

Hidden Gold

A fly tier's guide to recycling a dead CFL globe

By Bruce Curry



A WORD OF CAUTION:

Working with Compact Fluorescent Lamps can be a hazardous task. They shatter easily and are filled with mercury vapour which can be detrimental to your health if inhaled, Google "[CFL hazards](#)" for more information.

Surgical instruments required



Sterilisation is not necessary

1. Side Cutters- small, general purpose ones are OK.
2. Flat Screwdriver #x.
3. Junior Hacksaw, you can also use a larger one, but more care is required in Step 2.
4. Pair of pliers. Again, a small pair of general purpose pliers will be ok for this task.

Lobotomising the globe

1. Wrap the globe (glass part) in an old piece of cloth, when starting to saw the base of the globe. The best place to start cutting, is the join line in the base.



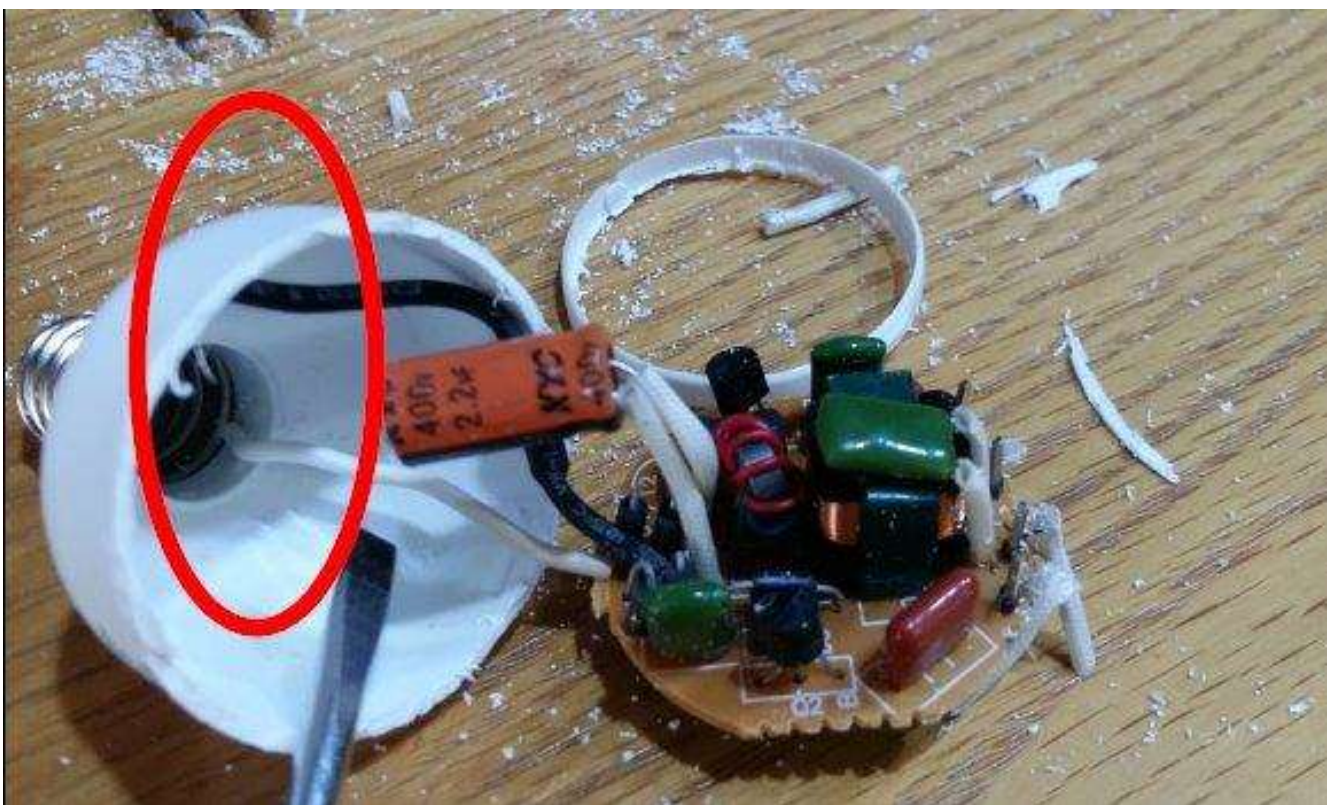
Lobotomising the globe using the rim as a cutting guide

2. Cut around the rim of the globe.
3. Alternatively, you can place the base of the globe in a vice, with the bulk of the base within the jaws of the vice and S L O W L Y tighten the vice until you hear the sound of the plastic cracking.
4. Check that the top portion of the globe can be separated from the base.
5. There will be 4 or more wires going from the globe itself to the Printed Circuit Board (PCB) enclosed in the base. Cut these wires carefully, see pic below. The CFL globe must be disposed of correctly ie sent for recycling.



