us all riveted to our chairs waiting for the next installment. Also, nice photography!

Date Posted: 02/21/2008 10:51 AM

Posted By: catnip (Member)

Luis, Seeing the rapid progress and development of the scroll is very inspiring. Your visual documentation is more practical than reading about scroll carving.

I was told by a Welsh Luthier that he likes to set the chamfer as soon as possible as it is another visual aid of the symmetry of the scroll curve. I noticed that you are saving the chamfer till the end.

Great craftsmanship!

Date Posted: 02/21/2008 11:26 AM

Posted By: David Burgess (Junior Member)

Nice thread, Manfio.

Instead of trimming the sides of the neck flush with the fingerboard early in the process, have you tried leaving this step till the very end, to make the neck easier to clamp into a bench vise in the interim?



Edit:

I guess the picture doesn't show it very well, but the neck is clamped into a bench vise from the sides. View is from the top....you can see the bench dog holes on either side. Really handy when doing the fluting on the back, and hollowing out the pegbox. When flipped over in the vise, the back of the scroll is supported on the benchtop for hollowing the pegbox.

burgessviolins.com

Remember that the Ark was built by amateurs and the Titanic was built by professionals.

Edited: 02/21/2008 at 11:49 AM by David Burgess

Date Posted: 02/21/2008 11:38 AM

Posted By: Seth_Leigh (Enthusiast)

Here's an example of how I was able to clamp my last neck on its side by leaving that bit till near the end, as David mentioned.

ps: I won't inline my pic, so as not to get in the middle of Luis' photos, but yeah, I was thinking the same thing. I'm following his method with fascination, however, and I wonder how I will benefit from his photos and whatnot on my next scroll.

Edited: 02/21/2008 at 12:18 PM by Seth_Leigh

Date Posted: 02/21/2008 11:54 AM
Posted By: MANFIO (Enthusiast)

Hi David! Thank you for input! What I like about the idea of having the neck trimmed is that it gives me an "organic" and overall look of the thing while I'm working and I don't have a bench vise like yours, unfortunately.

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/21/2008 04:33 PM
Posted By: David Tseng (Enthusiast)

Luis, you didn't show us how you drill the peg holes. I drill small pilot holes when the neck block is still square.

Date Posted: 02/21/2008 04:53 PM
Posted By: MANFIO (Enthusiast)

Now I will shape the chin of the pegbox, mine is in the form of a half circle:



Now the chamfer, I'll do this with a small file and refinish with a scraper. Keep the file in the same position, the chamfer may not be rounded or finished with sandpaper:





The two lines of the chamfer may run parallel, that's quite quite important. Here now I'm working with a small gouge to undercut the turns and reach the inner line of the chamfer.



In Italian the chamfer is also called "nastrino", that is, little ribbon, and I like the idea of a little ribbon running through the scroll. But the chamfer varies in width, depending on its place. It's a bit wider in the chin region and narrower in the end of the turns, on the eye. Here I'm making a narrow chamfer in the eye region:



Here I'm undercutting again, preserving the inner line of the chamfer:



If you want, you may mark the lines of the chamfer with a simple marking tool like this. It's a scalpell knife glued in a piece of wood with sewing line and super glue. I'm not using this tool in this scroll, but I used it in the past:



MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/21/2008 05:04 PM
Posted By: MANFIO (Enthusiast)

Hi David! I don't have a drill to make holes in 90 degrees, so I do this primitive thing: I mark the place of the holes, draw circles in the peg positions and drill it free hand with a small electric drill. Then I reamer the hole.

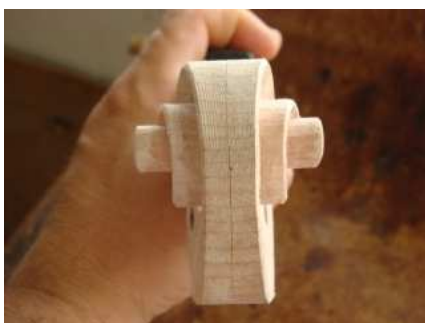
Although I'm reducing the pics for "forum format" in photobucket they are appearing cut in my computer... are you having this problem too?

