Bluestem Tackhead Banjo Plan

Scale / size:	1:1 (Drawing border 37" X 20")
Drawn by:	Randy Cordle
Date:	July 2018, revision 1.05
File:	Bluestem Banjo Plan Tackhead.dcd

This drawing is provided as a companion to the pictorial construction guide, "Complete Guide For Building A tackhead Banjo", detailing the construction this banjo in over 100 photos and descriptive text, and available (FREE!) at:
www.banjohangout.org/topic/343500

Drawing may not be re-produced, copied, or used for any purpose other than individual use without the express written permission of the author.

As Built Details:
Five walnut layers (7/64") to make rim with 1/2" wall thickness
12" by 2-3/4" (total) rim with simple rounded over edges (no separate tone ring)
3/16" by 5/16" by 1-3/8" nut
Asymetric "paddle head" peg head (no overlay)
Wooden violin friction peg tuners for all strings
Flat sawn walnut neck-through design with Dobson style heel
25-1/2" scale length
Neck finish: Heat infused 100% Beeswax or heat infused 100% Carnauba Wax finish
Rim finish: 3 applications MinWax Wipe-on Satin polyurethane, light 0000 steel wool rub
1/16" dots between 1st and 2nd string at actual fret locations 3, 5, 7, 10, and 12
Strings / tuning: Aquila Nylgut Classics / eAEAB

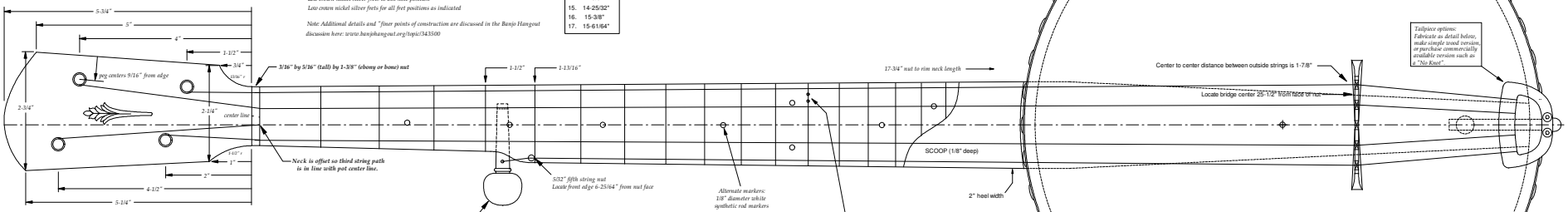
Possible alternate configurations:
1/8" fingerboard position markers and 1/16" side dot markers
"Flush Fret" inlaid contrasting wood position markers
Low crown nickel silver frets to 8th note position
Low crown nickel silver frets for all fret positions as indicated

Note: Additional details and "finer points of construction are discussed in the Banjo Hangout discussion here: www.banjohangout.org/topic/343500

Distance from nut: for 25-1/2" Scale:	
1.	1-7/16"
2.	2-25/32"
3.	4-1/16"
4.	5-17/64"
5.	6-25/64"
6.	7-15/32"
7.	8-31/64"
8.	9-7/16"
9.	10-11/32"
10.	11-3/16"
11.	11-63/64"
12.	12-3/4"
13.	13-15/32"
14.	14-9/64"
15.	14-25/32"
16.	15-3/8"
17.	15-61/64"

Measurement of fret position distances:
My tape measure looks like this, how do I measure to a 64th inch?

Split the distance between the 16th inch divisions for 32nd inch measurements, example 1-13/32"
Split the "visualized" distance again for 64th inch measurements, example 1-25/64"



48 - 3/8" tacks (adjust numbers as needed)
Longer tacks can be shortened to desired length.

Medium 18" goat hide obtained from:
www.goatskins.com
They are a Dejembe drum specially supplier located in Knoxville, Tennessee.

Tailpiece options:
Fabricate as detail below, make simple wood version, or purchase commercially available version such as a "No Knot".