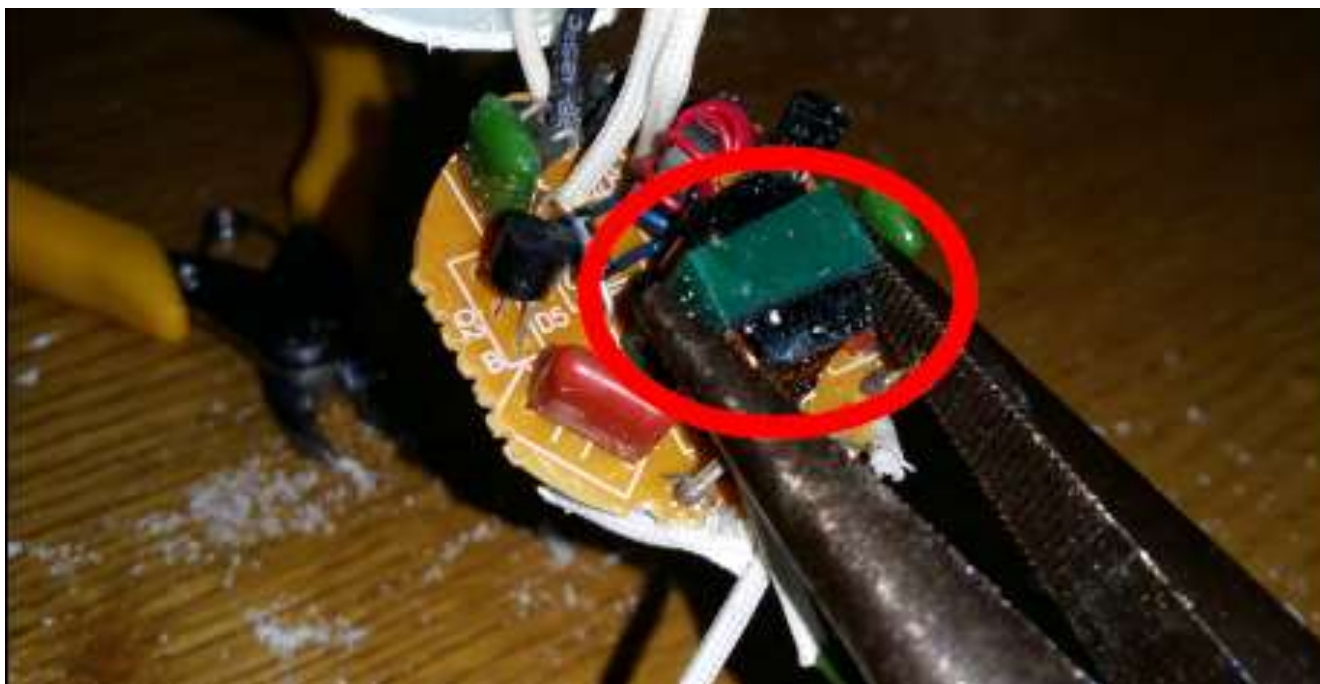
Severing the spinal cord. Fortunately the choice of wires to cut first is not critical

6. Using the screwdriver, pry the PCB out of the base.
7. Again, there are 2 wires running from the metal connectors on the base to the PCB. These too, need to be cut and the PCB removed from the base. See pic below:



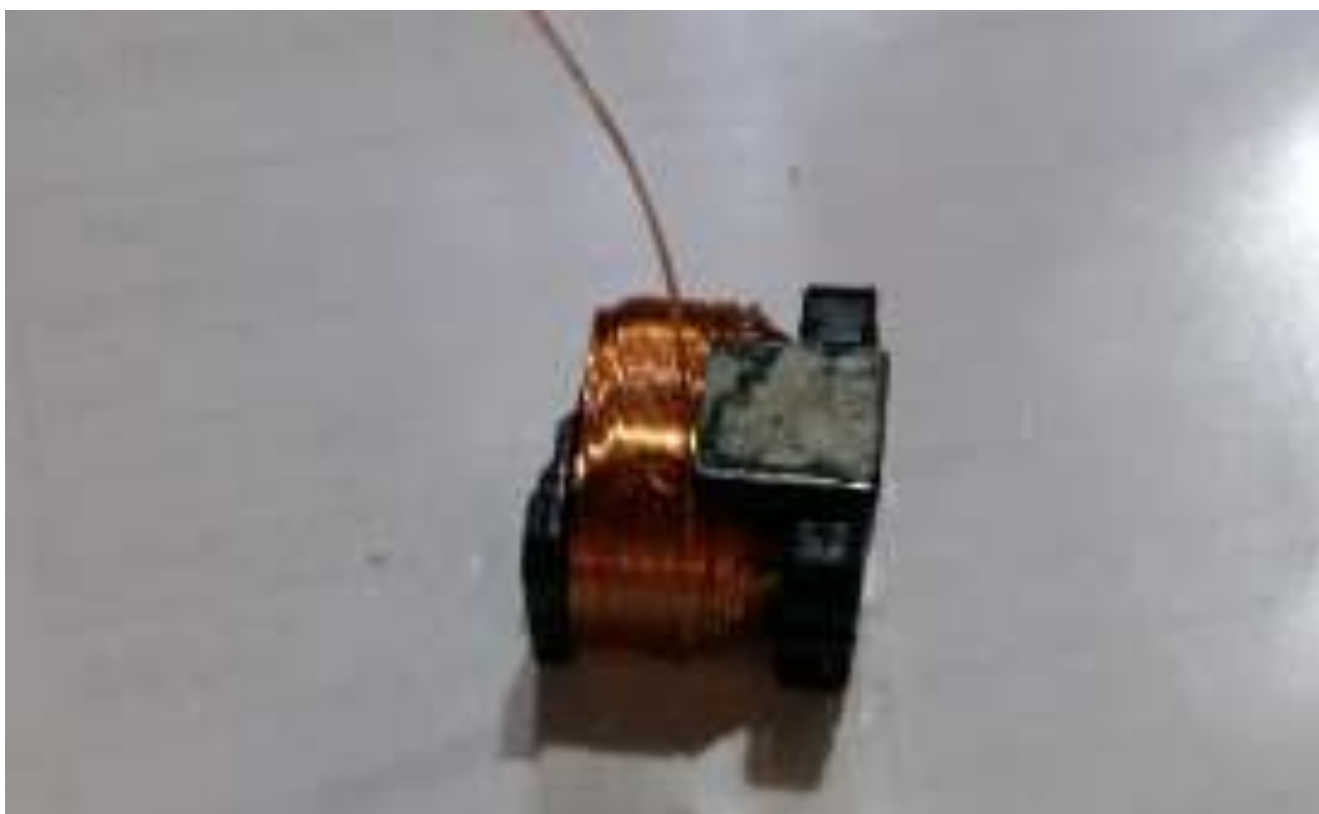
More wires to cut. Lobotomy almost complete

8. Locate the transformer, generally a small square object, see pic below. This is our pot of gold at the end of the rainbow.
9. Grab them with pliers and put some pressure on the black material surrounding the core. This is a ferrite material and should crack easily. Remove all of tape holding the transformer together and carefully pull the transformer off the PCB-if you have a soldering iron you can de-solder it from the PCB.



Scrunch the crunch - feel the squeeze

10. Remove any remaining ferrite material and you should end up with something like this:-



Voila! Fly Tying material

Notes

1. The thickness of the copper wire on the transformer bobbin is dependent on the wattage of the globe, higher wattage globes will provide thicker wire.
2. Below is a picture of other PCB's, transformers have been highlighted, that have been liberated from different manufacturers CFL's.



3. Mains LED globes have a similar arrangement, and a similar dis-assembly procedure, they are far healthier to handle. However, the transformer is wrapped in a much finer wire. .
4. Below is a picture of an LED down lighter, with its guts removed.



5. AS AN ASIDE, when dismantling CFL's, save the small ferrite bead, by cutting off any wires holding it to the PCB, see highlighted below.



6. This can be used to make a Joule Thief, a device that uses dead batteries and can then make single LED torches for kids to play with not worrying about the batteries going flat. See:-
- https://en.wikipedia.org/wiki/Joule_thief
 - <https://www.instructables.com/id/Make-a-Joule-Thief>
 - <https://www.youtube.com/watch?v=0GVLnyTdkg>