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/22/2008 05:03 AM
Posted By: MANFIO (Enthusiast)

Well, I will reduce the size of the pics, since it seems they are being cut here:





Here I'm cleaning the scroll with a shaped scrap:



Here I'm using a thick needle to clean this area:



 MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/22/2008 at 05:32 AM by MANFIO

Date Posted: 02/22/2008 09:56 AM
Posted By: BarryD (Senior Member)

This is a great thread! I am really enjoying it. It is interesting to see your approach and method of work. After Manfio completes this thread I would loved to see David do the same thing so we could compare Methods of Work. I do like David and keep the neck side square until the very last. It makes it so much easier to clamp and complete the other steps. Here is a shot of the Corpus and the rough neck showing the square sides. Not the greatest photo!



 Barry
<http://www.barrydudley.com>

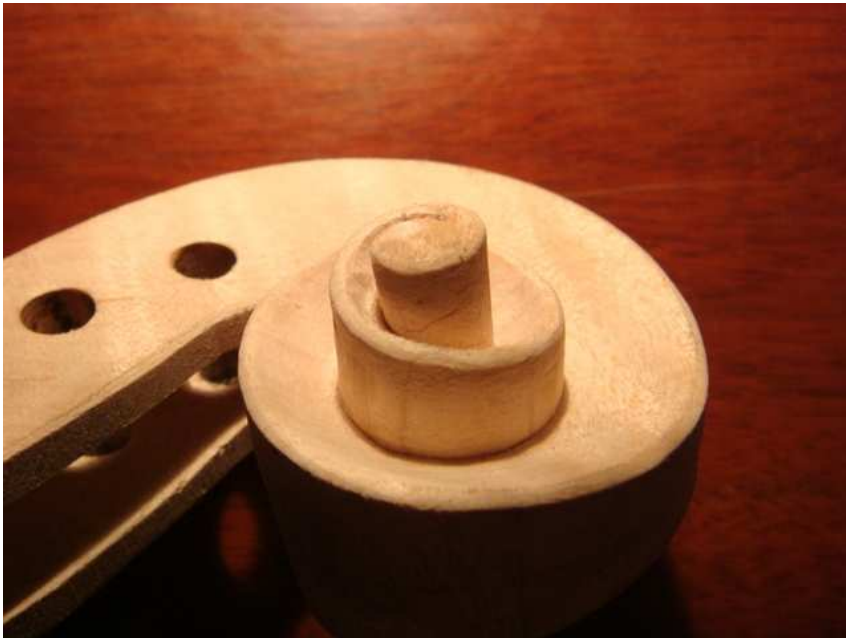
Edited: 02/22/2008 at 10:19 AM by BarryD

Date Posted: 02/22/2008 03:42 PM
Posted By: MANFIO (Enthusiast)

Hi Barry! To make that mark on the scroll this is a much better tool!!!:



I think I'm almost satisfied now with the side view. Only when I'm satisfied with look of it I'll carve the channels on the front and back of the scroll.



I haven't mentioned it yet, but NO SANDPAPER was used, of course:





MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/22/2008 at 03:46 PM by MANFIO

Date Posted: 02/22/2008 03:53 PM

Posted By: edi malinaric (Senior Member)

Manfio - just one question for now.

Is that your Grandfather's old leather travelling suitcase that covers the workbench?

To think that we threw out my Mother's after she died - it would have been perfect for the job. And it was like new. Only did the one trip from Croatia to South Africa

cheers edi

Edited: 02/22/2008 at 03:55 PM by edi malinaric

Date Posted: 02/22/2008 04:07 PM

Posted By: JimMurphy (Member)

quote:

... I haven't mentioned it yet, but NO SANDPAPER was used

Gorgeous, Manfio ... simply gorgeous !

Manfio, for cleaning the scroll, does your curved scraper "edge" have a hook, or is the curved edge 'true' [90 degree] ?

TIA,

Jim

Date Posted: 02/22/2008 04:09 PM

Posted By: NewNewbie (Enthusiast)

Is it possible for us to go to photobucket and see the pics that are missing there?

