Microsun

Build Your Own Lamp Conversion Guide

Congratulations on your purchase of a Microsun Conversion kit, it includes all of the parts that you will need to convert most lamps into a lamp with Microsun's patented lighting technology. To complete the conversion you will need some basic tools in addition to the parts included in this kit.

Contents (included)

1. Microsun Gearpack (1)
2. Microsun Bulb (1)
3. SunStyle LED Bulbs (2)
4. Cord (1)
5. Felt (1)
6. Wire Nuts (2)
7. Allen Wrench (1)
8. Set Screw (1)
9. Safety Label (1)
10. $\frac{3}{8}$" Lock Washer (1)
11. $\frac{3}{8}$" Nut (1)
12. $\frac{1}{2}$" Lock Washer (1)
13. $\frac{1}{2}$" Nut (1)
14. Brass Check Ring (1)
15. Antique Brass Check Ring (1)
16. Nickel Check Ring (1)
17. Antique Brass $\frac{1}{2}$" to $\frac{1}{3}$" Reducer (1)
18. Nickel $\frac{1}{2}$" to $\frac{1}{3}$" Reducer (1)
19. $\frac{1}{3}$" x $\frac{5}{8}$" Nipple (1) - to be used with the nickel or brass reducer

Additional Tools (not included)

- Wire Cutters
- Wire Strippers
- # 1 Phillips Head Screwdriver
- $\frac{1}{2}$, $\frac{9}{16}$, and/or $\frac{11}{16}$ Wrench
- Heatgun or Hair dryer
- Craft knife or box cutter

Note It is highly recommended that a licensed electrician or lamp specialist complete the lamp conversion. Proceed at your own risk.

Step 1: Determine if your lamp is gearpack ready.

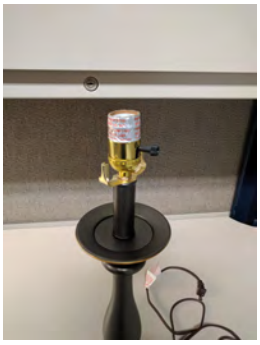
In order to convert your lamp into a Microsun lamp, you first need to determine whether it is ready for the Microsun gearpack. This is accomplished by removing the socket and harp saddle from the lamp which will expose the lamp's rod.

Part A: Ready your lamp.

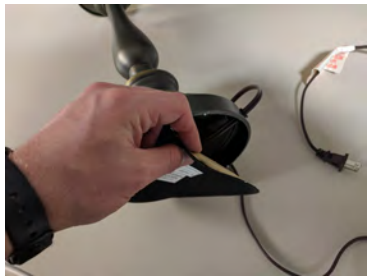
I. Begin by unplugging your lamp's power cord from the wall outlet.

II. Remove the lamp shade and bulb. (May require removal of a finial or ring.)



III. Remove any felt or backing from the bottom of your lamp.
(This will expose the lamp rod, counter weight, washers and nuts, and electrical cord in the base of your lamp.)



Part B: Remove the socket and harp saddle.

I. Locate the small screw at the bottom of the socket. (May not be present in all lamps.)

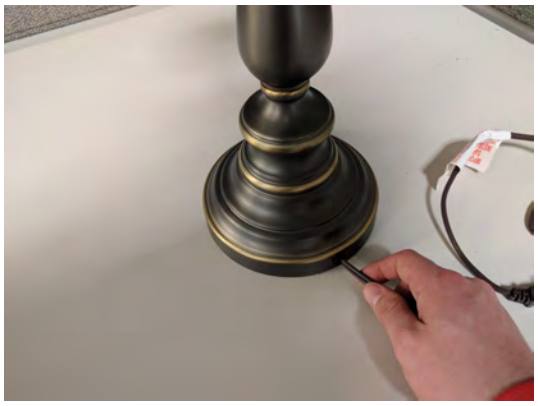
II. If the screw is present, remove it using the #1 Phillips head screwdriver.

III. Twist the socket counterclockwise to remove it.

Note Sockets are sometimes locked in place using an adhesive. If the socket is difficult to remove, you may need to use a heatgun or hairdryer to loosen any adhesive holding the socket in place.

IV. The socket's electrical cord should now be visible, use wire cutters to cut the cord and separate the socket from the lamp.

