

How to Replace a Cue Tip ... No Special Tools Required

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Things Required:

- block of wood (or any other material) with smooth edge surface.
- printer/copy paper.
- sandpaper sheets (100-200 grit for rough sanding, 300-500 grit for fine sanding, and 600+ or emery paper for fine sanding and cleaning).
- super glue gel.
- paper towels.
- hand towel.
- Scotch Magic tape.
- utility knife.
- new tip.
- tip shaper.
- los of patience, so you will **take your time and be careful** during the entire process.

I - Remove Old Tip

1. Cut off the current tip with utility knife, being careful to not damage the ferrule (or the fiber pad if there is one). You can cut straight through or roll the shaft back and forth as you cut to make it a little easier. Do not try to remove the entire tip on the first cut. Make sure you are cutting into the bottom of the tip but not too close to the ferrule. With more experience and care, you can cut closer to the ferrule on the first cut.

II - Scrape Ferrule

2. Carefully trim and scrape off the remaining tip material and any residue remaining on the flat end of the ferrule. Scrape with a sharp blade at an angle and flush with the top of the ferrule while turning the shaft, being very careful to not shave the ferrule shoulder, making passes over only the far $\frac{1}{2}$ or $\frac{3}{4}$ of the ferrule with each pass. It is best to scrape away from your fingers to reduce the risk of cutting yourself. With final scraping passes, you can scrape with the blade perpendicular to the ferrule, or at a slight angle scraping in the non-cutting direction, to help remove any remaining residue, again being careful to keep the blade flush to the ferrule. Turn the shaft after each scraping pass. You can also do a light sanding by applying pressure to the center of the ferrule with a finger on a piece of medium-grit sandpaper and turning the shaft or your finger, being very careful to not sand down the edges of the ferrule shoulder. You can also invert the shaft vertically on a piece of sandpaper on a flat floor or board and twist the shaft to lightly sand the ferrule end, being very careful to keep the shaft as vertical as possible, but this is a little risky. The light ferrule-end sanding will help the glue bond better. Make sure all tip material and glue is removed before continuing. You should also wipe off any dust on the top of the ferrule with a clean rag or paper towel (and optionally clean with acetone) to ensure a clean gluing surface.

III - Prepare Tip and Ferrule

3. Sand the back of the new tip so it will more easily absorb the glue. The new tip should have a larger diameter than the ferrule. If not, it is very difficult to end up with a perfectly centered tip. Be careful to not touch the bottom of the sanded tip or the top of the ferrule before gluing to keep the surfaces as clean as possible. Wipe the sanded tip on a paper towel to remove any dust or sanding debris.
4. Test the fit of the tip on the ferrule to make sure it is oversized and fits flat with no wobble while turning. If the ferrule surface is not flat and true, you should have somebody with a lathe help you get it flat again.

IV - Tape Ferrule

5. Tape around the ferrule to build up the diameter to the size of the new tip to make it easier to center the tip when gluing it on, and to keep the glue off the ferrule. Make sure the tape does not protrude beyond the ferrule (if it does you should trim it off), but get it as close to the end as possible. Make sure the tip can sit perfectly flat on the ferrule.

V - Glue New Tip On

6. Uniformly spread glue on sanded tip surface and place a small drop in the center so it will squeeze out uniformly without any bubbles or voids. It is best to use brand new glue that hasn't been on the shelf too long (i.e., purchase from a busy retailer like Walmart who replaces stock frequently).
7. Center the tip on the taped-wrapped ferrule with gentle turns and shifts, using your fingernails against the sides.
8. Gently press down the tip to get the glue to squeeze out uniformly, being careful to keep the tip centered. Gently wipe off excess squeezed-out glue with a paper towel. Optionally and quickly wrap tape around the bottom of the tip and taped-wrapped ferrule to help center and secure the tip.
9. Firmly press the tip down and hold pressure on the tip until the glue sets. You can do this by hand, or you can wedge the shaft under a table, maybe with the tip down on a board on the floor. Make sure the pressure on the tip is uniform with the shaft vertical. Alternatively, you can tie rubber bands to the shaft and pull them over the tip to apply holding pressure, but the force won't be as large and it probably won't be as uniform and centered as with the other approaches.
10. Give the glue time to cure, as recommended on the package.

