

The
Cellotar
— est. 2012 —
BOWSTICK BUILDER'S KIT

PLANS & PRINTABLE TEMPLATES



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AMAZINGLY AWESOME AND
ATTRACTIVE PERSON, FROM**

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BACKGROUND AND HISTORY

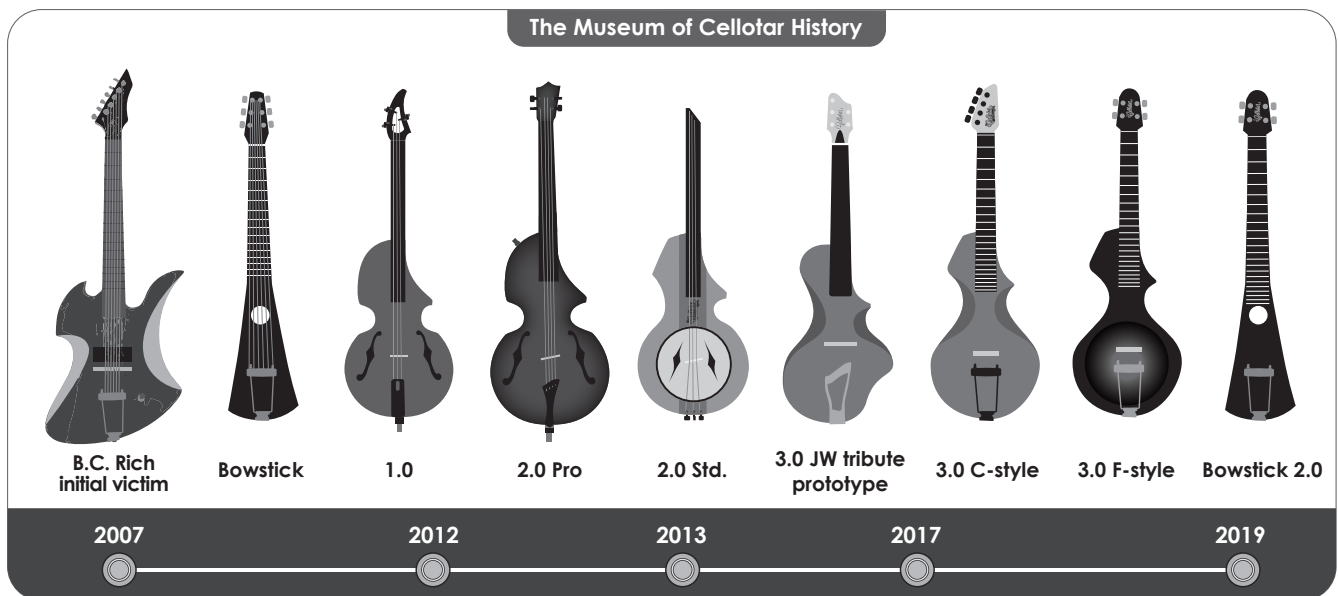
The Cellotar is a guitar-tuned, fretted cello/guitar hybrid bowed instrument that I created as a cost-effective solution for guitar players to be able to record and perform real bowed strings sounds with minimal time investment. The inspiration for it harkens back to 2006 when I ran across the TogaMan GuitarViol online and became obsessed with the idea of having a bowed guitar.

In early 2007, one of those music/movie stores was going out of business in our local mall, and had B.C. Rich Bronze single-pickup mockingbird starter guitar packs on sale for \$99. Fortunately for me, and unfortunately for that Mockingbird, I bought one of those

packs that day and took it home to do terrible things to it.

Not too much later, I had removed the frets, tried to sand the fingerboard into a curve, reinstalled the first 5-7 frets on the barely curved fingerboard, installed a jazz guitar tailpiece, and fashioned a curved bridge. The thing barely played, and sounded even worse (as it was “amplified” by its flat single humbucker pickup, which is totally wrong in every way for a bowed string instrument).

Fast-forward to 2019, and as you can see in the diagram below, it’s been a long road—but we’re finally here. Let’s get building.



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PARTS LIST FOR BOWSTICK

	Part	Where to find	Cost
1.	cheapo knockoff backpacker guitar	ebay or amazon	~ \$30
2.	beginner 1/2 scale cello bow	ebay or amazon	~ \$20
3.	cello rosin (sticky stuff that makes bow work)	ebay (or like \$6 on amazon)	~ \$1
4.	3/4 or 4/4 cello bridge	ebay (or like \$8 on amazon)	~ \$2.50
5.	string retainer bar with screws	ebay (or like \$5 on amazon)	~ \$1
6.	Merano 1/4 cello string set (or other cheap set)	ebay (or like \$10 on amazon)	~ \$5
7.	couple dozen #4 1" zinc wood screws	Lowe's / Home Depot	~ \$3
8.	baggie of 100 black 4" zip ties	Lowe's / Home Depot	~ \$4
		TOTAL (without new tuners or tailpiece):	~ \$67
9.	jazz guitar SHORT trapeze tailpiece + screws	ebay / amazon (or sub. hardware store gate latch)	~ \$7
10.	SEALED back replacement tuners	ebay or amazon	~ \$7
		TOTAL (with new tuners and tailpiece):	~ \$80

Optional upgrades for extra scratch:

pre-soldered dual-head piezo pickup system	jjb-electronics.com PPS-200—basic, sounds great jjb-electronics.com VTP-200, with volume/tone	~ \$23 or ~ \$40
electric guitar pickup with adjustable pole pieces (so you can adjust height per string to even out volume)	amazon, ebay... *note: you wil need to use d'addario Chromes flatwound guitar strings instead of cello strings for this to work, and it will only sound good for pluck/strum	varies

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REQUIRED TOOLS LIST

FOR BOWSTICK

So here's the thing with tools... If you don't already have a huge collection of them, someone you know does--and you can probably just get away with **borrowing what you need** from that person for this project. Your dad, grandpa, neighbor, friend--someone you know has all this stuff and more. Go talk to them, then you don't have to pay any of the costs on this page. YW.

Tool

Where to find

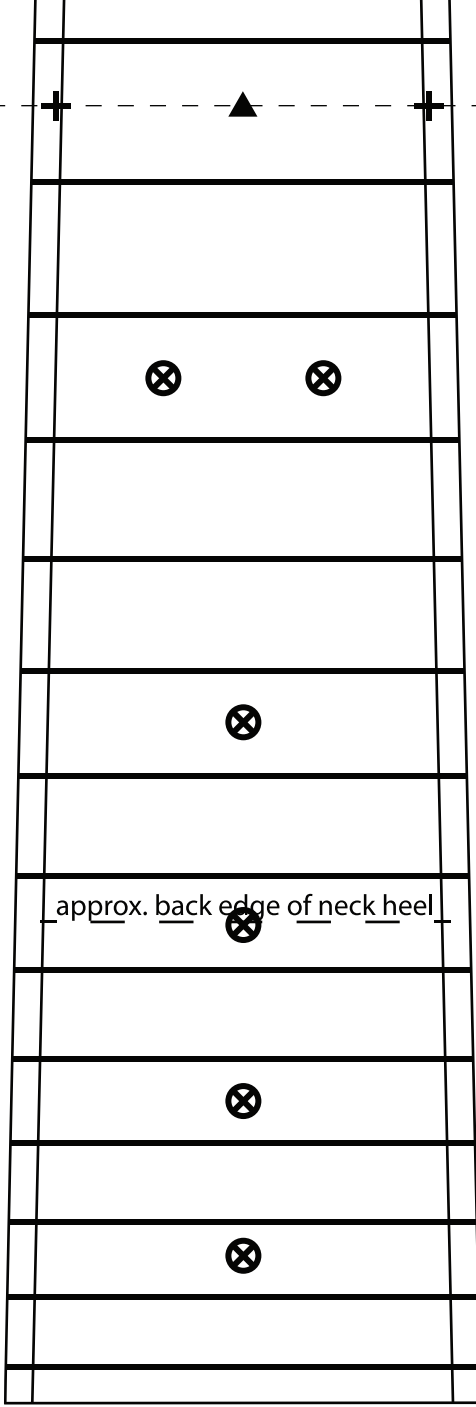
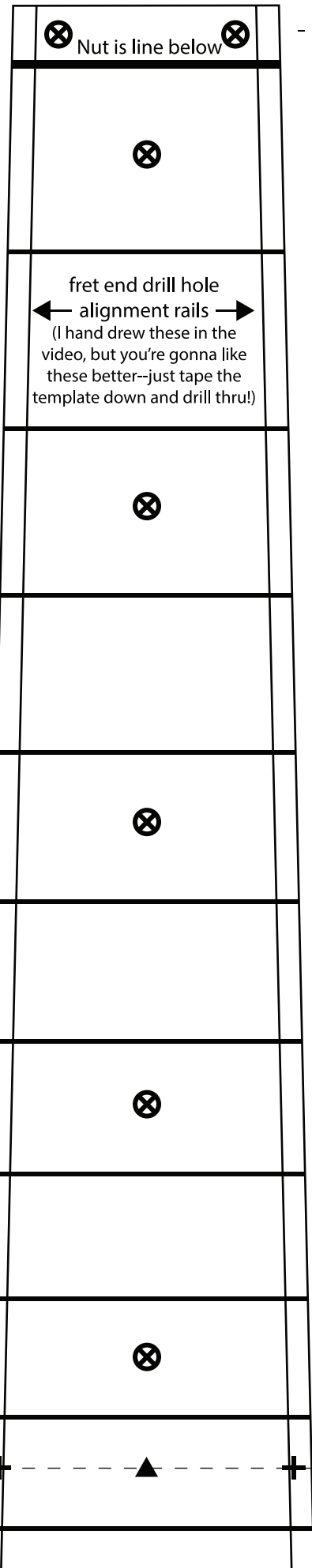
Cost