V. Pull the remaining electrical cord out of the lamp through the cord hole in the base.



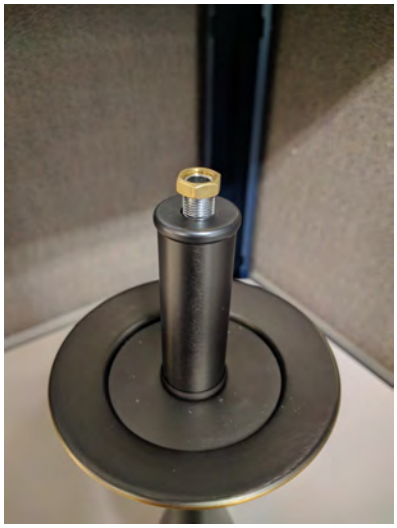
VI. Generally, there will be a harp saddle locked in place by a lock washer and nut. Use a wrench to unscrew the nut. Then remove the nut, lock washer, and harp saddle if present.

Part C: Check your lamp's rod.

Before you can continue with your lamp's conversion, you need to determine if your lamp is gearpack ready. This is mostly determined by the size of your lamp's rod. If your lamp has a $\frac{1}{8}$ IPS ($\frac{3}{8}$ " Diameter) lamp rod, then it is gearpack ready. If not, you will need to complete an additional step to make your lamp gearpack ready.

In order to determine the size of your lamp's rod, simply try threading the $\frac{1}{8}$ IPS nut (the smallest included nut with the smallest hole) onto the rod.

If the nut fits, you can continue on to step 3. If not, complete step 2 first.



Step 2: Making your lamp gearpack ready.

If the $\frac{1}{8}$ IPS nut did not fit on your lamp's rod, then your lamp's rod is a $\frac{1}{4}$ IPS ($\frac{1}{2}$ inch diameter) rod. You will need to add a reducer to your lamp to enable the gearpack to be attached to the rod.

I. Select either the nickel, or brass reducer and nipple from the components included in your conversion kit.
(You can select whichever reducer you prefer, but we recommend that you match the reducer's finish to the rest of your lamp.)

II. Attach the reducer to the lamp's rod by aligning the larger threaded hole with the rod and twisting it clockwise onto the rod.

III. Continue to twist the reducer clockwise until it is tight.
Note If a gap remains between the bottom of the reducer and your lamp, then your lamp's rod protrudes too far for the reducer. This can be solved by adjusting the lamp's rod, or adding a washer.

IV. Align the nipple with the threaded hole in the top of the reducer. Twist clockwise into the reducer.

Step 3: Attaching the gearpack.

Once your lamp is gearpack ready you can feed the gearpack's electrical cord through your lamp's rod and then twist the gearpack clockwise until it is seated on the top of your lamp. If the upper components of your lamp are loose from removing the socket and lamp harp, then it is recommended that you add a lock washer, jam nut and check ring before the gearpack.

I. Place a lock washer over the lamp's rod and down onto the top most part of your lamp.
(Steps I. through IV. are not necessary if you used a reducer to make your lamp gearpack ready in step 2.)

II. Thread the smaller $\frac{1}{8}$ IPS jam nut clockwise down over the rod until it is seated on the lock washer.

III. Use a wrench to tighten the nut down until all parts of your lamp are secure.

IV. Place the small check ring that best matches the finish of your lamp down over the nut and lock washer.

V. Feed the electrical cord from the gearpack down through the lamp until it extends out through the bottom of the lamp's rod.

VI. Pull the cord all the way down through the lamp until the gearpack is pulled down to the top of the lamp rod.

VII. Twist the gearpack clockwise onto the top of the lamp rod until it is fully seated on the top most part of your lamp. (It may be helpful to have another person assist you by holding your lamp during this step.)

Note It is best to twist the gearpack down until it is seated on the top most part of your lamp, orient it to your desired orientation, then use a wrench to tighten the nut in the base of your lamp to lock it down. In some cases you can also position the gearpack by loosening the bottom nut and rotating the lamp rod, then tightening the nut again.

VIII. Measure out roughly 4 to 6 inches of cord from the bottom of the lamp rod, then cut the excess cord with your wire cutters. (The excess cord can be thrown away.)

