



# Making The Turner Guitar

*An Architect's Illustrated View of the Guitarmaking Process*

by Barry Price

*Guitarmaker Magazine, Appendix #24-a*

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in conjunction with  
Rick Turner of Turner Guitars and Barry Price, Architect.

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or

The Association of Stringed Instrument Artisans  
P.O. Box 341  
Paul Smiths, NY 12970

*Membership and bulk book inquiries are invited.*

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## *The Association of Stringed Instrument Artisans & Guitarmaker Magazine*

During the summer of 1988, a small group of stringed instrument makers and repair technicians met with the intent of establishing a not-for-profit professional trade organization. Most simply, we preferred to be an "association", deciding to focus specifically on "stringed instruments", and we felt that the word "artisans" best described our mutual activities. Hence, *The Association of Stringed Instrument Artisans* (with the accidental yet recognizable acronym of "A.S.I.A.") was born. Michael Dresdner was chosen to launch the concept of A.S.I.A., with the initial goal of facilitating through consensus a mission statement and set of bylaws that would provide a framework of integrity for our future evolution.

With Michael Dresdner's task complete, a Board of Directors was elected and Dick Boak, assuming the voluntary post of editor and executive director, began the task of developing a publication and operating procedure. The A.S.I.A. journal began as a very informal 4-page newsletter and grew over the course of several years into the substantial and respected magazine *Guitarmaker*.

A.S.I.A. membership continues to grow substantially. Starting with 20 initial advisors, A.S.I.A.'s ranks now include makers, repair technicians, and stringed instrument enthusiasts worldwide. In 1991, A.S.I.A. had the opportunity to increase membership by fulfilling the subscription responsibility of what had been GPI's *String Instrument Craftsman* newsletter. Subsequently, A.S.I.A. membership has grown annually to its current level of 1750 and is expected to reach 2000 within the next year.

One of the most exciting elements of A.S.I.A. has been the bi-annual gatherings or "Symposia," which have served to bring hundreds of makers and repair technicians together to exchange information, exhibit new work, find new sources, be exposed to key lecturers, develop lasting friendships, and have fun. Off year regional seminars and workshops are currently offered in more than twenty different locations.

Though the priorities have certainly evolved, A.S.I.A.'s basic goals have remained essentially the same:

- to provide a sense of community for instrument makers, repair technicians, and enthusiasts
- to continually increase the level of professionalism within the craft
- to publish an informative, useful, and valued journal for the membership
- to encourage inter-communication through the publication of a cross-referenced membership directory
- to offer multi-level educational Symposia, workshops, and seminars for the field
- to develop a scholarship fund for on-going education within the field
- to develop an assortment of health, instrument, and shop insurance programs at group rates
- to establish a comprehensive database of resources, skills, supplies, and technical information
- to assist the membership in the promotion and marketing of their products

This booklet exemplifies the spirit of what A.S.I.A. is all about. We are especially pleased to have had a part in its publication and availability.



*Dick Boak has served for the past six years as executive director of A.S.I.A. and editor of the association's quarterly journal, Guitarmaker Magazine. With the appointment of a new executive director and editor, Dick will be stepping down to serve as a member of the A.S.I.A. advisory board. This book carries his thanks to A.S.I.A. members for their contributions, encouragement and support throughout his tenure.*

## Preface

While attending the 1994 Winter NAMM Show in Anaheim, California, I had the pleasure of visiting my old friend Rick Turner in his Marriott Towers "Hospitality Suite", which adjoined with Steve Klein's room. Both Rick and Steve were displaying an assortment of their guitar models and the two rooms had become quite popular for musicians and makers alike. As I entered, there were several separate pockets of guitar playing and intense discussion about our craft. While seated on one of the double beds, Rick came rushing over with what looked like an artist's notebook and said, "You've got to see this!"

I leafed past the title page and the table of contents to the first illustrated page entitled "Raw Materials" and my jaw dropped. What an incredibly beautiful and clear exploded view. I immediately related to the illustration since I had executed many tedious exploded views in my past position as draftsman for C. F. Martin, but there was something quite different about these drawings. They were looser than ruled draftings, humble and delicate in their approach, much more personal in their almost storyboard or thumbnail stylization. Most simply, I loved them.

My uncontained excitement caused several others to peer over my shoulder at the drawings. Everyone agreed that the booklet was something special. In a nutshell, Barry Price had captured not only the essence of the Turner guitar, but he had also made a profound summerization about the instrument making process.

As editor of *Guitarmaker Magazine* and as executive director of the Association of Stringed Instrument Artisans (A.S.I.A.), I expressed immediate interest in publishing the booklet as a service to the membership. I felt that anyone involved in the guitarmaking process would greatly appreciate seeing or having a copy of the book, and I immediately approached Rick about initiating such a publication. After speaking with Barry, we were all in agreement.

Few readers will ever have an opportunity to see Barry Price's original spiral bound artist's sketch book. This reproduction attempts to faithfully capture the integrity and feeling of the original while making slight improvements in the presentation and format wherever possible. The actual drawings have not been altered and special care has been taken to preserve through fine screening the delicate pencil guide and shading lines that are subtle yet visible behind the dark ink lines.

Lastly, it is my hope that you experience the same excitement that I felt when I first saw Barry's drawings. Enjoy.



*Dick Boak*

*Dick Boak*

*Nazareth, Pennsylvania 1994*

## *Introduction*

In the medieval crafts guild system, there was a time in each apprentice's career when it was time to prove to his mentor and to the other masters of the guild that he had acquired sufficient skill and basic understanding of his craft to be considered a "journeyman" — literally one who had the right to journey and work in any master's shop. The tangible proof of skill was an "apprentice-piece" which could be a set of miniatures using all the techniques and structural details of the full size pieces; it could be a full scale piece with a tour-de-force decorative feature. Whatever it was, it had to show that the apprentice really "got it" with regards to his chosen craft and that he was ready to join the ranks of professionals proudly furthering the state-of-the-craft.

This book is the modern equivalent of an apprentice-piece. In it, Barry Price shows beautifully and conclusively a complete understanding of the processes which go into making one of my guitar models. Welcome to the ranks of professional guitar makers, Barry. And, thank you.

*Rick Turner*

*Rick Turner*

*Topanga, California, 1994*



*Veteren guitar designer/maker, Rick Turner, photographed at his shop in Topanga, California. He is holding a completed Model 1 electric guitar.*



## *Artist's Remarks*

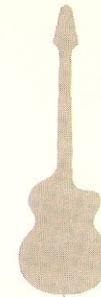
This book began as a compilation of sketches and notes accumulated during my apprenticeship with Rick Turner. Through the course of my training, I found it helpful to record the techniques and procedures I was learning both for future reference as well as to test my own understanding of the processes. As the material came together, it became apparent to me that the drawings provided a good overview of the making of Rick's "Model 1" electric guitar. I decided to format the drawings into a book as a gesture of thanks to Rick and as a document of our work together so far.

Although my training is in architecture, lutherie provides me with the opportunity to tightly focus my interests in the integral relationships among structure, materials, and aesthetics. As with architecture, the instrument design and manufacturing processes benefit from the discipline of drawing. Although the drawings can not substitute for actually constructing and hearing an instrument, for me they are an invaluable tool for the learning, development, and realization of an idea.