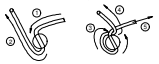
If fretless fingerboard is used, a single (or double) 1/16" inlay 12-3/4" from nut face is handy.
If the string is noted at the inlay position, the note should sound 1 octave higher than the open string if the bridge is located at the designed 25-1/2" scale length.
Slide bridge toward the neck or bridge until the notes agree.
If no frets or markers have been used the only reason to properly locate the bridge is so scale agrees with the fifth string nut position.
NOTE: This banjo was built using 1/16" dot markers at 3, 5, 7, 10, and 12th fret positions.
Place the dots where FRETS would be located, NOT in the normal "in between the frets" locations.

Optional: 8" x 3/4" x 3/16" sculpted Garolite XX opaque black armrest
(See text / photos for details)
Material available from McMaster-Carr

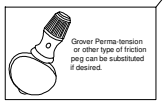
Armrest attached with (4) 1/2" long #8 pan head sheet metal screws through (4) small 3/4" by 3/4" by 1/2" .032" brass brackets.
Brackets are made from brass strip from hobby store.
Screw brackets to rim and bond armrest with J.B. Weld epoxy.

Easy no-slip stringing:

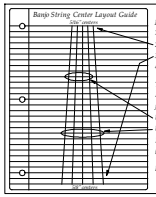
Bass side shown, reverse for treble side.



1. Feed string through forward angled tuner hole.
2. Wrap loose end of string around toward the nut.
3. Feed loose end under the string...
4. pull upward.
5. Apply tension to string to hold loose end in place while winding string to pitch.



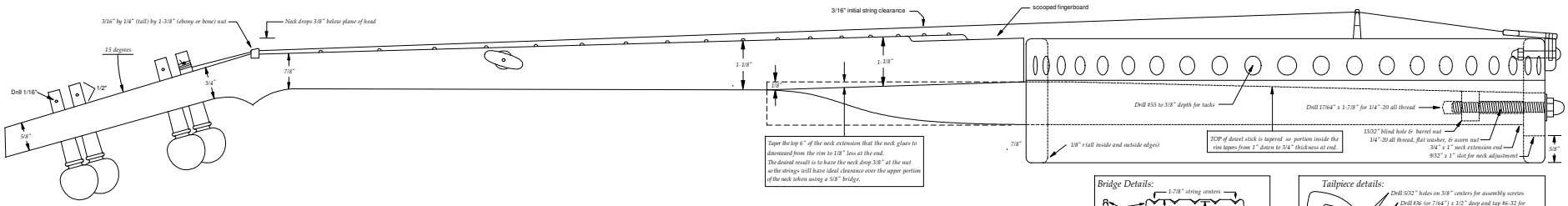
Grover Perma-tension or other type of friction peg can be substituted if desired.



Make your own string center layout guide:
1. Draw a vertical line down the sheet center.
2. Add 2 points on 5/16" centers to the left and right of vertical line.
3. Add 2 points on 5/8" centers, left and right of vertical at bottom.
4. Connect the points as shown.

To use:
Measure along the horizontal lines to find your desired string center distance.
Use four lines for nut spacing distance.
Use five lines for bridge spacing distance.
Fold paper along the selected line and transfer the points directly to your nut or bridge.

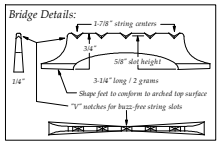
Better yet, just print the full size guide available as: "Bluestem Banjo String Center Layout Guide.pdf"



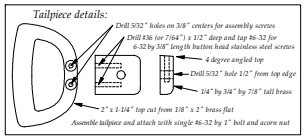
Taper the top 6" of the neck extension that the neck glues to downward from the rim to 1/8" loss at the end.
The desired result is to have the neck drop 3/8" at the nut so the strings will have ideal clearance over the upper portion of the neck when using a 5/8" bridge.

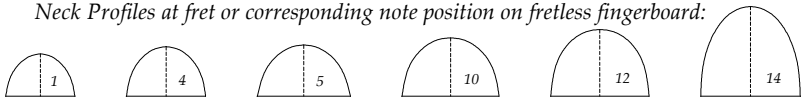
TOP of dowel stick is tapered so portion inside the rim tapers from 1" down to 3/4" thickness at end.

Bridge Details:



Tailpiece details:



Assemble tailpiece and attach with single #6-32 by 1" bolt and acorn nut

Neck Profiles at fret or corresponding note position on fretless fingerboard: