



12V LIGHTING

HOW TO CHANGE YOUR
CAMPER/RV LIGHTING TO
MODERN FIXTURES

ARGOSY TRAVELING





12v Lighting eBook

Brought to you by:

Argosy Traveling

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Let's be honest,
trailer/RV lighting can
be bland and boring.
Most new trailers/RVs
have standard non
descript lighting
because it's easier for
the companies to mass
produce and to keep
the decor more neutral.



TIP

For Maximum Impact to your Decor for your Camper or RV, shop for "Flush Mount" or "Ceiling Mount" lighting options.

The **Stained Glass Light** on our Cover is a Flush Mount Light.

Although our trailer & motorhome are both vintage and we like the original look, the ugly dirty plastic lights had to go.

We always completely change the decor to erase the standard factory look.

The easiest way to do this to change out the lighting.



INFO

All the Lights
pictured on the
cover of this eBOOK
are standard lights
for a house.

We converted from
110v to 12v so we
can use them in our
Camper and RV.

Understanding

12V & 110V

12V

12v is known as low voltage, this voltage is achieved by "stepping down", reducing/converting standard 110/120v high voltage into 12v low voltage with the aid of a transformer.

Campers and RVs use 12v because it is the Electrical System for vehicles.

110V

110/120v is known as high voltage, line voltage, standard voltage or 110v/120v/130v. This is the voltage that comes directly into most homes.

Most household lights use 110/120v.

IMPORTANT

With 120v applications, we recommend using a licensed electrical contractor as there is some danger installing 120v systems from electrical shocks.

By contrast, 12v systems are very safe and can be done by just about anybody provided they are somewhat careful.

There are two differences between a 110v and 12v light fixture.

The first is that a 110v fixture, that is used in your home, is controlled by a wall switch.

The second is the power source 110v (home) vs 12v (trailer/RV).

The 110v fixture, such as our stained glass mission light, does not care that the new power source is 12v, because wiring is wiring.

TIP

All the Supplies can be found at your local Hardware Store or Online.

You will also need a drill with a phillips bit, wire cutters, wire stippers and twist on wire cover.

Supplies Needed:

Light Fixture, Flush Mount is easiest for ceilings.

15 amp On/Off Toggle Switch

12v LED Light Bulb

Electrical Tape

Threadlock

Drill and 1/2 inch drill bit

Self Drilling Screws

IMPORTANT

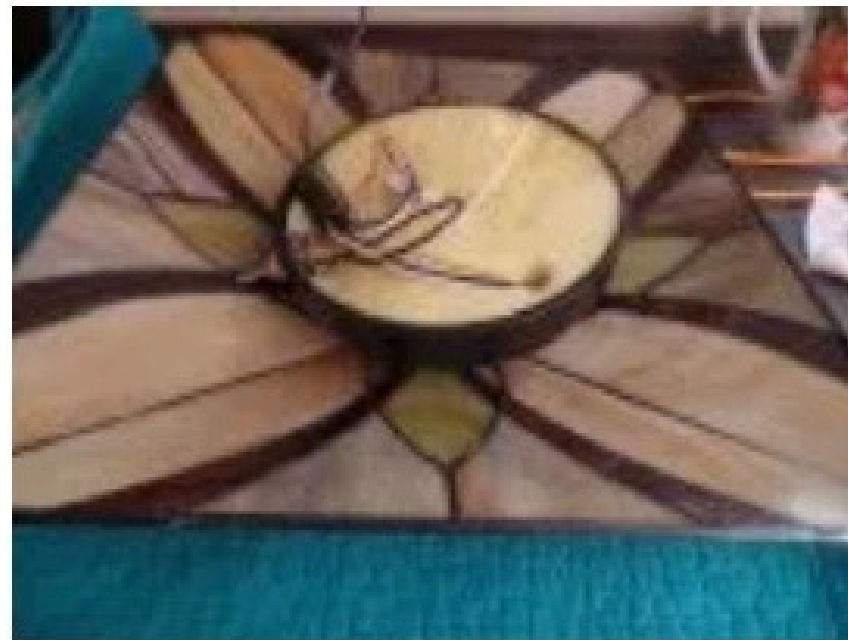
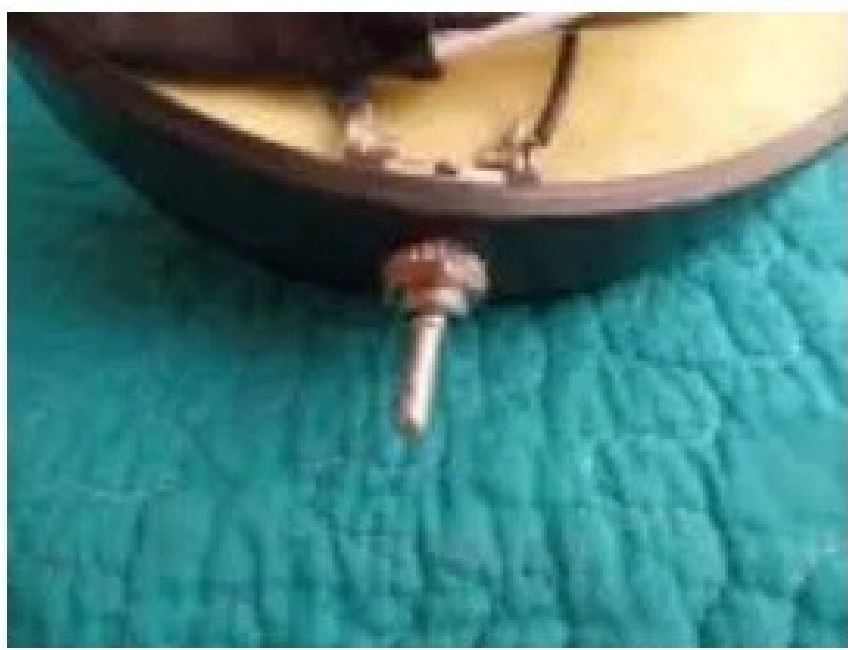
Before removing and installing lighting, remove the Battery Cable from one Terminal.