palm / mouse / detail sander and various grits of fitted sanding sheets (velcro back)	amazon, or \$20 at walmart/lowe's/home depot...or sand by hand with sandpaper if you hate life	~ \$15
small and medium philips head screwdrivers	they're everywhere... just look around	FREE
basic electric drill and various wood/metal bits	amazon, walmart, lowe's, home depot	~ \$20
some higher-grit "by-hand" sandpaper	amazon, walmart, lowe's, home depot	~ \$5
freaking safety glasses (don't ruin your eyes)	amazon, walmart, lowe's, home depot	~ \$10-15
ruler, yardstick, scissors, office tape, pencils, sharpee markers... you have these somewhere		FREE
duct tape and a set of files for the nut/bridge	amazon, walmart, lowe's, home depot	~ \$15
rust-o-leum black lacquer	walmart, gurl!	~ \$5
paper towels, computer printer & ink/paper	oh c'mon	FREE

Total if you fail at the borrowing thing: ~\$75

Optional tools for more awesome:

bench drill press (instead of a lame hand drill)	seems that all the cool makers use these, um yard sale?	~ \$?
waterslide decal sheets, mod podge, spray adhesive	amazon, ebay, craft stores, mod/spray at walmart	~ \$40



IMPERIAL:

22.000" fret scale

fret	from nut	fret to fret
1	1.235"	1.235" (nut-1)
2	2.400"	1.165" (1-2)
3	3.500"	1.100" (2-3)
4	4.539"	1.038" (3-4)
5	5.519"	0.980" (4-5)
6	6.444"	0.925" (5-6)
7	7.317"	0.873" (6-7)
8	8.141"	0.824" (7-8)
9	8.919"	0.778" (8-9)
10	9.653"	0.734" (9-10)
11	10.346"	0.693" (10-11)
12*	11.000"	0.654" (11-12)
13	11.617"	0.617" (12-13)
14	12.200"	0.583" (13-14)
15	12.750"	0.550" (14-15)
16	13.269"	0.519" (15-16)
17	13.759"	0.490" (16-17)
18	14.222"	0.463" (17-18)
19	14.658"	0.437" (18-19)
20	15.070"	0.412" (19-20)
21	15.459"	0.389" (20-21)
22	15.826"	0.367" (21-22)

* Frets that are bold are "octaves".

METRIC:

558.800mm fret scale

fret	from nut	fret to fret
1	31.363mm	31.363mm (nut-1)
2	60.966mm	29.603mm (1-2)
3	88.907mm	27.941mm (2-3)
4	115.280mm	26.373mm (3-4)
5	140.173mm	24.893mm (4-5)
6	163.669mm	23.496mm (5-6)
7	185.846mm	22.177mm (6-7)
8	206.778mm	20.932mm (7-8)
9	226.536mm	19.757mm (8-9)
10	245.184mm	18.649mm (9-10)
11	262.786mm	17.602mm (10-11)
12*	279.400mm	16.614mm (11-12)
13	295.082mm	15.682mm (12-13)
14	309.883mm	14.801mm (13-14)
15	323.854mm	13.971mm (14-15)
16	337.040mm	13.187mm (15-16)
17	349.486mm	12.446mm (16-17)
18	361.234mm	11.748mm (17-18)
19	372.323mm	11.089mm (18-19)
20	382.789mm	10.466mm (19-20)
21	392.668mm	9.879mm (20-21)
22	401.992mm	9.324mm (21-22)

* Frets that are bold are "octaves".

MEASUREMENTS TAKEN FROM:

<http://www.stewmac.com/FretCalculator>

Directions:

Cut out the two segments of fretboard template and tape together using clear office tape where the dashed line, two crosses and triangle meet. I recommend overlapping one piece over the other by a few mm to get the symbols perfectly aligned.