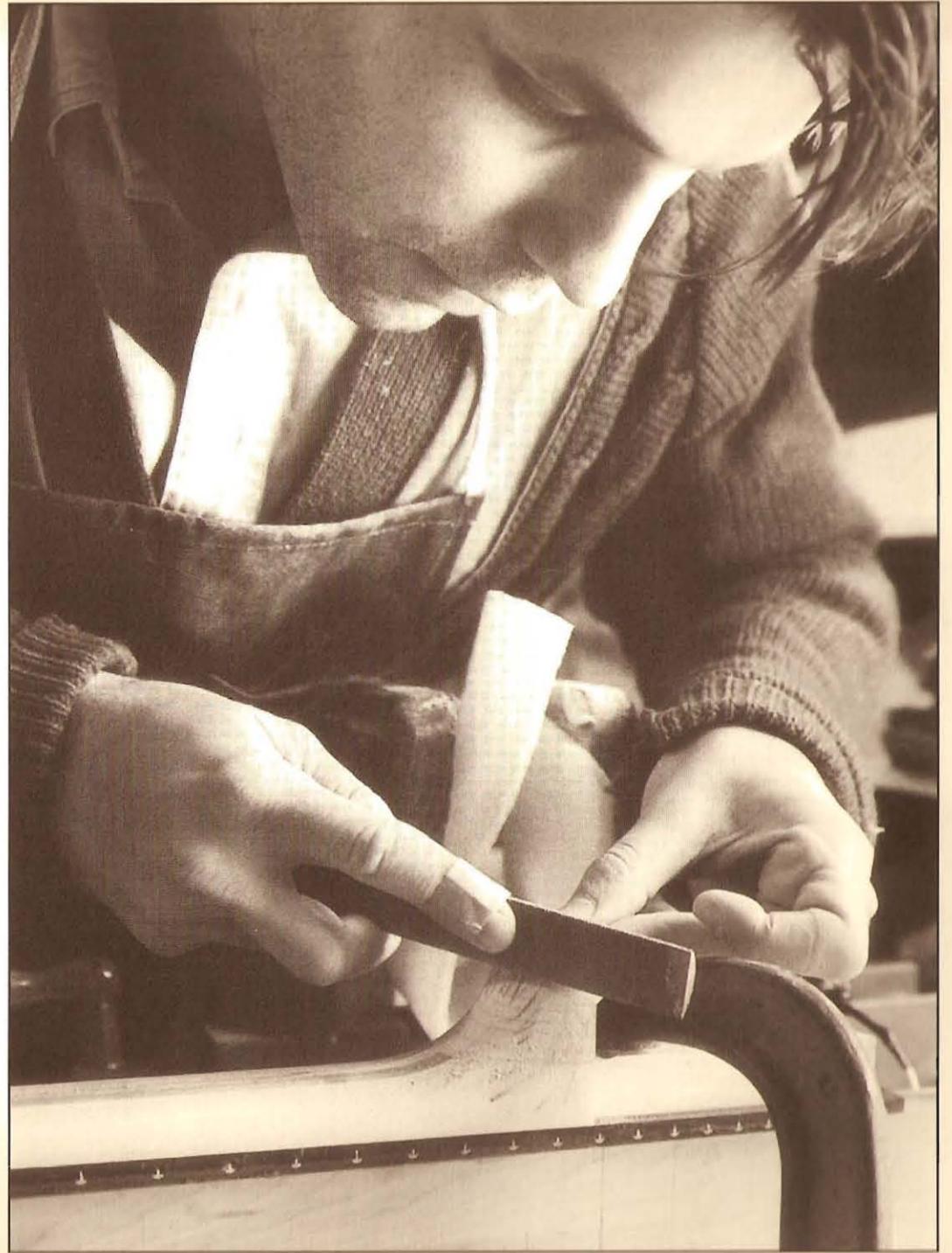
*Barry Price*

*Barry Price*

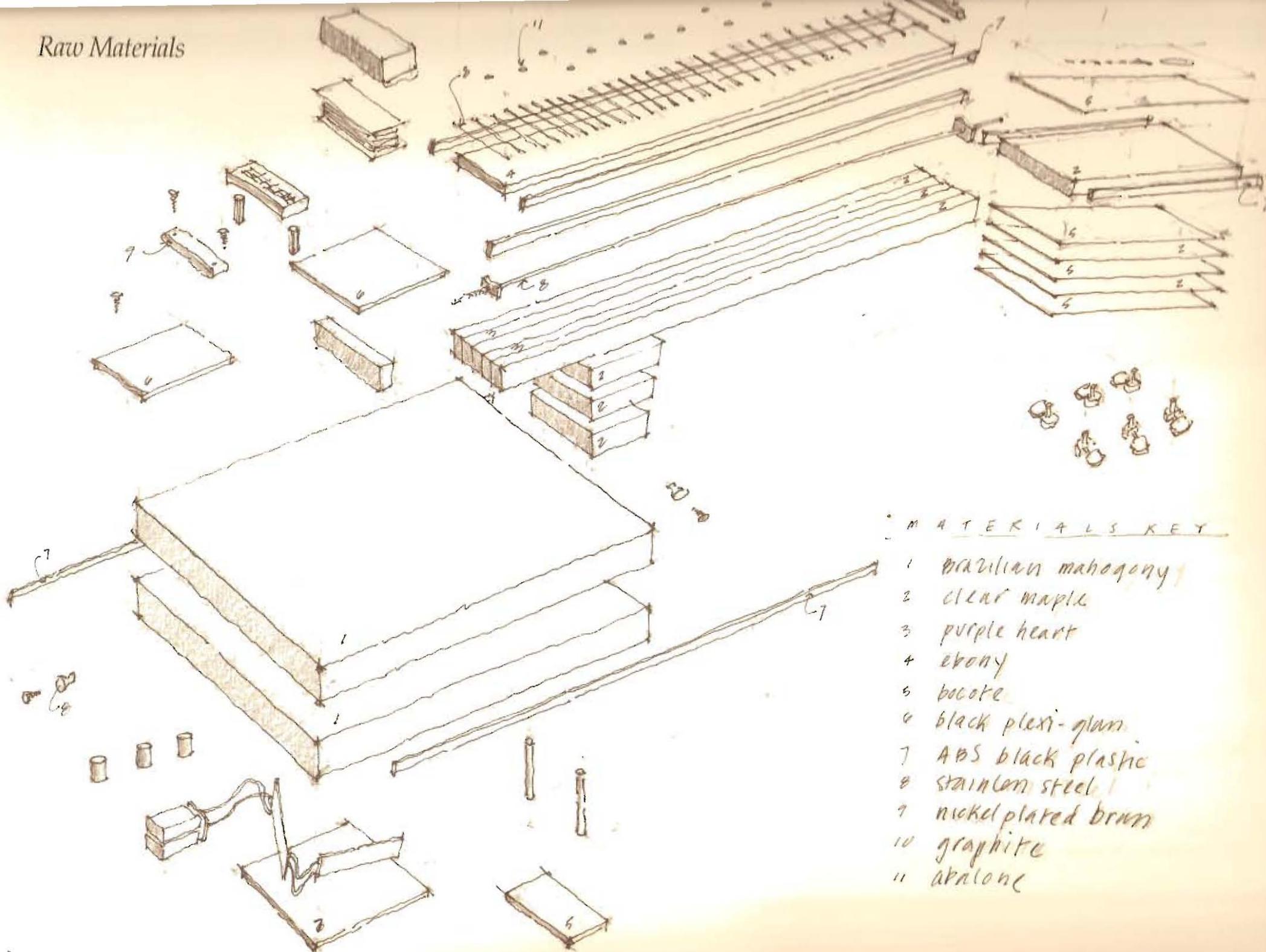
*Topanga, California, 1994*



*Barry Price takes a round file to the neck heel of the electric guitar he constructed during his apprenticeship with Rick Turner in 1993.*



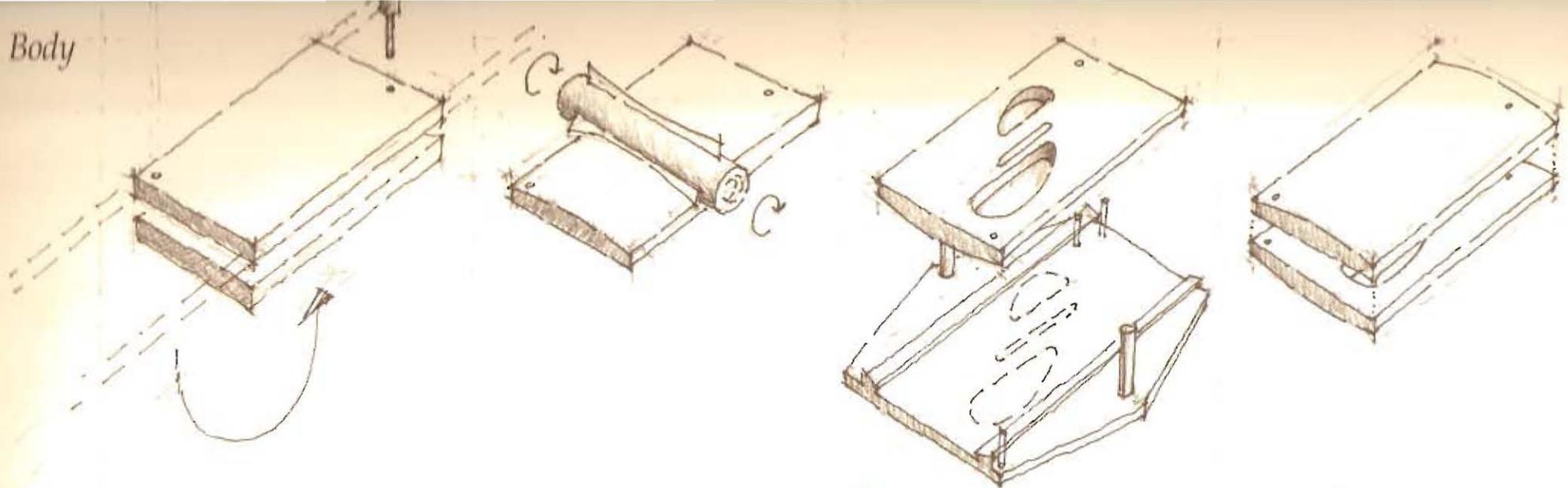
# Raw Materials



## MATERIALS KEY

- 1 Brazilian mahogany
- 2 clear maple
- 3 purple heart
- 4 ebony
- 5 bocote
- 6 black plexi-glass
- 7 ABS black plastic
- 8 stainless steel
- 9 nickel plated brass
- 10 graphite
- 11 alabone

Body

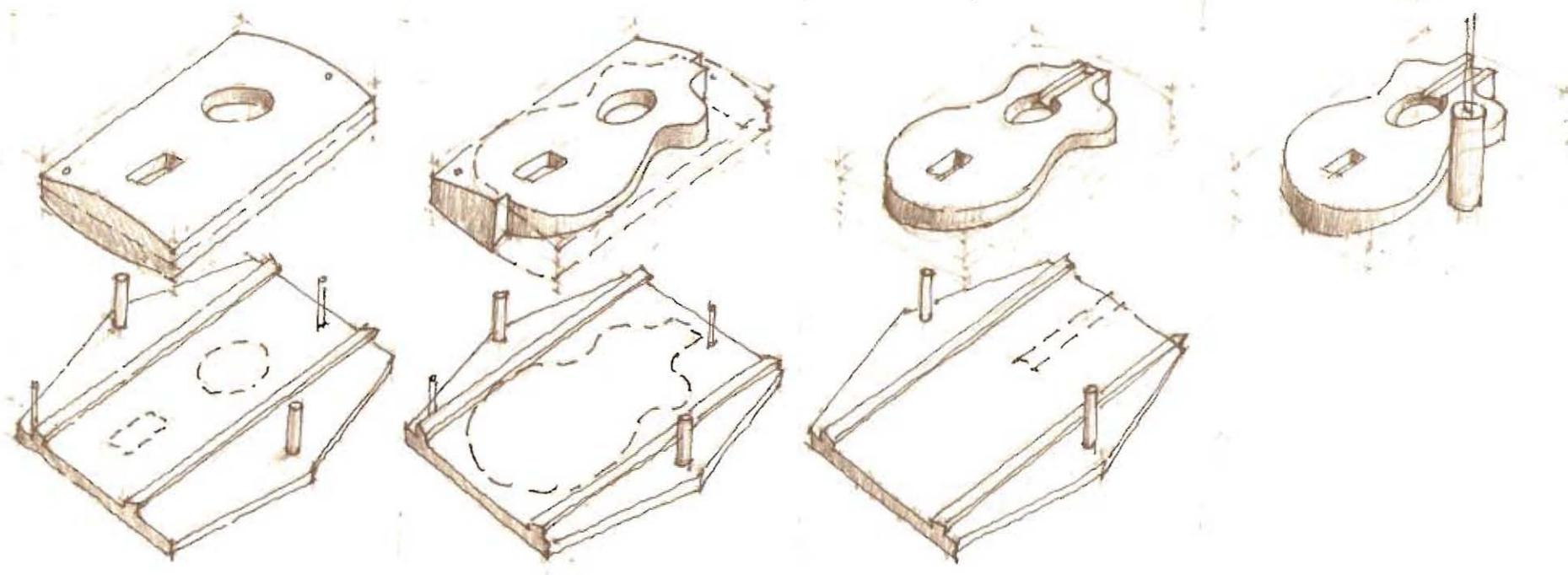


1. drill for registration

2. plane to arch.