"There are no secrets better kept than the secrets everybody guesses." - Mrs. Warren's Profession by George Bernard Shaw

Date Posted: 02/22/2008 04:26 PM

Posted By: MANFIO (Enthusiast)

Hi Edi! This leather was in a chair, I saved it to cover my bench when needed.

Hi JimMurphy! I break a scraper and shape the points with a file, in different shapes. The edge is 90 degrees, but I may have some with a knife edge type too.

Newnewbie: part of the pictures are in my flicker page (see address below) and most of them are here, I hope it works:

<http://s268.photobucket.com/al...carvinga%20a%20scroll/>

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/22/2008 04:32 PM

Posted By: martina hawe (Member)

Hi Manfio

Really nice thread! Thanks for making such an effort!!!

I like your rabbit a lot, really sweet but the bite mark might be a bit too big for Barry's chip 😊 hamsters do them a tad smaller but than they're harder to train I think...

I'm looking forward to see the next pictures...

martina

<http://www.martina-violina.de>

Date Posted: 02/22/2008 04:33 PM
Posted By: H.R.Fisher (Senior Member)

Manfio; Thanks so much for sharing this informative post. This is being very helpful for me.

I have a question regarding the finger board: If this is the final FB, do you finish, plane and dress the FB prior to glueing it onto the neck. Or do you replace this FB after you have neck and scroll finished and attached to the corpus? Best Regards, Henry

Date Posted: 02/22/2008 04:57 PM
Posted By: NewNewbie (Enthusiast)

quote:

Originally posted by: **MANFIO** Newnewbie: part of the pictures are in my flicker page (see address below) and most of them are here, I hope it works:

It is working for me. Thanks!

You have a very interesting peg shaper. Would it be possible at the end, to see some other pics of it?

"There are no secrets better kept than the secrets everybody guesses." - Mrs. Warren's Profession by George Bernard Shaw

Edited: 02/22/2008 at 05:00 PM by NewNewbie

Date Posted: 02/22/2008 05:57 PM
Posted By: MANFIO (Enthusiast)

Hi Martina! Bello Hamster! There are 5 bunnies here, plus the adult couple, mini rabbits. I used to eat them when I was a boy but now my children would kill me first...

Hi H.R.Fisher: the fingerboard will stay there, yes, it's already in the proper size, I'll just make a chamfer and polish it. In Italy modern and contemporary makers will leave the fingerboard untreated, in general, but for instruments shipped to America they must be polished, the same for the peg shafts.

NewNewbie: I'll keep the photos there, I think. That's a low profile pegshaver, I think I'll take some pictures of the tools I used. Ciao!

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/22/2008 at 05:59 PM by MANFIO

Date Posted: 02/22/2008 06:10 PM
Posted By: BarryD (Senior Member)

Manfio, This is excellent work!!! Great thread.

Barry
<http://www.barrydudley.com>

Date Posted: 02/22/2008 06:19 PM
Posted By: Doug Rice (Member)

Hi Luis. I always thought the back of the scroll looked a little like bunny ears when they lie back against their head. 😊 Doug

Date Posted: 02/22/2008 07:54 PM
Posted By: David Tseng (Enthusiast)

When I started to learn carving the neck and scroll, I also drilled the peg holes free-hand. When I finished the violin, a friend would come over to look at it. The pegs were not perpendicular to the center line, the 2 eyes were also slanted. He would just laugh at it.

Nowadays I carve the scroll at the kitchen table. I only have virtue but no vise to clamp the neck. Therefore I use small gouges to carve with one hand. BTW, one neck block can yield 2 necks and a few rib stocks.

Date Posted: 02/23/2008 06:53 AM
Posted By: MANFIO (Enthusiast)

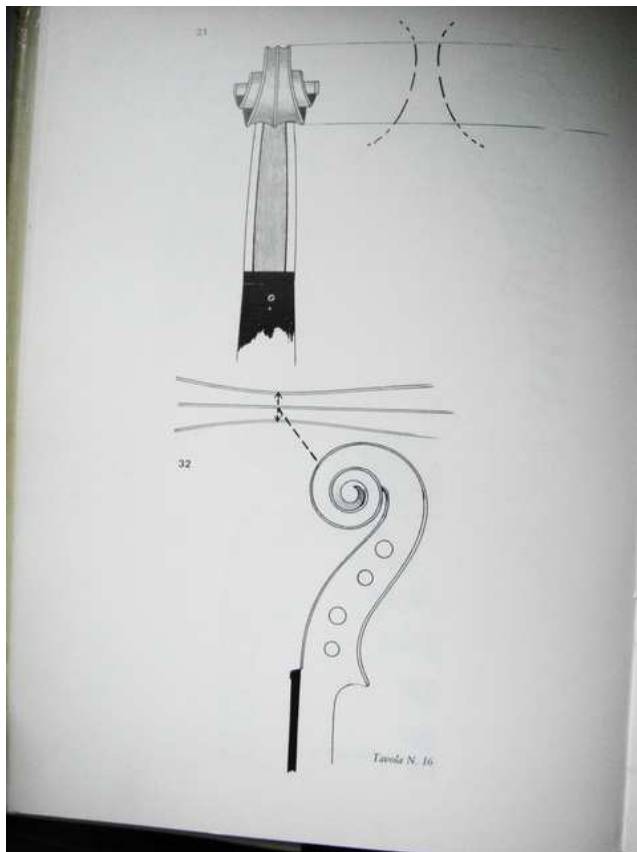
Hi David! Nice wood! I noticed on Claudio Rampini's forum that you speak Italian! Congrats!!!

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/23/2008 10:45 AM
Posted By: MANFIO (Enthusiast)

As I mentioned before, there are some scroll styles. Maestro Carlo Vettori, from Florence, published a quite interesting book called "Linee Classiche della Liuteria Italiana". If you happen to visit Florence go to visit him in his workshop on Via Guelfa, he is an expert in the Florentine School. He works with restoration and make many new instruments as well. I'll quote some parts of the above mentioned book regarding the scroll, and attach a pic of the book's page:



"Fig. 31 represents the front view of a scroll. This is the sort described as "aggressive" since the narrowest part of the channelling (visible in fig 32) is moved forward by two centimetres from the centre. From this change of position comes the predominance of two curved lines (see the dotted lines in fig. 31). Many of the greatest Italian makers have employed this type of scroll not least among whom are certainly the members of the Amati family." (Carlo Vettori, "Linee Classiche della Liuteria Italiana", Giardini Editori e Stampatori in Pisa, 1980, pages 66, 67, 70 and 71).

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

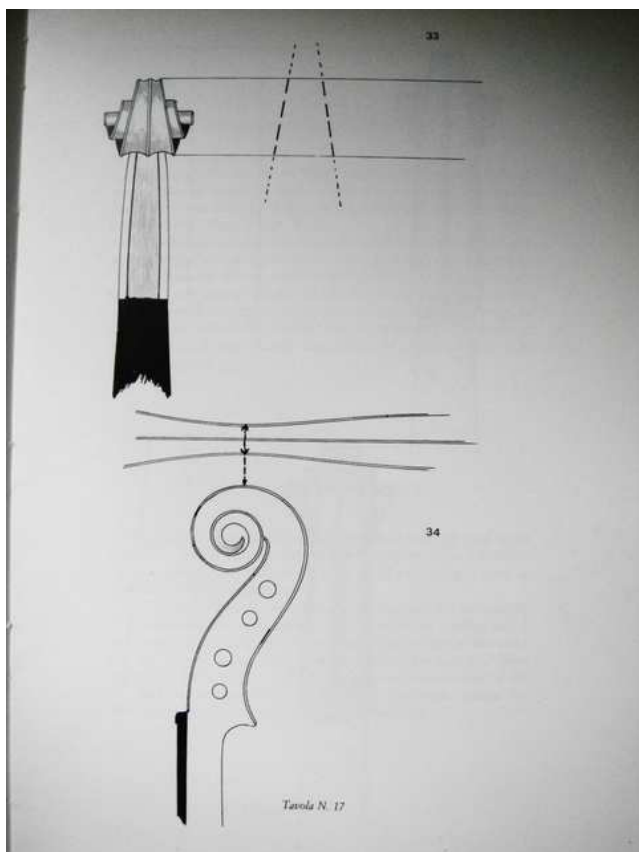
FREE TIBET!!!