VI – Remove Tape

11. Remove the tape, peeling away toward the tip, scraping and peeling with your fingernail or utility knife when necessary.

VII - Trim Tip

12. Using a utility knife, make rough cuts to get the tip down close to the final diameter, only removing only a small amount of tip at a time. Hold the shaft vertically with the tip down, and slowly trim a little at a time with a sawing motion, being careful to not apply too much force. Angle the blade (while still flush with the ferrule) to start the cutting to reduce the force required. Keeping downward pressure on the tip and use a small-cut sawing motion to reduce the likelihood of separating the glued tip edge from the ferrule.

VIII - Sand Tip

13. Apply a layer of tape to ferrule.
14. Put down a sheet or strip of the rough sandpaper (100-200 grit) on a flat surface.
15. Tape down two pieces of copy/prINTER paper across the sandpaper leaving about half the sandpaper exposed.
16. Get a wood block with a smooth edge surface and place it on the sandpaper, leaving only a tip-height width strip exposed between the block and cover paper.
17. Place the shaft down flat on the table with top of the tip against block.

18. Adjust the block position and angle to make sure the width of the exposed sandpaper is just the thickness of the tip over the whole block width, so only the side of the tip (and not the ferrule) touches the sandpaper, with the taped ferrule entirely on the paper.
19. To make it easier for the shaft to pivot with the joint end still, and to help keep the shaft roughly perpendicular to the block, you can support the joint end of the shaft on a towel or rubber pad. This will create a very slight bevel on the tip edges, but this is not an issue. Also, the slight bevel can help compensate for future tip mushrooming. The sanding and sealing procedure below can also be used to remove tip mushrooming that can occur with tip use, especially with a softer tip that compresses more with use.
20. Holding the shaft near the ferrule with the other hand on the block to keep everything in place (the sandpaper under the block also helps keep it from shifting) and rub the tip back and forth on the exposed strip of sandpaper, holding the ferrule with your fingers, turning the shaft periodically or during the motion (against the rubbing of the sandpaper). Move to a different part of the sandpaper (or shift the entire sheet of sandpaper) as necessary to maintain good abrasion. Keep the cue as perpendicular to the block as possible to prevent any ferrule damage. Also keep an eye on the ferrule tape to make sure it is not being sanded.
21. After the rough sanding down to a round shape close to the ferrule diameter, switch to the fine-grain sandpaper (300-500 grit) to smooth the side of the tip.

IX - Clean Up Tip and Ferrule

22. Remove the tape from the ferrule. If tip is not flush with the ferrule, you can re-tape the ferrule and sand some more, applying more pressure or using a thinner piece of cover paper. Leaving a ledge between the tip and ferrule is not good because it can catch on something and risk pulling the tip off. Also, with mushrooming and a ledge, the edge of the tip can tear with a large-tip-offset power shot hit.
23. Lightly sand the ferrule and tip edge with ultra-fine-grit sandpaper (600+ grit) or emery paper to make sure everything is smooth and clean.
24. To finish the tip, wet the side and rub it in the same way but on the cover paper rather than the sandpaper.

X - Shape and Chalk Tip

25. If the tip doesn't already have a dome shape, use a half-cylinder sander or sand paper curled in your hand to sand down as you turn the shaft to create a dome shape
26. Use a tip shaper to put the desired radius (dime or nickel) on the top of the tip.
27. Chalk the tip thoroughly and deeply.

Video Demonstration and Other Supporting Resources:

billiards.colostate.edu/faq/cue-tip/replacing