3. pin route for internal cavities/shield

4. laminate two arched halves together



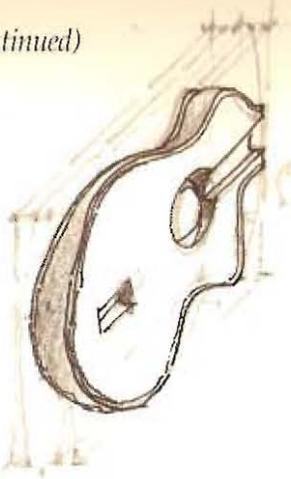
5. pin route pick/up hole/ battery compartment

6. pin route body shape

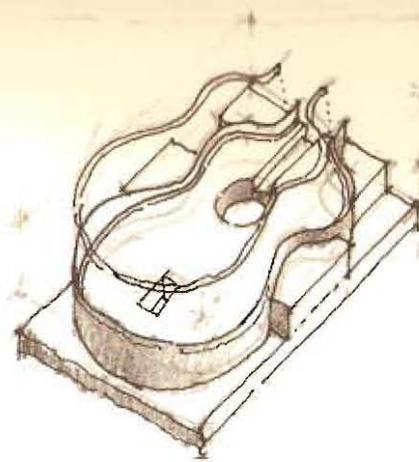
7. route neck joint slot

8. pre-sand for binding

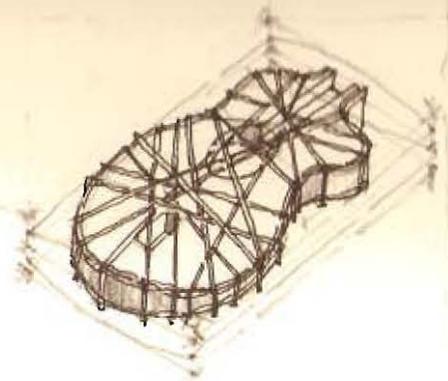
Body (Continued)



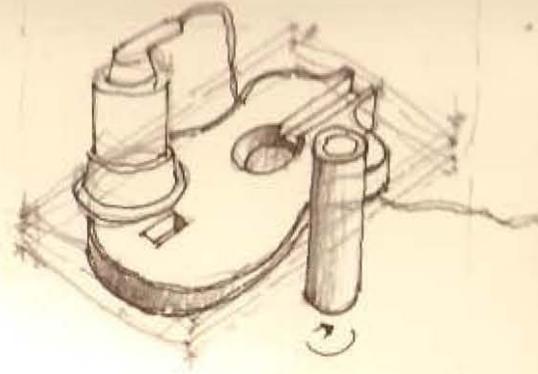
9. route for binding



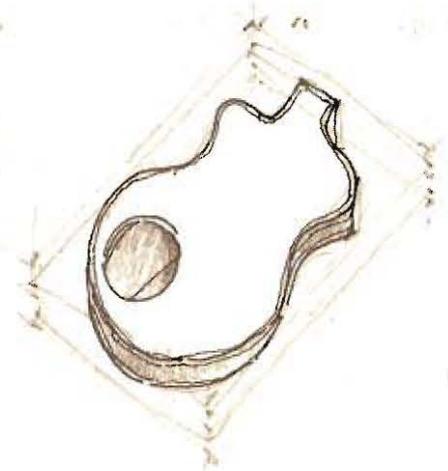
10. preform binding (heat)



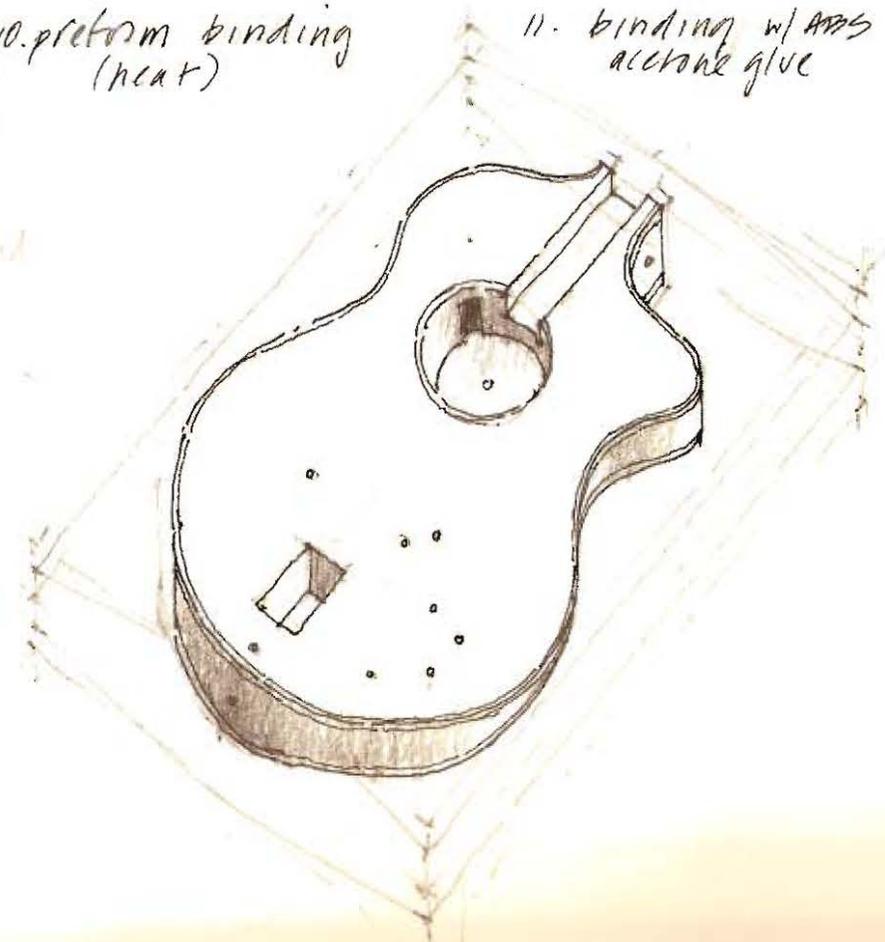
11. binding w/ ABS acetone glue



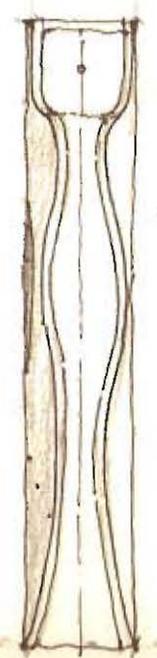
12. sanding



13. back electronics cavity route - full binding

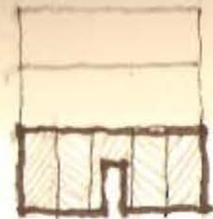


FINISHED BODY

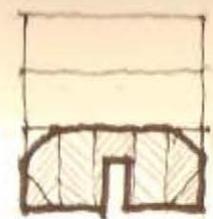


SIDE VIEW

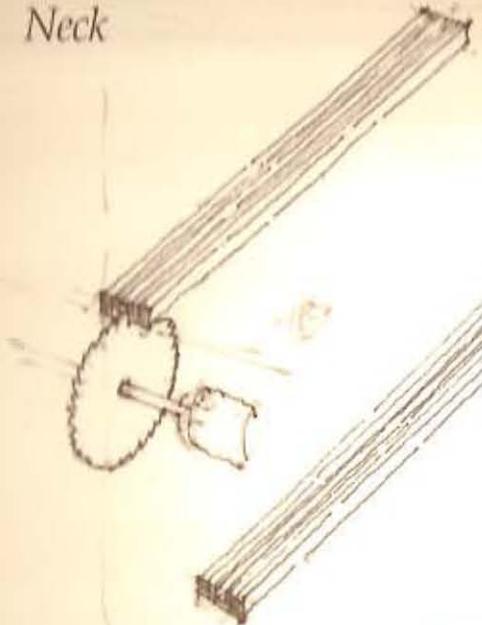
Neck



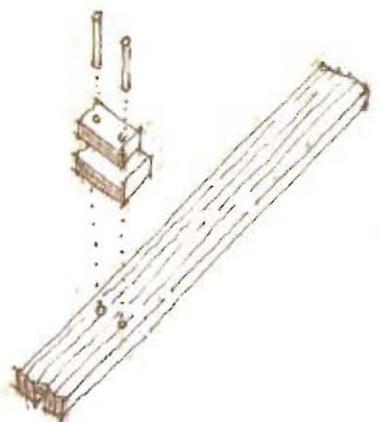
section



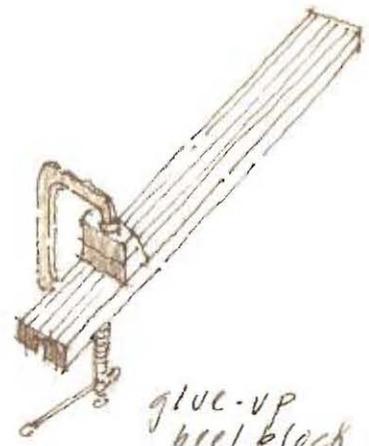
section



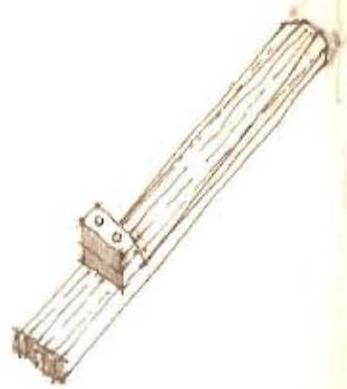
1. table saw cut for truss rod slot.