Edited: 02/23/2008 at 12:18 PM by MANFIO

Date Posted: 02/23/2008 12:16 PM

Posted By: MANFIO (Enthusiast)

I'll quote again the Maestro Carlo Vettori:



"Fig. 33 shows a front view of a scroll in which static and roughly pyramidal lines predominate. The characteristic point of this design is that the narrowest part of the channeling is found in the centre of the scroll (fig. 34). This type of scroll is the one used by Antonio Stradivari and may be considered to be the purest and most classic of all violin making" (Carlo Vettori, "Linee Classiche della Liuteria Italiana", Giardini Editori e Stampatori in Pisa, 1980, pages 66, 67, 70 and 71).

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/23/2008 01:08 PM

Posted By: Tim McTigue (Senior Member)

Luis, I assume you're translating from Italian in your quotes, do you know if this book is available in English? It looks like a must-read for anyone aspiring to know really what they're doing, instead of just working from templates and examples, especially someone coming at this from a "lay" perspective, without benefit of study in the relevant history. You've just moved this thread from a mere practical demonstration, into a rarefied learning experience in what kinds of things should be looked for, and how to look. The information here takes my breath away!

Date Posted: 02/23/2008 02:05 PM

Posted By: MANFIO (Enthusiast)

Hi Tim! Thank you! This book is in Italian and English, the English name is "The Classic Lines of Italian Violin Making".

It's sold out but I found it in Italy, here, for 90 Euros:

<http://www.libraweb.net/result...alore=musica&start=70>

And here for 200 Pounds:

<http://www.antiqubook.co.uk/boox/pete/10641.shtml>

MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/23/2008 10:06 PM

Posted By: David Tseng (Enthusiast)

Thank you, Luis for quoting Maestro Carlo Vettori's book. If we look at the back of the pegbox of Strad style of channelling, it converges much faster right after the A-peg hole and both side edges are convex. In Amati style, it narrows down more gradual but opens up faster. I wonder what it would look like if we put the narrowest point in between the two cases.

Date Posted: 02/24/2008 07:01 PM

Posted By: MANFIO (Enthusiast)

Yes David, that's it!

Just when I'm totally satisfied with the side views, front, skew, front, back, all views, I will start carving the channels:





Here I'm using a shaped scraper again:





MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/24/2008 at 07:32 PM by MANFIO

Date Posted: 02/25/2008 10:29 AM

Posted By: MANFIO (Enthusiast)

Notice the position of the hands. The scroll is a bit fragile in this point so you have to support it with your other hand while cutting the channel:

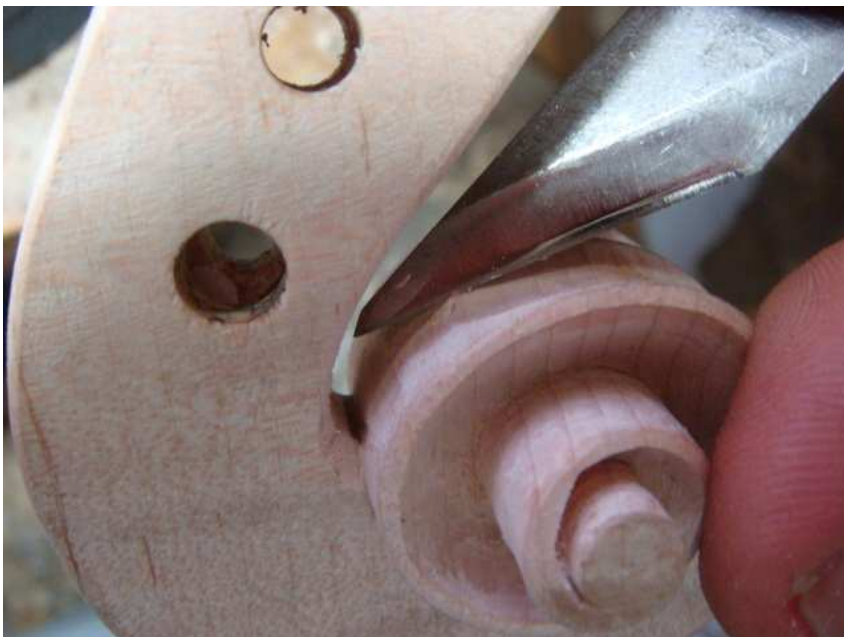




Here a view of the fluting of the front part of the scroll. I put a piece of sandpaper on the back to give contrast:



Here Im working in the fluting in the throat region with a knife:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/25/2008 12:47 PM

Posted By: MANFIO (Enthusiast)

Here I'm using a knife for cutting till the centerline:



When cutting the fluting near the throat, the gouge may scape and hurt the front part of the pegbox's walls, so I protect them with a small piece of thick leather:



Again cutting the throat region with a knife:



Here using a knife to cut till the chamfer. The channell was made with the gouge, the knife will just cut the small remaining part till the line of the chamfer, I find it gives more precision than the gouge, the gouge can "invade" the chamfer, but many makers will use just the gouge:



Here I'm using a rond file to take off some marks left by the gouge:





 MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Edited: 02/25/2008 at 12:59 PM by MANFIO

Date Posted: 02/25/2008 08:46 PM

Posted By: luthier9010 (Member)

Luis,

Thanks again for all the great pictures. This process has been fun to watch. I've checked the fourm 3 or 4 times a day just to see where you are with the scroll. Super job!!!

Berl

Date Posted: 02/26/2008 07:53 PM

Posted By: MANFIO (Enthusiast)

Thank you Berl!

I still will have to make some refinishing on my scroll but now I'll work on the neck. Here I worked with an aggressive rasp till the final thickness of the neck, 18.5 and 20, I'll remove the wood between these points:



You may have the impression that my workshop is a mess, there is a good quote by Oscal Wilde about first impressions:



Here I wrapped a coarse sandpaper in a round chisel handle to work in this region:



Here I'm cutting the neck root with my Japanese saw:



Working in the neck with a rasp:



MANFIO - VIOLA/VIOLIN MAKER

<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/26/2008 11:19 PM
Posted By: **falstaff** (Enthusiast)

Very nice thread, Luis.

Edited: 02/28/2008 at 07:31 AM by falstaff

Date Posted: 02/28/2008 06:06 AM
Posted By: **NewNewbie** (Enthusiast)

I see that you have done some work on the hollow under the fingerboard. Can you give us some information on your fingerboard set-up such as length and side height etc.

Since you mentioned that the neck is 150 mm I am assuming that the Stop for the instrument is 225 mm.

Is this right? Do you stick with the same Stop and Neck length?

Thanks for the extremely interesting post !!!! 😊

"There are no secrets better kept than the secrets everybody guesses." - Mrs. Warren's Profession by George Bernard Shaw

Date Posted: 02/28/2008 06:56 AM
Posted By: **Jacob** (Enthusiast)

When I look at the fingerboard, I think Manfio will use a body stop of 223mm. 😊

J N van Soelen

<http://www.briscdisc.co.za/violins>

Date Posted: 02/29/2008 06:03 AM
Posted By: **MANFIO** (Enthusiast)

Thank you Falstaff!

NewNewbie and Jacob: I keep the same neck length, stop and string length regardless the size of my viola, following Renè Morel's article on the Strad some years ago. The neck length is 150 millimeters, the string length is 375 millimeters and the stop will be that one that allows the 375 mm string length.

I leave the sides of the fingerboard about 5.5 and I try to make it light. I'll have to check the length of it. I'm rather busy these days I'll post more pics when possible. Ciao!

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/29/2008 07:55 AM
Posted By: **NewNewbie** (Enthusiast)

"When I look at the fingerboard, I think Manfio will use a body stop of 223mm." - Jacob

=====

"The neck length is 150 millimeters, the string length is 375 millimeters and the stop will be that one that allows the 375 mm string length." -MANFIO

=====

That should be then in the area of 223 mm or just under.

