



## Cable Spool and Reel with Keyway and Handle Retention



Lord Radford

[VIEW IN BROWSER](#)

updated 15. 6. 2023 | published 15. 6. 2023

### Summary

An easy print spool for small amounts of cable with a reel to lay or reel back the cable.

[Hobby & Makers](#) > [Other Ideas](#)

Tags: [cable](#) [cablemanagement](#) [cableorganizer](#) [reel](#) [spool](#)

I created this model to store the cable I use for hooking e-matches to my DIY electronic fireworks rig. Each currently has about 15m of bog standard speaker cable on in. The spools are easy to churn out and put together. They have a key but I believe this can be removed very easily as it is a separate body in the 3mf file. This is paired with a reel that the spools fit into. the handle is removed, the spool lid in then the handle inserted lining up the keyway. This allows you to very easily reel in cables very quickly. I built a retention system to keep the handle locked into the reel using some BB's and a spring but this mechanism is not at all necessary, just an ease of use improvement.

Hardware list:

Spool:

1. M3 x 10mm Self Tapping Screw. 2 off per spool.

Reel (5 onwards are for the retention system):

1. M3 x 20mm Screw 6 off.
2. M3 Nut 6 off
3. M4 x 8mm Screw 1 off (you will also need threadlock or superglue for this)
4. M4 Nut 1 off
5. M3 x 18mm Self Tapping Screw 1 off
6. Spring approx 5mm diameter 15mm length 1 off
7. 6mm BB/Airsoft pellet 2 off

Instructions:

Spool:

1. Line up both sides of the spool so the Keys in the central hole line up.
2. Secure the 2 sides together using the M3 x 10mm Self Tapping Screws.

Reel (Step 5 onwards are for the retention system):

1. Insert M3 nuts into the slots in Reeler Side 2
2. Line up the holes in Reeler Side 1 and 2 then insert and tighten M3 x 20mm screws
3. Drop the M4 x 8mm screw into Handle part 3 and the M4 nut into the Hexagonal hole in handle part 2.
4. Screw handle parts 2 and 3 together leaving the screw just loose enough for the plastic parts to spin freely. Add a drop of glue or threadlock at the back of the nut to secure the nut and screw together (you should avoid twisting the handle until the glue is set).
5. These following steps are fiddly but easy enough if you take your time. Please use the photos for reference. Place a BB in the slot on Handle part 2 then place the spring in the slot with it.
6. Take the 2nd BB and use it to compress the spring opposite the 1st BB. these should all sit in the slot. Use a finger and thumb on each BB and another on top to hold them in place. Slide Handle part 1 on over the top so the slot lines up and the location features engage.
7. Whilst holding the parts together use the other hand to insert and tighten the M3 x 18 self tapping screw down the middle. This should work its way past the spring very easily.

## Printing Notes:

- I printed the spools in cheap PLA but the reel in PETG for a bit of added durability
- I printed at 0.2mm layer height with 10% infill.
- No supports are required for any of the parts
- Both sides of the spool will fit the MK3s bed together and I have included a file of them together the way I printed them.

Please let me know if there are any issues. Its actually been a couple of years since I made this but I'm 99% sure I have all the info correct.

Happy Printing

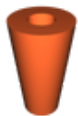
## Model files



**spool-shaft-2.3mf**



**spool-face-2.3mf**



**handle-part-3.stl**



**reeler-side-2.stl**



**handle-part-2.stl**



**reeler-side-1.stl**



**handle-part-1.stl**

---



**pla-spool-print.3mf**

---



**reel-handle-part-2-v3.f3d**

---



**firework-reeler-side-1-handle-v2.f3d**

---



**reel-handle-part-1-spindle-v3.f3d**

---



**firework-spool-reel-part-2-v4.f3d**

---



**cable-spool-modeled-with-key-v3.f3d**

---

## License ©

This work is licensed under a  
**Creative Commons (4.0 International License)**



**Attribution-ShareAlike**

---

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✓ | Commercial Use
- ✓ | Free Cultural Works
- ✓ | Meets Open Definition