2. drill for heel block



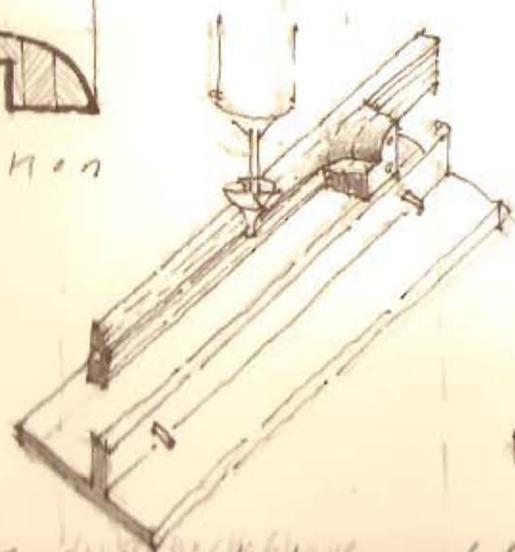
3. glue-up heel block



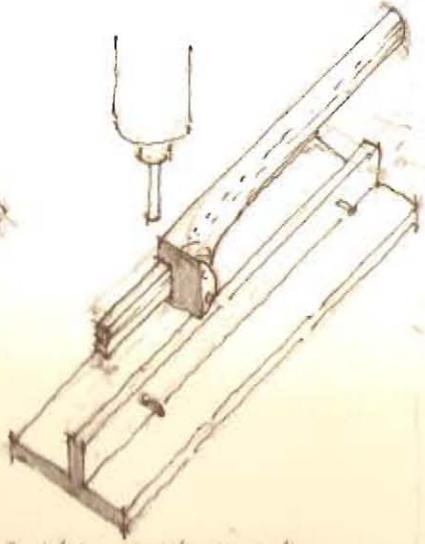
4. ease shape w/bandsaw



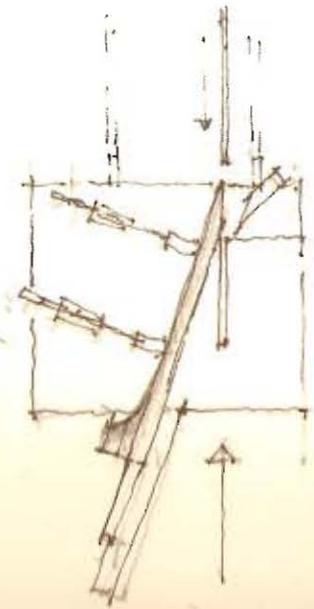
section



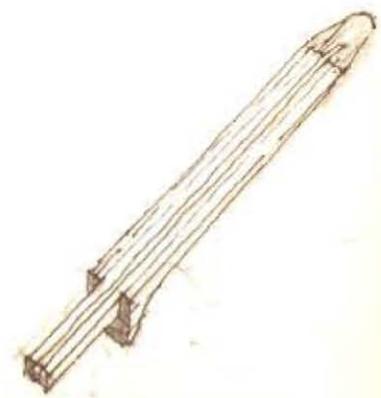
5. route neck shape



6. route neck joint

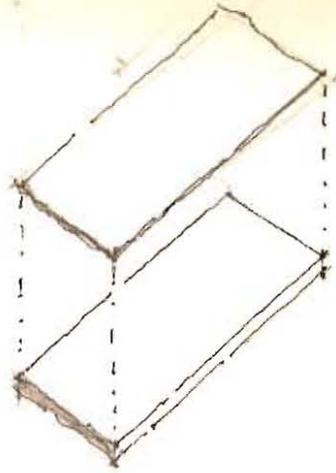


7. cut scarf joint

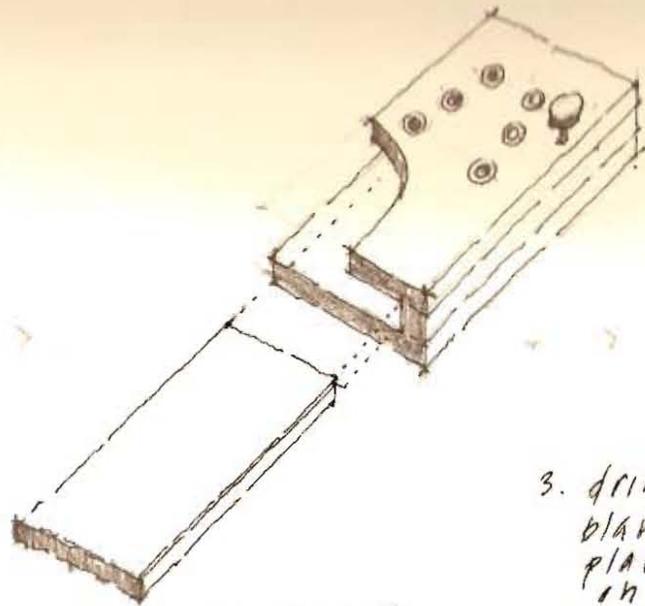


8. machined neck blank

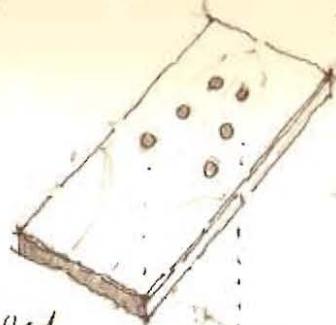
# Peghead



1. cocote veneer glued to maple blank



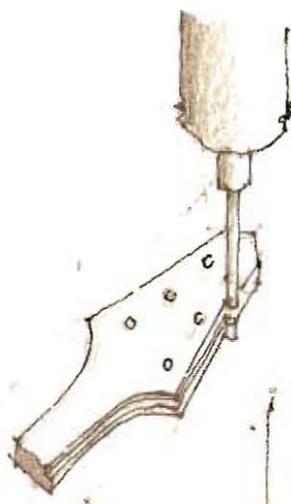
2. maple blank drilled w/ drill jig for tuner holes