IX. Select the set screw and allen wrench from your conversion kit.

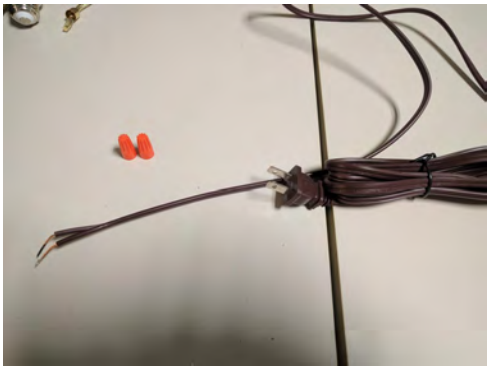
X. Locate the small hole in the back of the brass piece on the bottom of the gearpack.

XI. Thread the set screw into this hole using the allen wrench until it is tight. This locks the gearpack in place.

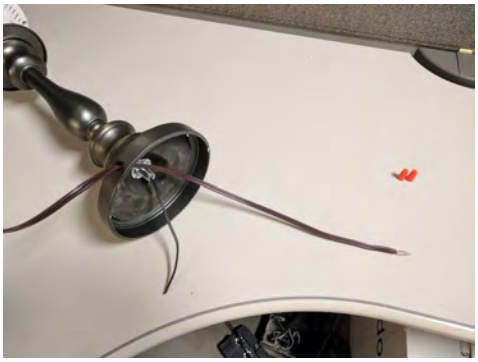
Step 4: Rewiring your lamp.

With the gearpack attached to the lamp, the remaining steps are rewiring the lamp and replacing the felt.

I. Begin by selecting the electrical cord and wire nuts from the conversion kit.



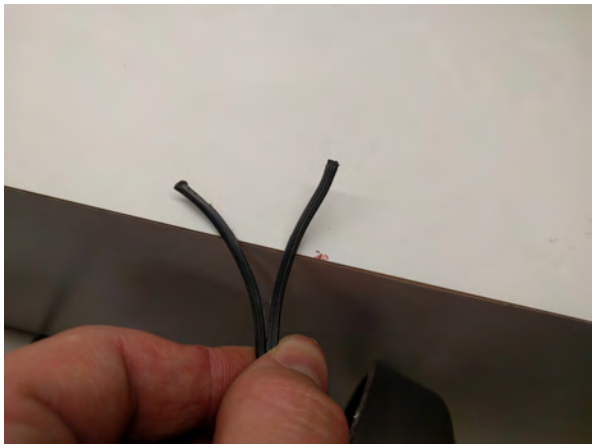
II. The electrical cord from the kit will have a standard polarized outlet plug on one end, and two bare wires on the other. Feed the end with bare wires through the cord hole in the base of your lamp.

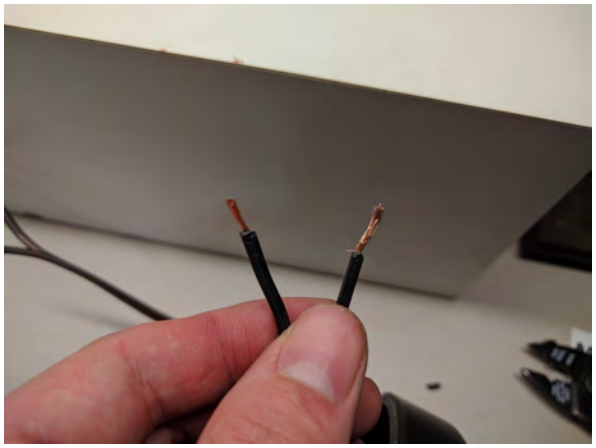


III. Pull roughly 12 inches of cord through the cord hole in the base of your lamp, then tie a knot in the cord about 6 inches from the end.
Note The purpose of this knot is to relieve stress on the electrical cord inside the base of the lamp.

IV. Both the electrical cord from the gearpack and the electrical cord from the conversion kit are made up of two insulated wires that are fused together. Separate the two wires and pull about 2 inches of the wires apart.