By doing this, you will not blow a fuse or your 12v system.

Part One – remove the old light

As you disconnect the wires cover the ends with electrical tape or wire connectors. The reason for doing this is so that you do not accidentally touch the hot wire (the black one) and ground together and blow a fuse.

After you have finished Step Two,
your new light fixture should
look like this:



Part Two - preparing the light fixture

Camper/RV ceiling light fixtures have on/off switches on them as oppose to home lighting, 110v light fixtures, that is controlled by wall switches. So you are going to have to add an on/off switch. I used a 15amp on/off toggle switch I bought at Amazon.

1. The threads on the switch have a diameter of 1/2 inch
2. Using a drill with a 1/2 inch drill bit carefully drill a hole in side of light fixture
3. Insert the switch through the hole
4. Secure in place with the nuts that came with switch

INFO

There are three wires that will need to be connected:

Black wire – this is the hot wire that provides power to the light

White wire – this is the neutral wire

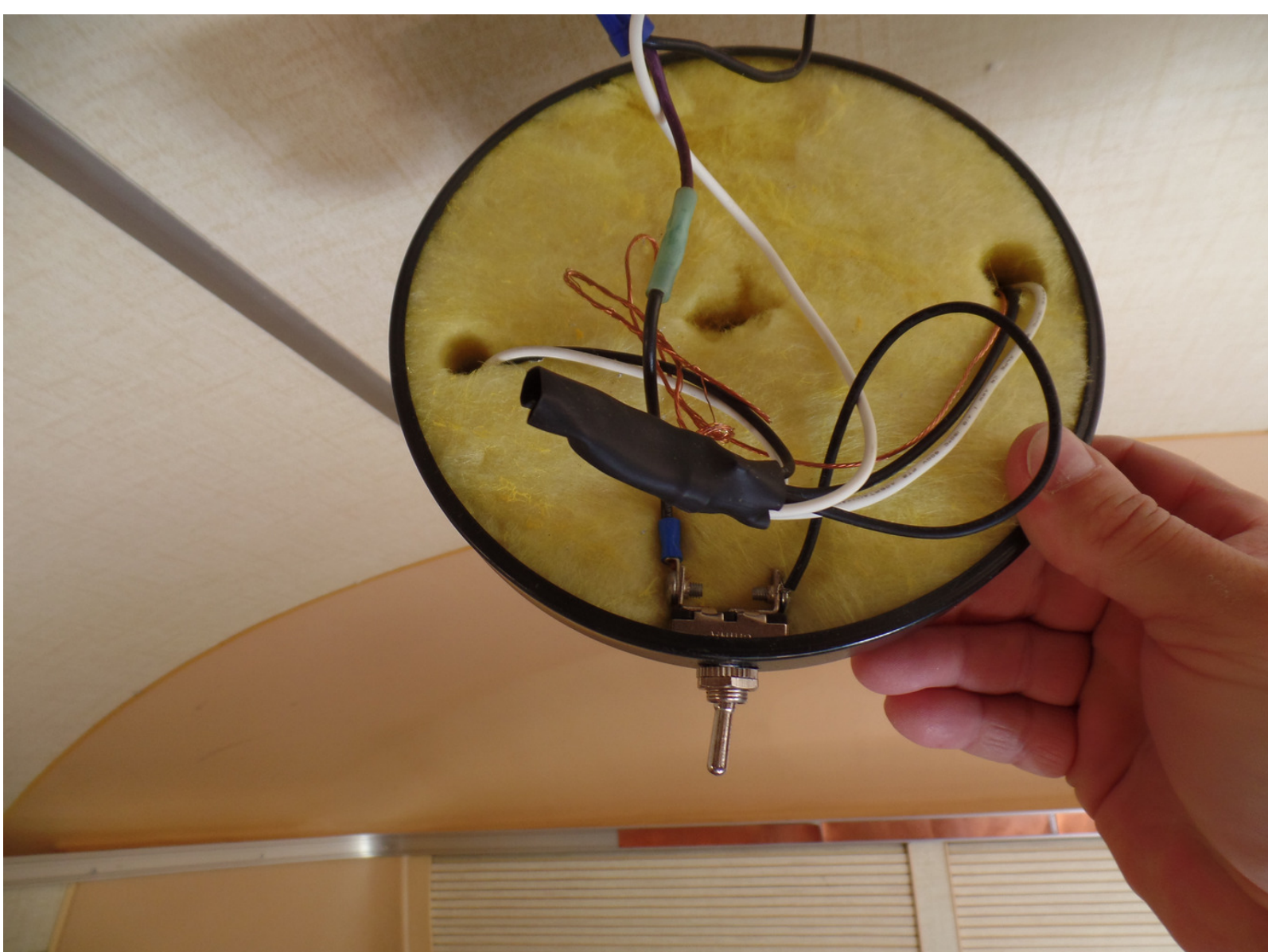
Copper wire – this is the ground wire

Part Three – install the new light fixture

The on/off switch you installed has two connectors, which will need to have the black wire connected to each connector.

One black wire goes to the trailer and the other one goes to the light fixture. (My wires were short so I added some yellow wire to make them longer.)

The two connectors had screws so I put a ring crimp connector on the ends of the black wire being connected to the switch.