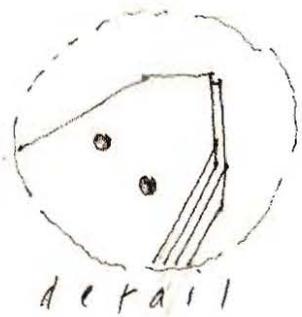
3. drilled blank placed on router jig



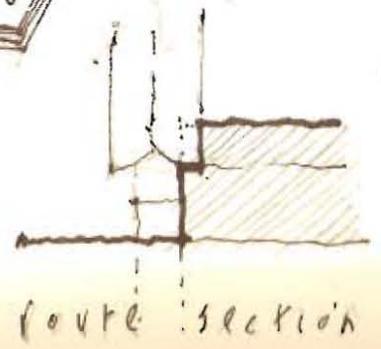
4. half route and flip



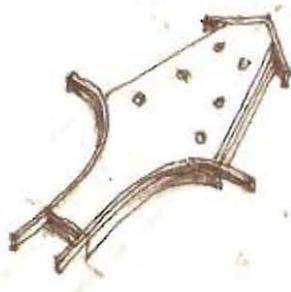
5. route for binding



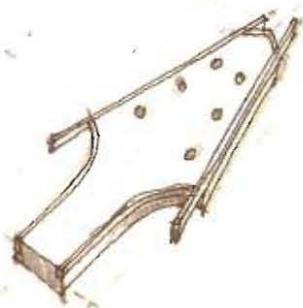
detail



route section



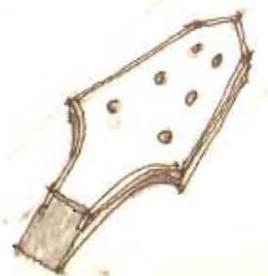
6. binding: stage 1



7. binding: stage 2

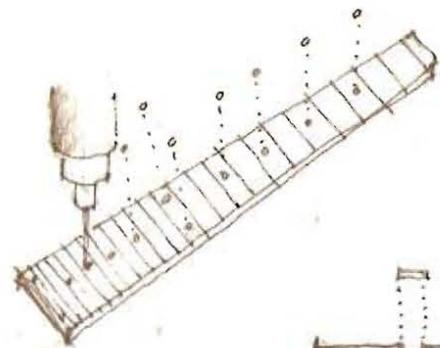
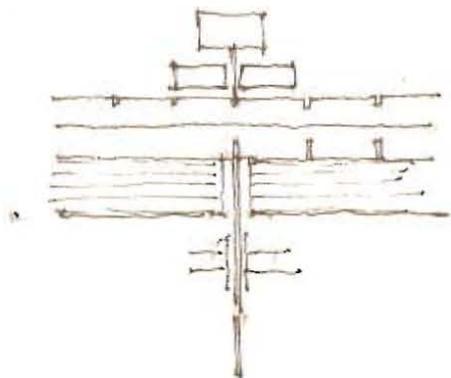
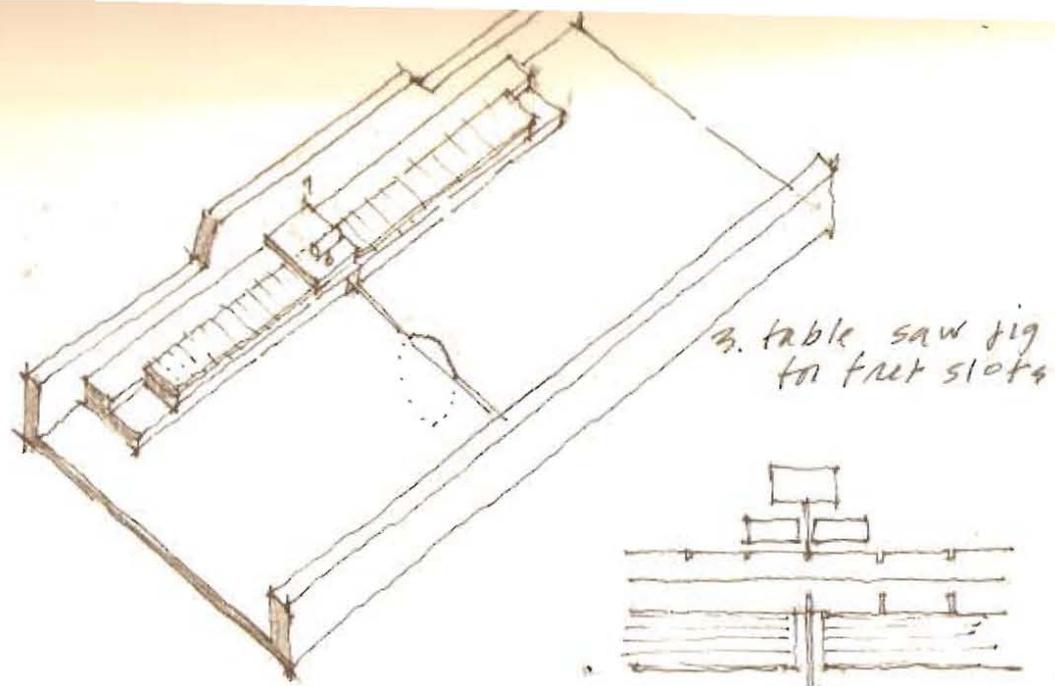
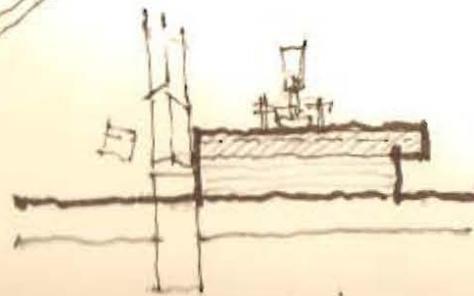
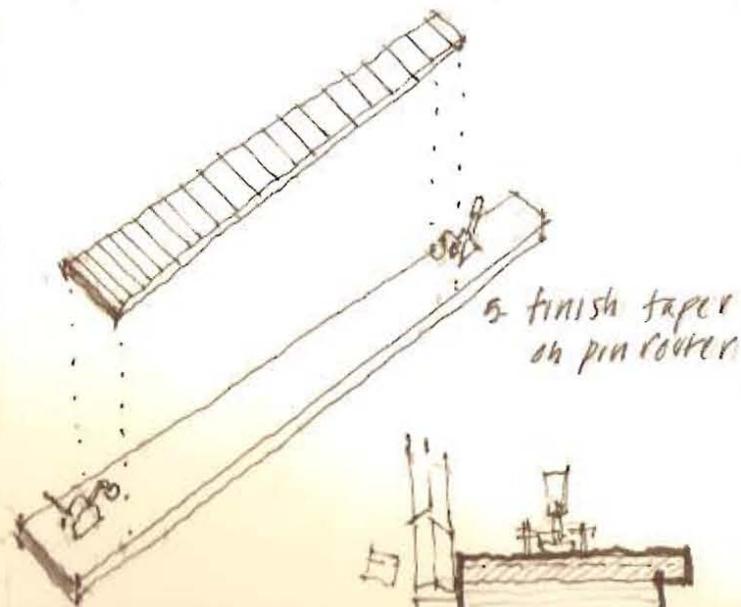
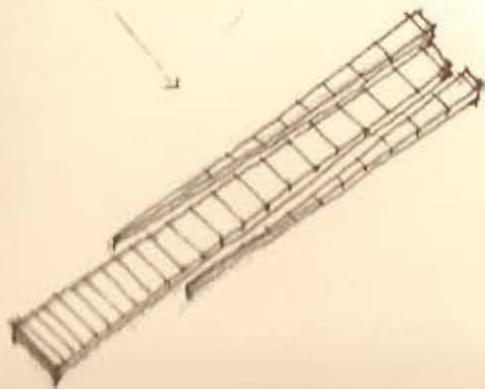
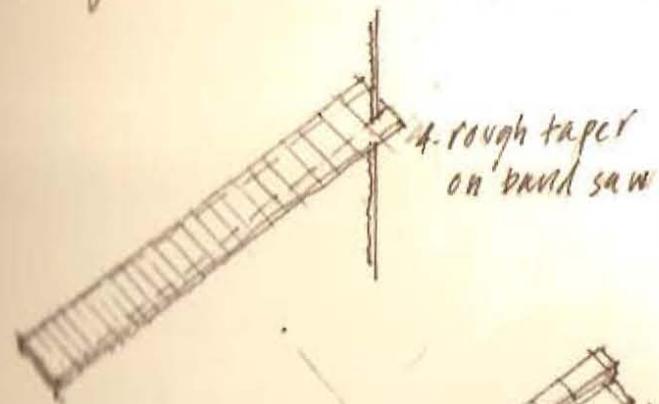
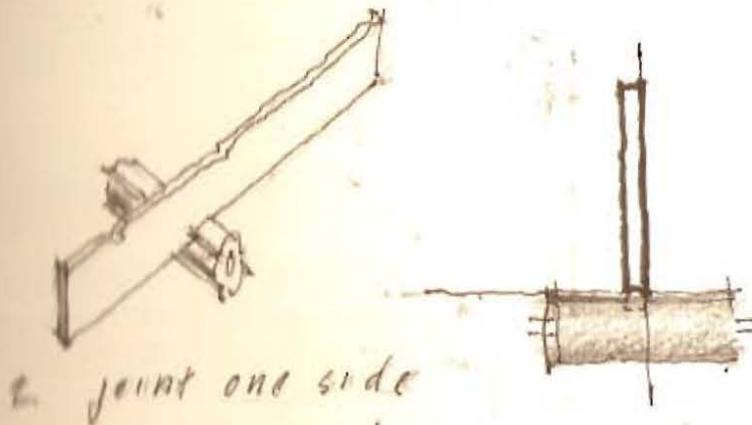
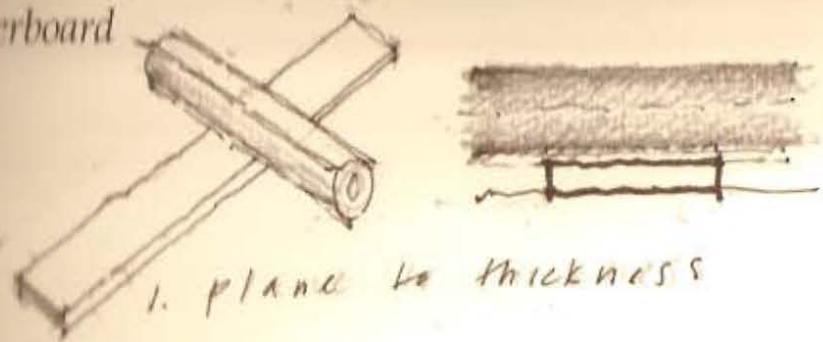


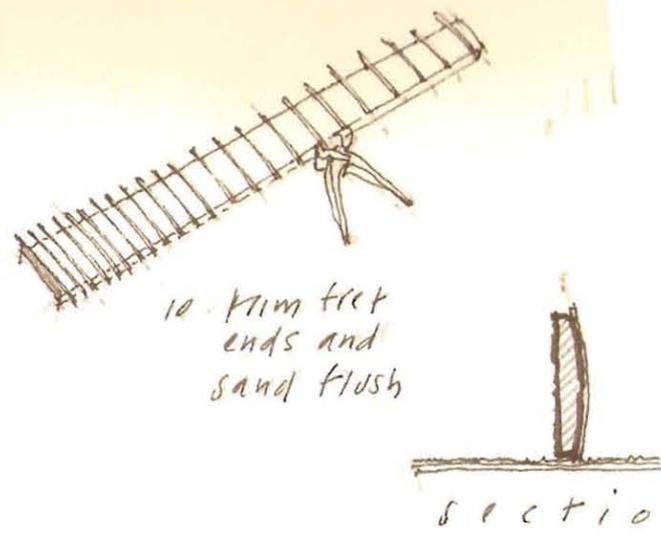
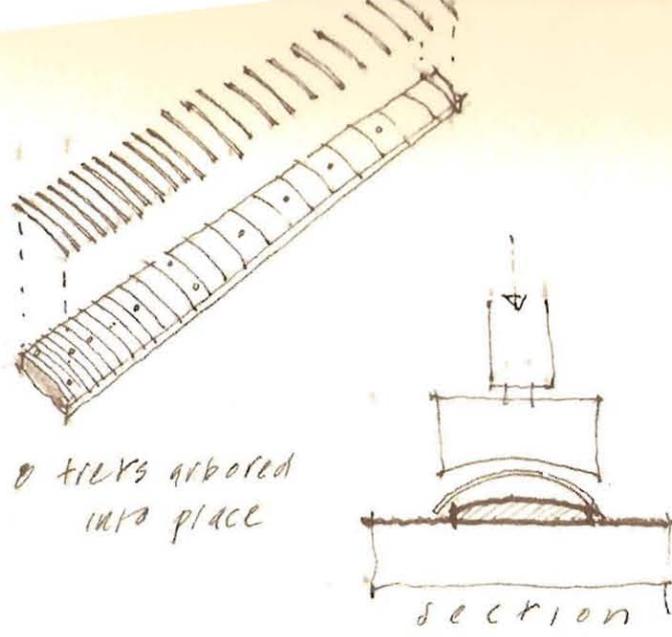
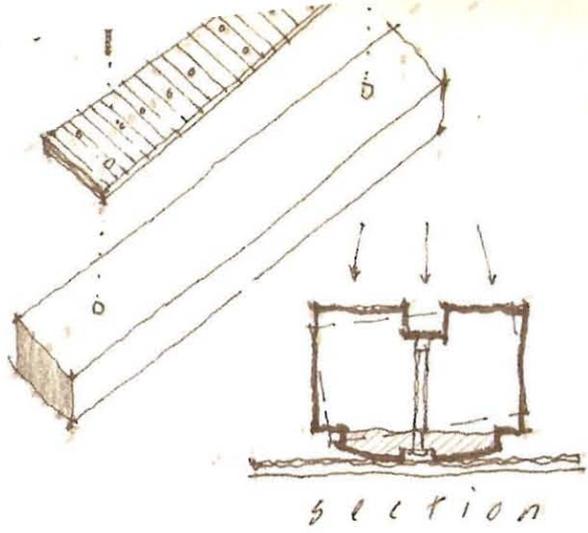
plan view