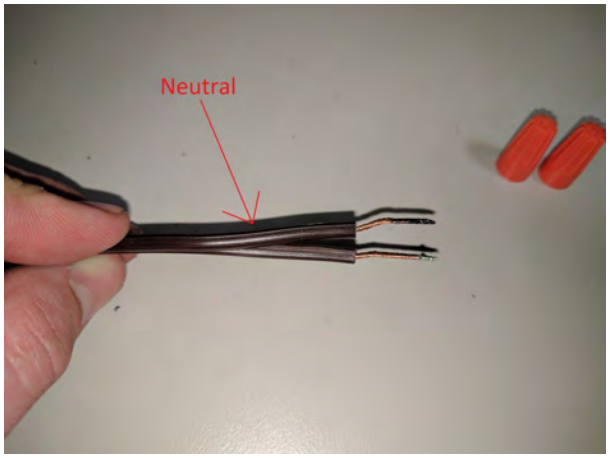
V. Using your wire strippers, strip $\frac{1}{2}$ an inch of insulation off of both wires from the gearpack's cord.

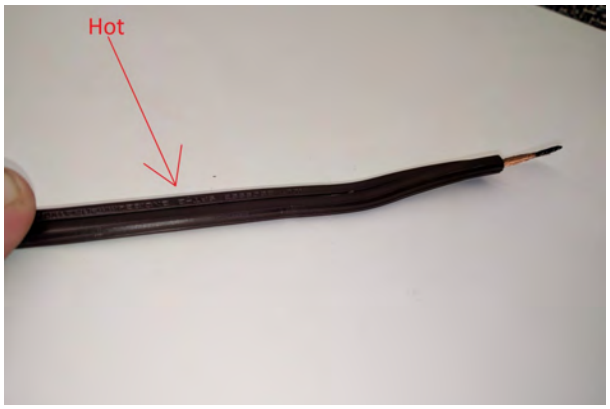




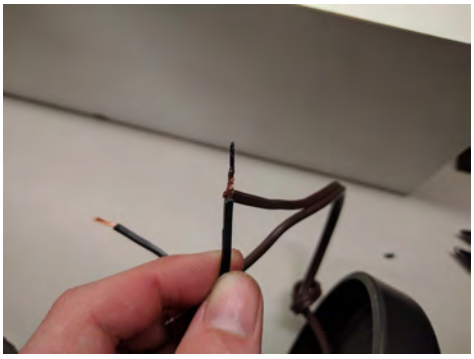
VI. Look closely at each. Both cords will have one smooth wire and one wire with grooves running the length of the wire. The grooved wire is the neutral wire, and the smooth wire is the hot wire. Pay close attention to this as the neutral wire must only be connected to the other neutral wire.

<u>IMPORTANT:</u> If you accidentally mix the hot and neutral wires you will create a short, which can damage your lamp, create a fire, and/or cause bodily harm.





VII. Twist the bare neutral wires from both cords together in a clockwise motion until both are tightly twisted together.



VIII. Insert the twisted neutral wires into one of the wire nuts, and then twist the wire nut in a clockwise motion until the wire nut is secure.

IX. Lightly tug on the wire nut to ensure that it is secure, they can sometimes come loose.

X. Repeat steps VII and IX with the hot wires, again making sure that neither wire is a neutral wire to avoid creating a short.

XI. Pull the outer electrical cord away from the base of the lamp so that the knot created earlier is pulled tight against the cord hole.
Note It is generally helpful to tape the electrical wires down to the inside of your lamp's base. This ensures that they lay flat.

Step 5: Final Steps.

1. Select the felt square from the conversion kit and lay it felt side down on a flat surface.

2. Place your lamp's base down on the center of the felt square.

3. Trace the shape of your lamp's base on the felt using a pencil.
   Note We recommend using a pencil in the event that you wish to make a change.

4. Remove your lamp from the felt.
5. Place the felt on a cutting pad or similar surface to avoid damage from the cutting blade during the next step.
6. Using a sharp crafting knife or box cutter, cut around the inside of the traced lines.
   Note We recommend cutting around the inside to prevent the felt from sticking out from the bottom of the lamp.

7. Place your lamp's base back down on the newly cut felt, and check that the felt now fits your lamp's base.
8. If you are satisfied with the fit of the felt, peel the backing off the back of the felt and attach it to the base of your lamp.




Congratulations!

You are now the owner of a your own custom-made Microsun Lamp, which you made yourself!

We hope that you enjoy the excellent light and color that your new lamp brings to your home or office.

If you have questions, or if we may be of further assistance, please call us at (937) 552-2452. Technical support is available from 7:00 am to 3:30 pm EST Monday through Friday.