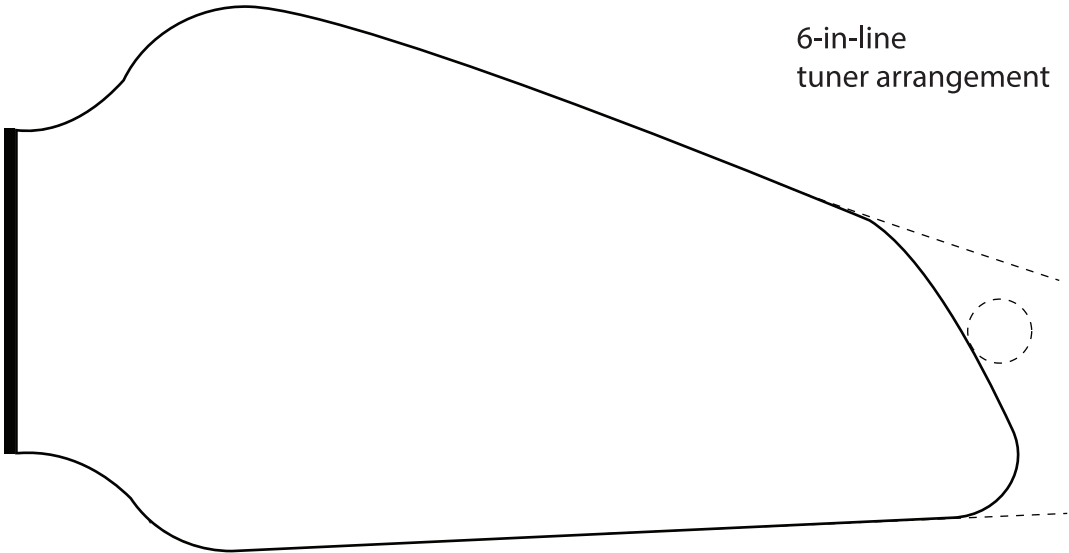
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FRETBOARD TEMPLATE

22 FRET

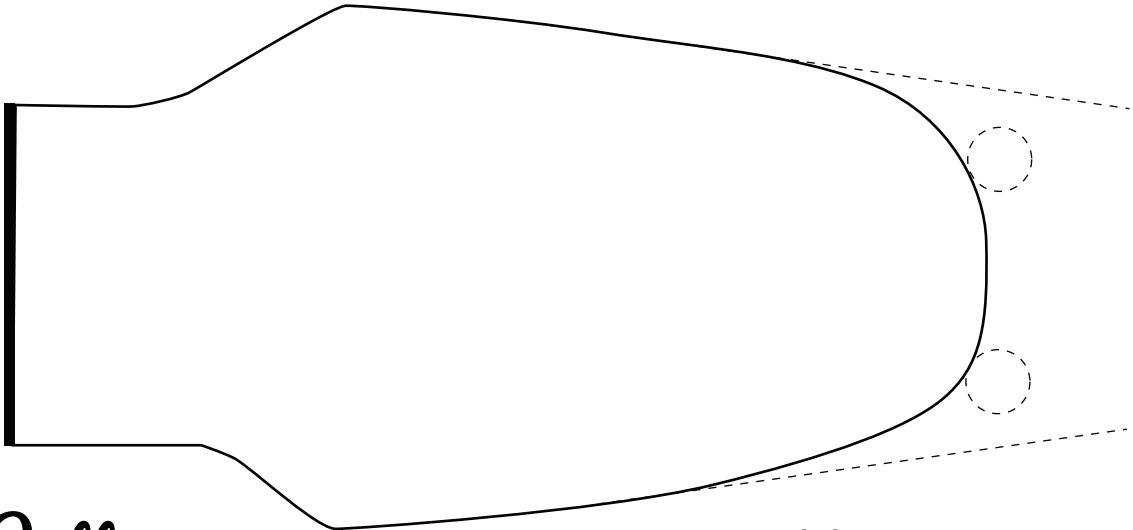
PG. 1 OF 1

6-in-line
tuner arrangement

approx. nut position



approx. nut position



3x3
tuner arrangement

HEADSTOCK LOGOS (NORMAL AND REVERSED)

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Plain

intello
— stOS .ks —

The
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Blob

intello
— stOS .ks —

The
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— est. 2012 —

Outlined

intello
— stOS .ks —

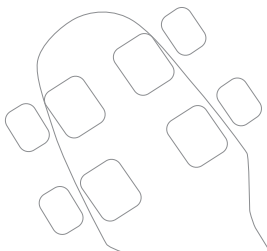
Reverse Blobs

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intello
— stOS .ks intello —

The
Bellotar
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intello
— stOS .ks —



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**VIDEO TUTORIALS FOR HOW
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**FOR SUPPORT, QUESTIONS,
OR TO REPORT ISSUES WITH THESE
PLANS, EMAIL ME DIRECTLY AT:**

JESSEBOND@GMAIL.COM