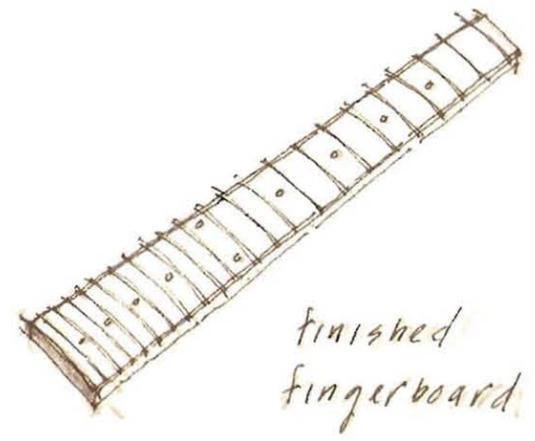
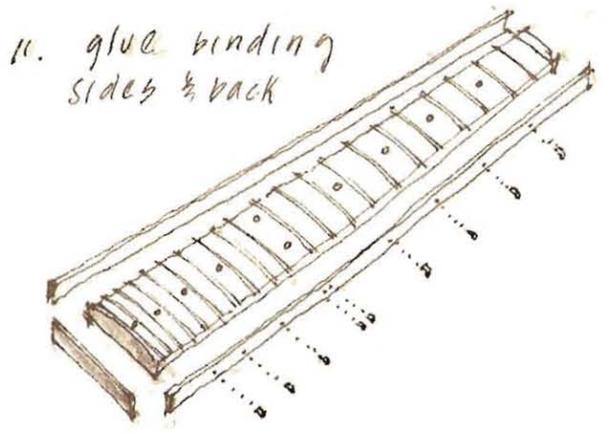
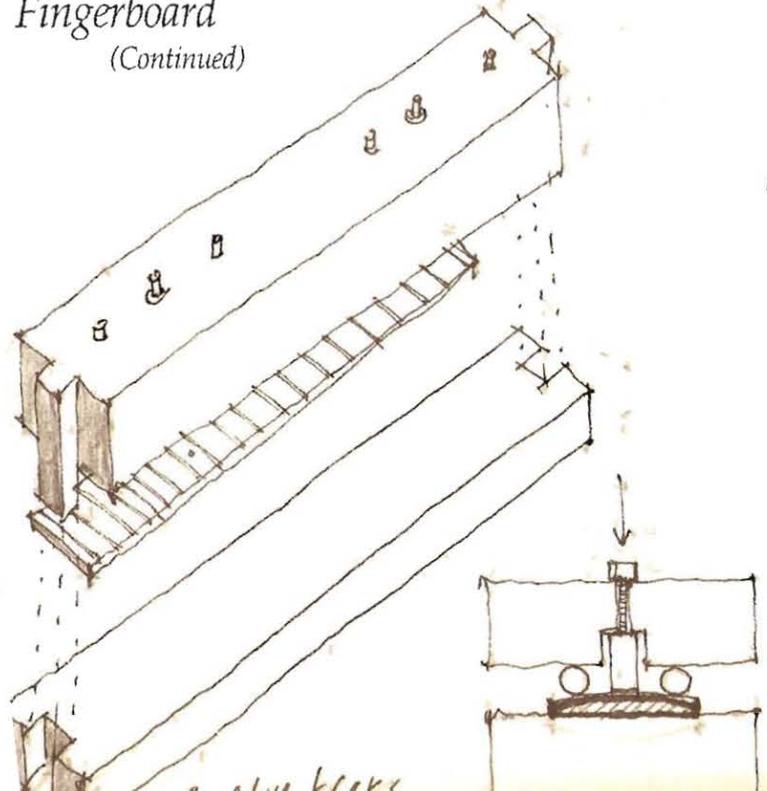
8. scarf joint cut on table saw

Fingerboard





Fingerboard  
(Continued)

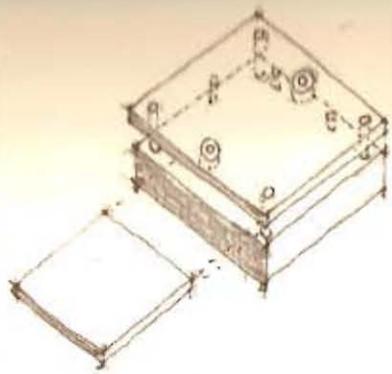


finished fingerboard

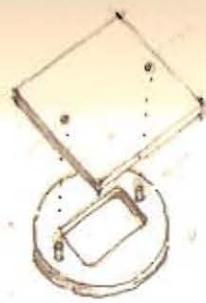
### Pickup Mounting Ring



1. plexi-blank



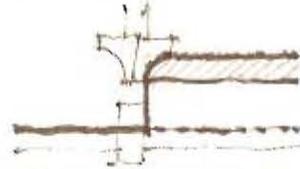
2. drill jig



3. attach router jig



A. route for shape & quarter round

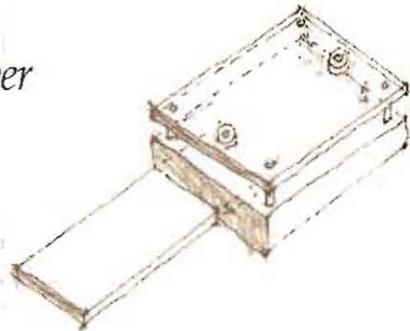


5. finished pick-up mounting ring

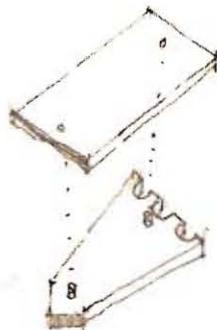
### Battery Compartment Cover



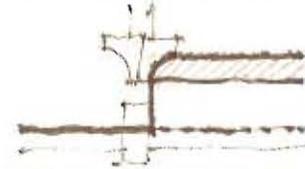
1. plexi blank



2. drill jig



3. attach router jig



4. route for shape & quarter round



5. finished battery compartment cover

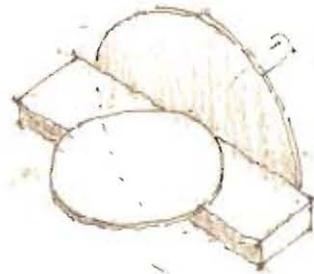
### Back Access Panel



1. ABS blank



2. score & rough cut shape



3. finish sand shape

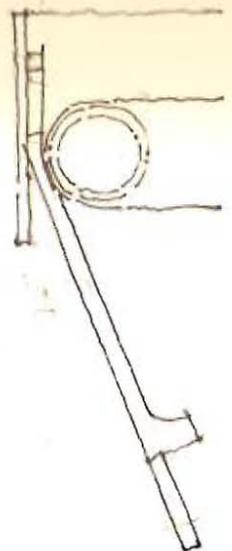
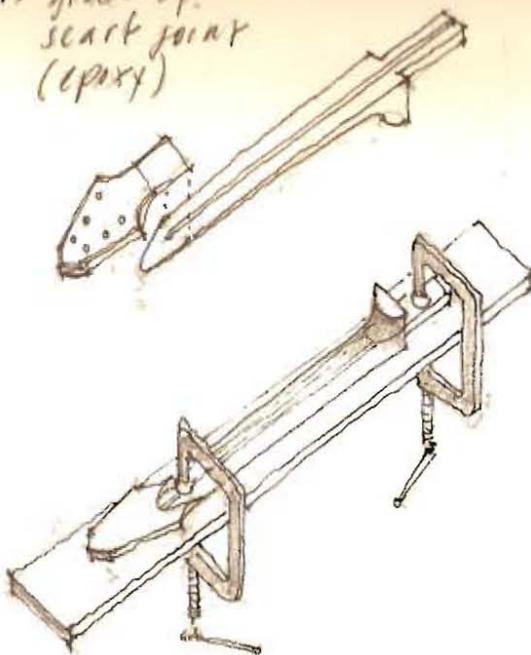


