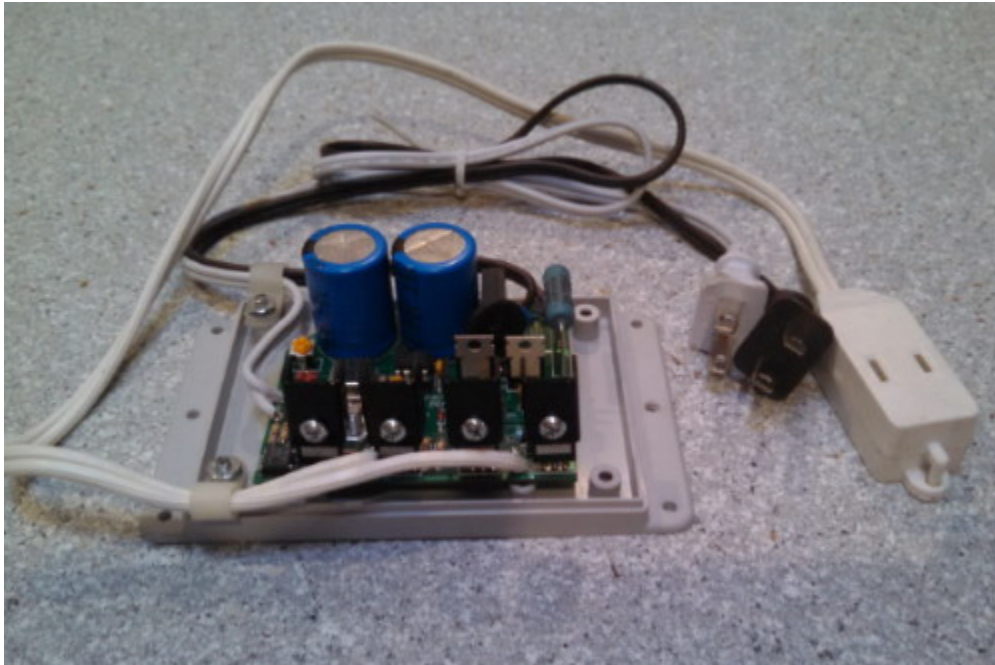


## MTCLogic Plug-n-Play Installation



The MTCLogic Plug-n-Play version will work on any type of Leslie regardless of how it's switched.

- 1) First you will need to remove the suppressor capacitor from under the Leslie Amp chassis. Remove all plugs from the amp. Remove the slot head screw on the amp bracket and slide the amp out. **Under the two AC sockets from which the motor plugs were located there will be 0.1uf capacitor. In some cases, this cap is located on the relay itself.**

**\*\*It must be removed.\*\***

**Lastly, if your amp has a Brake circuit cut the Orange wire from the break circuit to the relay.**

Use the reverse to reinstall the amp.

- 2) Plug the motors into the MTCLogic motor socket.
- 3) Plug the brown cable plug into the rightmost socket. (UNSWITCHED) Plug the white cable plug into one of the sockets vacated by the motors. (SWITCHED)  
NOTE: There are some models that do not have the third Unswitched socket. In that case, one socket will need to be wired as unswitched.
- 4) Power up the Leslie and verify the switching is operating correctly. In some cases, the Leslie switch may work in reverse. If it works correctly you may go to the next step. If it works backward, remove the jumper near where the orange potentiometer is located. This will reverse the switching.
- 5) Set the slow speed with the adjustment potentiometer VR1.
- 6) Locate the MTCLogic board in a convenient place like the woofer area right above the amp.

As with any device that forces Leslie motors to run outside their normal range, there will be some additional noise due to the slower pulsing. Normally they are pulsed @ 60 times a second. We are slowing that down to around 6 times a second! Adjusting belt tensions and making sure the motors and rotors are turning freely will help reduce noise.

I have found these tips to be helpful;

First, both motors should be serviced, cleaned and oiled.

On the upper, the rotor should be oiled and the idler bearing should be in good condition. I like to place a piece of felt under the idler bearing so it doesn't vibrate against the cabinet. There should already be a rubber cushion but an additional layer of felt makes a big difference. It can't be too thick or the idler will hit the rotor. In some cases, I have removed the rubber and went with a larger felt.

On the lower rotor, belt tension is very important. Secondly, some rotors have guides or pins on the pulley that straddle one of the upper drum brackets. There is usually some play there and slow speeds can cause chatter due to the slack. Using more felt, you can tighten this up so there is no more play.

Lastly, older motor bracket grommets get compressed and hard. New ones will add isolation from the motors to the cabinet. This helps lower noise as well. I have found that simply turning the grommets over in the motor brackets so a new side is against the cabinet adds more isolation without actually replacing any parts. Most of these things should be part of normal maintenance anyway.

You may find the lower rotor running faster than the upper. This is due to the motor loads being different. Also, I have found that motor resistance affects this. In many cases, swapping the motors will make them run closer to the same speed.

To reverse the direction of the lower motor you have to flip the field 180 degrees.

Set the motor out on a work surface. Remove the four screws that hold the motor case together. There is an upper cap or housing, the field, the lower housing, and the armature/shaft. The lower housing will come off the shaft easily. Keep the housing upright as there is a ball bearing in the bottom of the lower housing where the shaft goes in.

Now you can begin to lower the field assembly from the upper housing. There is a wire attached to the field and it runs through the upper housing. I remove the AC plug from the motor wires so I can slide those wires through the housing for separation. Now you flip the field over.

The difficult part is to run the wires back through the housing. What I do is run those wires back through the field where there is some room to get the wires back where they will go back through the housing. Kind of hard to explain but should be obvious as you look at it.

Reassemble the motor and your done.

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