"There are no secrets better kept than the secrets everybody guesses." - Mrs. Warren's Profession by George Bernard Shaw

Edited: 02/29/2008 at 07:55 AM by NewNewbie

Date Posted: 02/29/2008 06:49 PM
Posted By: **MANFIO** (Enthusiast)

Hi NewNewbie! I will adjust the string length to 375 and put the bridge in the place that gives this stop.

Now I will shape the neck and fingerboard. I'll divide the side of the fingerboard in 3 parts:



First I'll round the two external thirds, preserving the central one that will correspond to the widest part of the neck:



Here a straight edge over the side of the fingerboard showing the central third as the widest part of the fingerboard:



On the part of the fingerboard that is not glued to the neck just the upper third will be rounded:



Here a shaped scraper is used for finishing the inside hollowing of the fingerboard:



I use my thumb's nail to guide me shaping this area (here not finished yet):



 MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 02/29/2008 11:30 PM
Posted By: **matthew tucker** (Senior Member)

Where can I get a thumbnail like that? Dick Tools don't seem to sell them ...

 ... double basses mostly

Date Posted: 03/01/2008 08:35 AM
Posted By: **MANFIO** (Enthusiast)

Hi Mathew! I use my thumbnails on the fluting of the C bouts of the back and top of my violas. For some new Japanese tools I can allow Dick to make posh templates with my thumbnails... But they could also make casts of tops, backs, and scrolls of instruments made by top makers.

 MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 03/15/2008 01:32 PM
Posted By: **MANFIO** (Enthusiast)

Well, I've been rather busy and unable to continue this, I'll try to continue and finish it.



This is the front view of the pegbox near the nut. Notice that just the outer side of the pegbox walls are chamfered, the inner parts remain not chamfered. The "floor" of the pegbox is finished with a chisel used as a scraper.



While working in the the neck, take care to avoid ebony dust reaching the maple because it will stain the maple, mainly if you are using sandpaper.





And finally, here the photo of the real McCoy and my new scroll:



 MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 03/15/2008 02:26 PM
Posted By: **edi malinaric** (Senior Member)

Manfio - thank you.

cheers edi

Date Posted: 03/15/2008 02:30 PM
Posted By: **Tim McTigue** (Senior Member)

Bravo, Maestro!

Date Posted: 03/15/2008 07:45 PM
Posted By: **violins88** (Senior Member)

Manfio,

Wow! How very, very generous of you. I shall use these pics when I carve a viola scroll for my niece.

John Schmidt
 Laurinburg, NC, USA

Date Posted: 03/16/2008 09:37 AM
Posted By: **Ed_Shillito** (Senior Member)

Excellent demonstration Manfio! Thank you! Are you going to enter a viola in the VSA competition this year? Unfortunately it's on the west coast so I might not be able to get there. I would like to see your newest instruments and try them out.

Ed

Date Posted: 03/16/2008 02:59 PM
Posted By: **Dean_Lapinel** (Enthusiast)

Ahh,

Manfio...it fills my soul with glee to see the way you properly use hand tools. Exceptional thread!!

I'm inspired now to dive in and start doing my photos for the long promised sound post set-up.

dean

Date Posted: 03/16/2008 06:53 PM
Posted By: **MANFIO** (Enthusiast)

Thank you all!

Ed, I don't know if I'll have a "free" viola to the VSA competition...

Dean, we are waiting for your tutorial!

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!

Date Posted: 03/16/2008 07:02 PM
Posted By: **Janito** (Enthusiast)

Manfio, a question...

You use quite a coarse rasp for shaping the neck. Are you very particular about removing the rasp marks?

I have very sharp hand-cut rasps and the marks they leave can be very difficult to remove. As a result, I probably use them less than I should.

Date Posted: 03/16/2008 07:18 PM
Posted By: **MANFIO** (Enthusiast)

Yes, all marks from the rasp are removed. I like the coarse rasp because I want to work fast, I follow with a finer rasp, than scrapers and sandpaper.

MANFIO - VIOLA/VIOLIN MAKER
<http://www.flickr.com/photos/7...88@N02/with/465247167/>

FREE TIBET!!!