4. add screw block

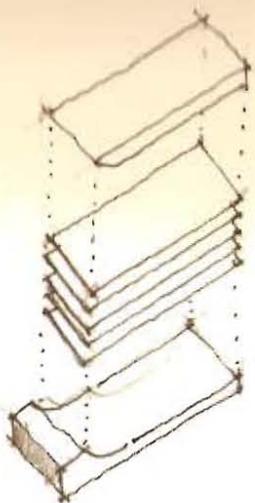


5. finished back access panel

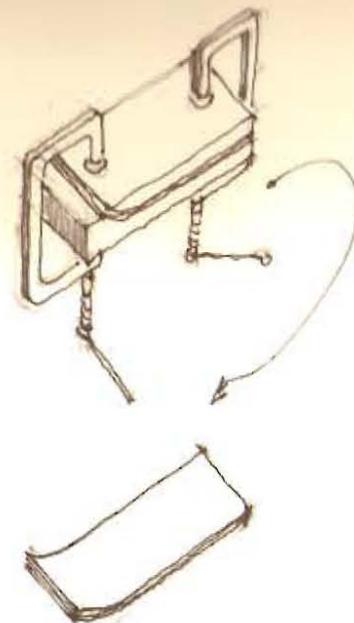
1. glue-up scarf joint (epoxy)



2. sand to veneer overlay

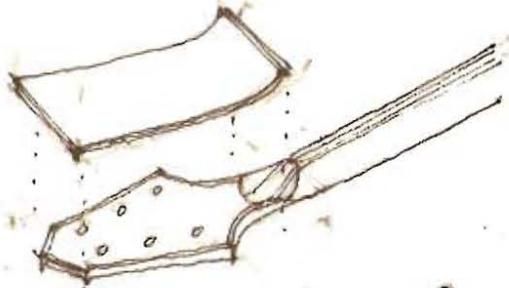


3. glue-up 5-ply back veneer overlay



4. finished overlay blank

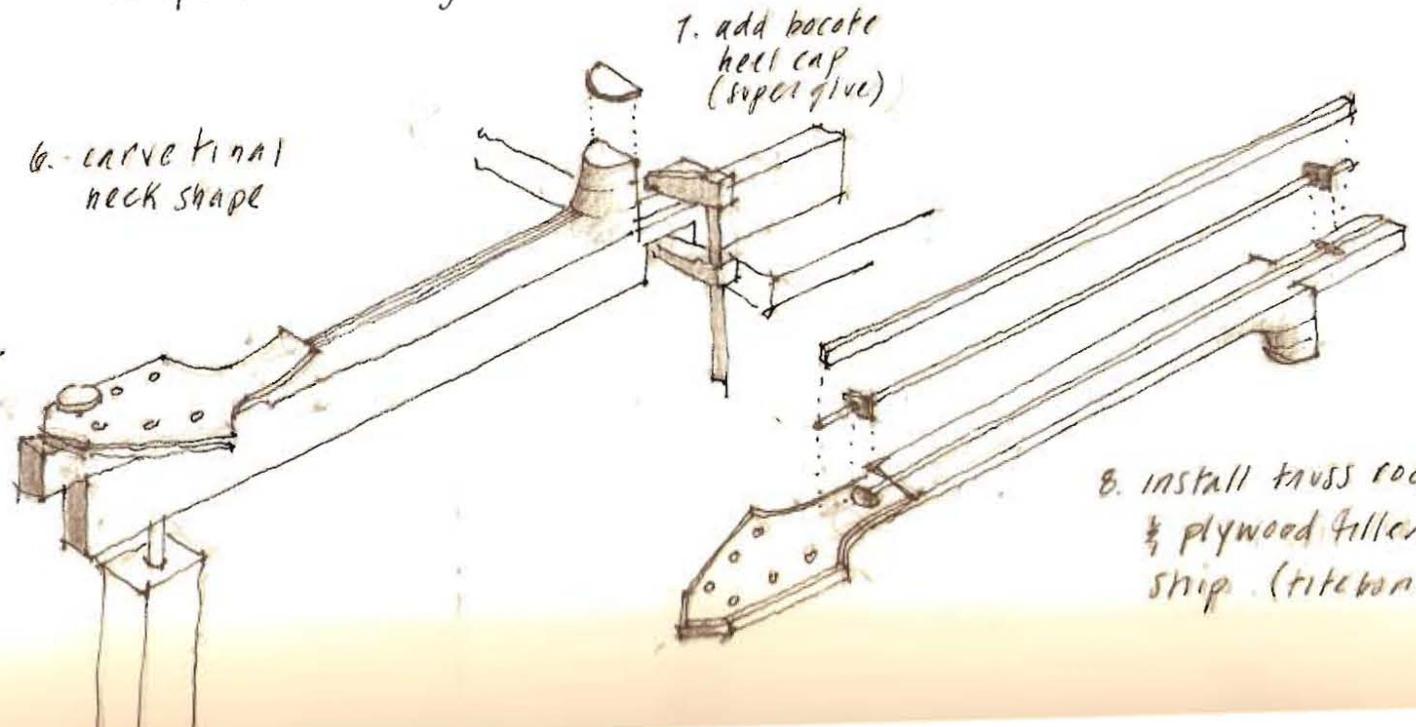
### Component Assembly



5. glue-up overlay (epoxy)

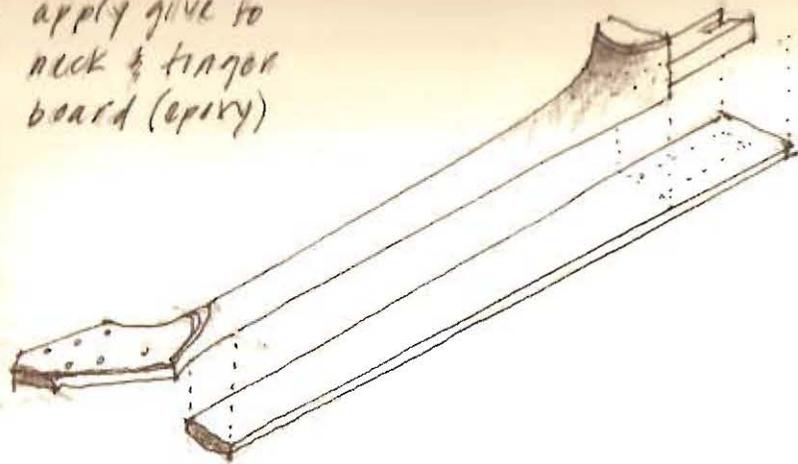
6. carve final neck shape

7. add bocote heel cap (super glue)

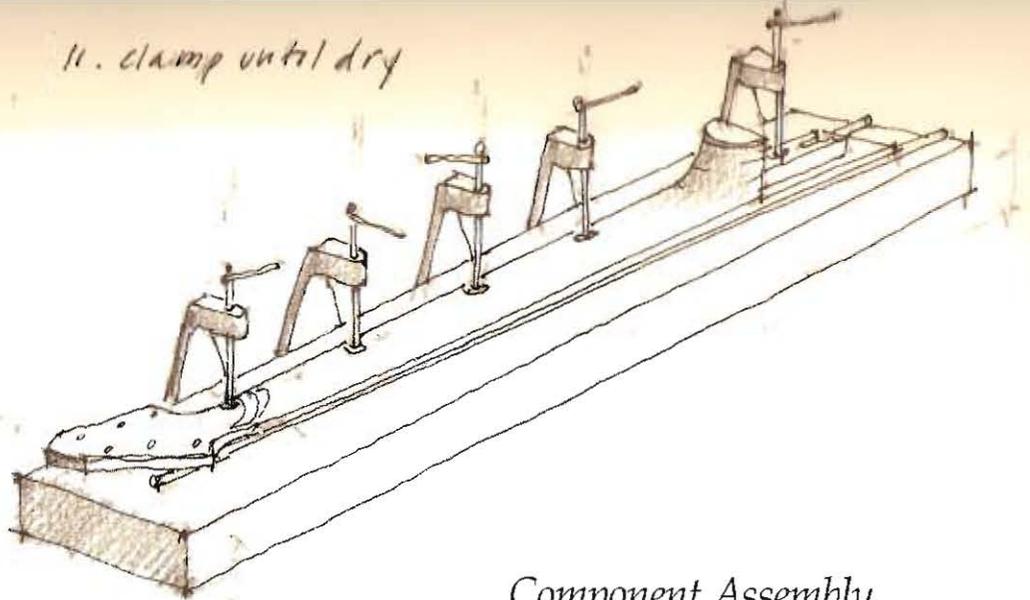


8. install truss rod & plywood filler strip (titebond)

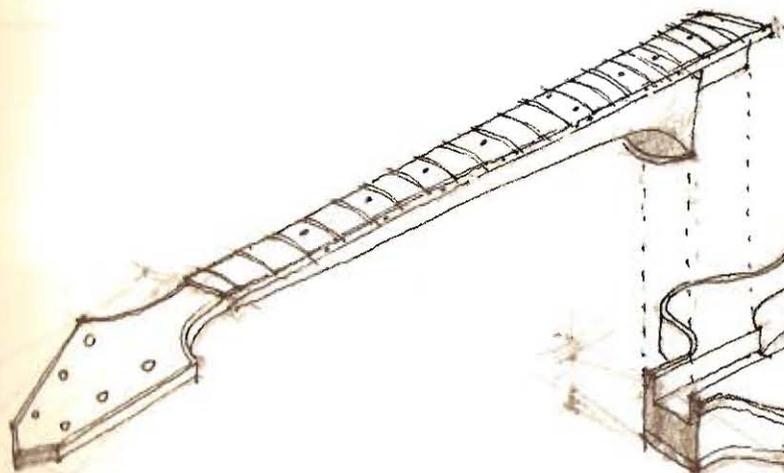
10. align & apply glue to neck & finger board (epoxy)



