

# Electric Lightning Cello Instructions



The cello is designed for a mostly screwless assembly with the only screws holding the endpin.

## Parts list:

- M5 Machine Screws: 2
- M5 Wing nuts: 2
- 4/4 size cello strings
- 2 left 2 right guitar tuning pegs
- Preamp
- Piezo
- 2 Steel rods 3/8 in by 36 in

## Tools:

- Hack saw
- Hammer (optional)
- Small engraver (recommended)
- Sandpaper

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- Flat file
- Box cutter (or a sharp knife)
- E6000 (Hot glue works fine but does not hold quite as well)

## Printing

Use tree supports

- Keep the supports out of the middle rod hole.
- Regular supports are harder to take off.

15% infill

- Changing the infill might make it more brittle or heavier.

Layer height: 0.2 mm

Perimeter shells: 2

Use the same settings for all the pieces. I resin printed my bridge but both filament and resin works just fine.

## Post Printing

The connections need to be hammered together or sanded. Most of them are somewhat easy to put together except the N connection which needs to be sanded. I used the engraver to sand

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the pieces down. It was faster and worked just fine. The bridge sides need to be sanded down.



Sand from the white line down.

## Assembly

First make sure the bar goes through the parts well. Then put together the first few pieces, Part 1, Part 2, Part 3, and 4th Position. You may have to hammer them on the floor to put them together. Then put the parts 4 and 5 together. These will need more sanding and need to be hammered together. Then connect part 6 to part 4 and 5. After that you will need to slide all the parts onto the bar before connecting all the parts together.

## Bridge and Tuning Pegs

Put on the bridge with the piezo in the small slot at the bottom. It should be somewhat easy to put on and if it is not sand it more. Then put the tuners on and thread the strings on through the top holes and down to the tuner. Make sure the strings go into their spots on the nut and bridge. The spot for the c string on the nut might have to be slightly lowered with the engraver or a file.

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## Preamp

First put the preamp inside the large hole in the box and screw it down, then put the plug in the small circular hole and use the nut to hold it tight. Fit the preamp box into the little holes on the bottom of part 3 and 4 with a little glue.



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## Lower Chest Rest

Use the E6000 glue to glue the chest rest on.



## Endpin

Put the endpin through the hole under the tuning pegs and all the way up the body. It fits all the way up the cello for travel. The bar can then be used as a handle. Put the m5 screws into the two holes and use the wing nuts to tighten down on the rod.

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## Side Lightning

Push the side lightning on. It should not need glue but it should not be too hard to get on.

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## Parts Lists

Piezo:

<https://a.co/d/fKMHEt8>

Filament:

<https://a.co/d/i6pzaI0>

Strings:

<https://a.co/d/1QhEO2p>

The screws

<https://a.co/d/izxljen>

Tuning keys

<https://a.co/d/3znAKLU>

Wing nuts

<https://a.co/d/aaNtqvO>

Preamp

<https://a.co/d/3XCU5Sx>

Steel Rod

<https://a.co/d/1Xv3QNo>