The copper wire is the ground wire, which completes the 12 volt circuit for the light. For connecting the two copper wires use a twist on connector.

Take the white wire from the trailer and the light switch and connect them using a twist on connector.

TIP

Have all your supplies
close by.

We keep a special toolbox
just for our Camper and
RV that includes tools in
case we remodel or need
an emergency fix while
traveling.

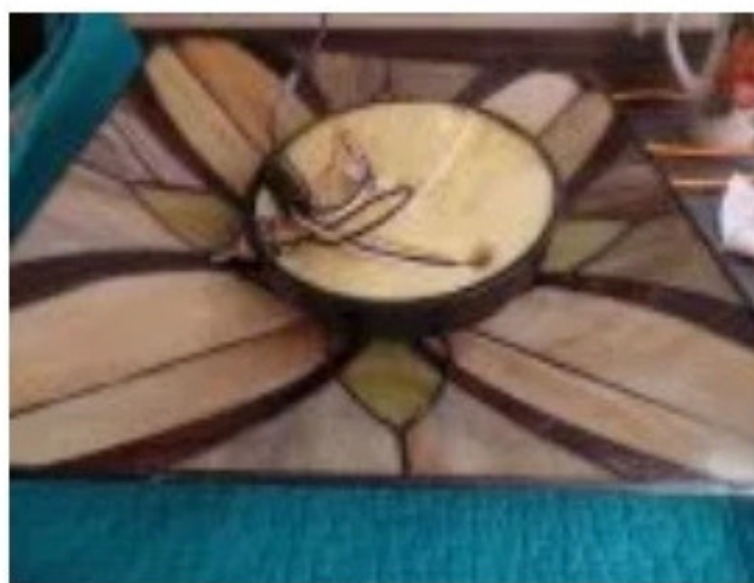
Part Four – mount the new light fixture

You will probably not have holes in the ceiling that match up to the holes on the new light fixture mounting bracket. Use self drilling screws to mount the light. These will be able to drill through the galvanized metal of the interior ceiling. The interior metal of the trailer is grounded, so screwing the mounting bracket to the ceiling grounds the bracket. This is important to complete the 12v circuit. The mounting bracket already has a copper wire connected to it (see picture).



Part Five – 12 volt light bulbs

In order for your 110 volt fixture to work with the 12 volt system you will need 12 volt light bulb (see picture). the 12 volt light bulbs are readily available online from various sites.



That's it! You have
successfully converted a
light to 12V for your
trailer/RV.



Part Six – install the light shade

Use threadlock when attaching the threaded post that holds the light shade to the mounting bracket and the light shade to the threaded post.

Because your trailer/RV is going to rock and bounce when being towed, using threadlock helps keep your light fixture/lamp shade from coming loose, falling and breaking.



THANKS FOR READING

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