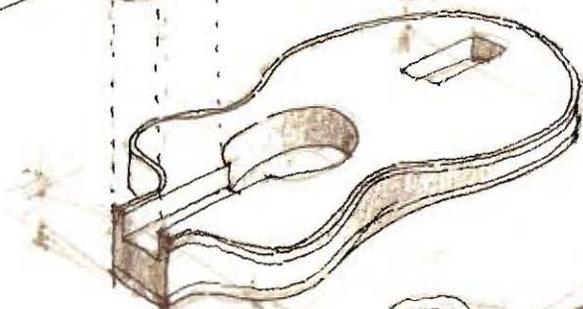
11. clamp until dry



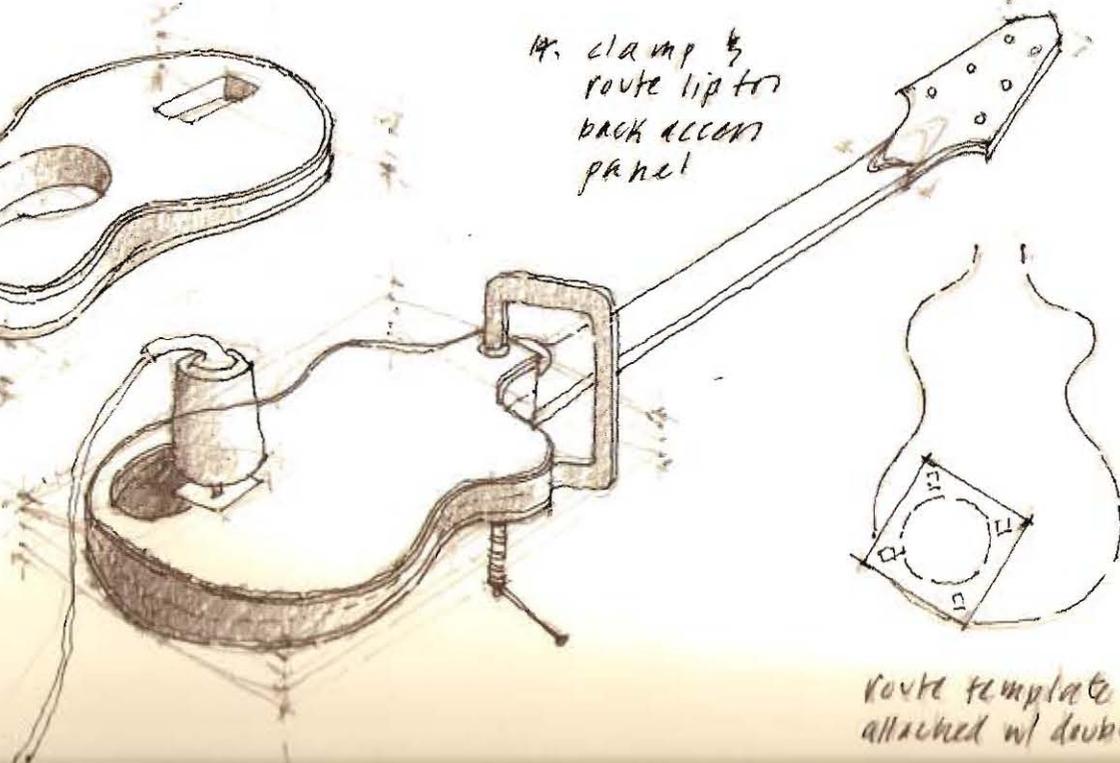
### Component Assembly (Continued)



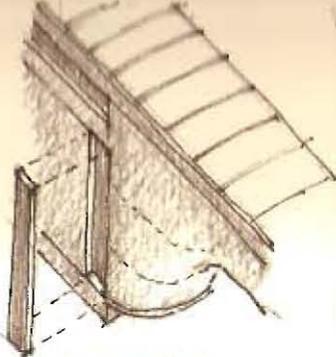
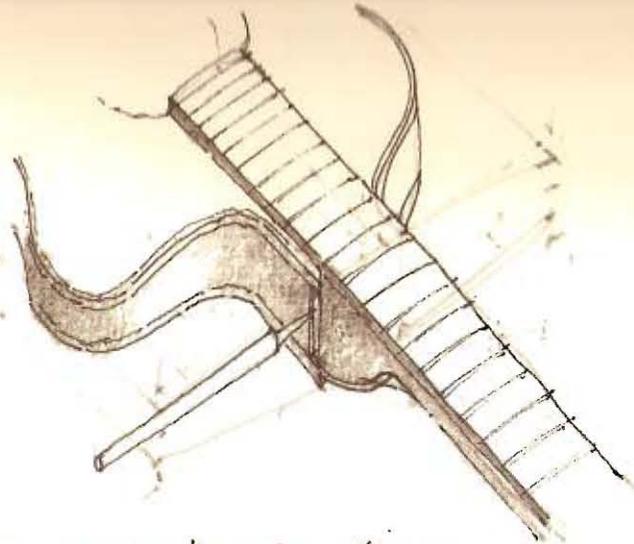
12. glue-up neck to body (epoxy)



14. clamp & route lip for back access panel

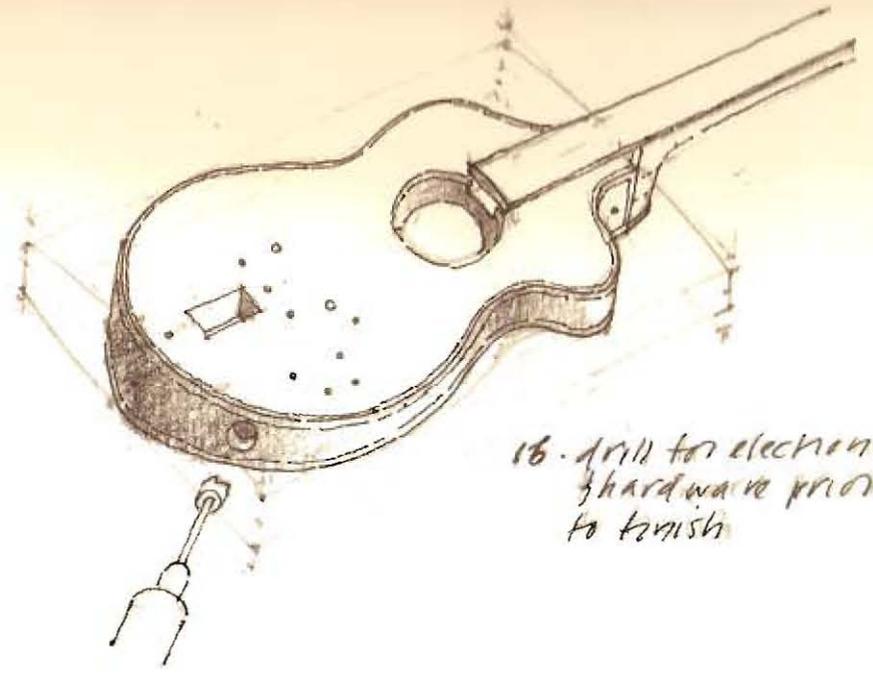


route template attached w/ double sticks



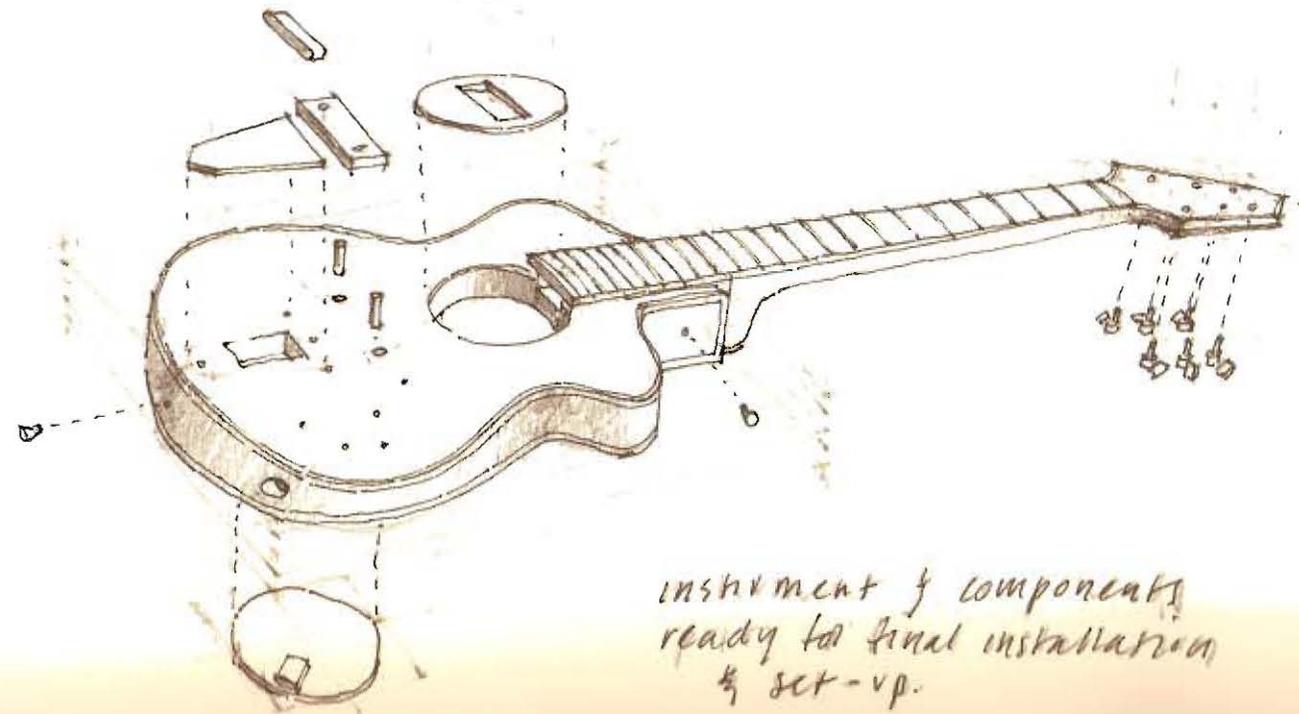
detail

15. score for binding



16. drill for electronics hardware prior to finish

Final Assembly & After Finish Applications



instrument & components ready for final installation & set-up.

*Prepared for Publication by*

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