Caribbean Controls

Leslie Chorale Kit

FOR USE WITH: Any Leslie equipped with single speed motors.

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INTRODUCTION

This kit contains a gated pulse motor controller. When properly installed to a single speed Leslie tone cabinet, it provides two speed operations (Slow and Fast).

CAUTION: Due to the presence of electrical potential, only an experienced technician should perform installation procedures or adjustments requiring work inside the speaker cabinet.

WARNING: This unit it connected to HIGH VOLTAGE and is intended to be installed INSIDE a Leslie tone cabinet where it cannot be touched by accident. DO NOT install this unit where direct access can be made while the unit is in operation. Failure to do so may result in injury or death.

INSTALLATION

CAUTION: DISCONNECT ALL EQUIPTMENT FROM POWER BEFORE PROCEEDING.

1. Remove the upper, middle and lower compartment backs.
2. Examine the upper belt, lower belt, and idler spring (on upper belt). Replace any excessively worn or dirty parts.

   NOTE: This unit is calibrated to run in a STANDARD Leslie, if any deforming of the idler spring has been performed to allow other controllers to operate, the idler should be straightened or replaced.

3. If your Leslie has a Plug In Brake, remove it. If your Leslie has a built in Brake, proceed to step 4. If your Leslie has no brake, proceed to step 8.
4. Remove the single retaining screw that holds in the amplifier in and carefully remove the amplifier.
5. Taking care not to damage the tubes, turn the amplifier over and locate the motor relay.

6. Take note of any wire that connects to the relay's "Brake" contact (FIG 1). This is the original "Brake" wire and must be removed.

   NOTE: This is a "live" lead so be sure to clip both ends and completely remove the wire.

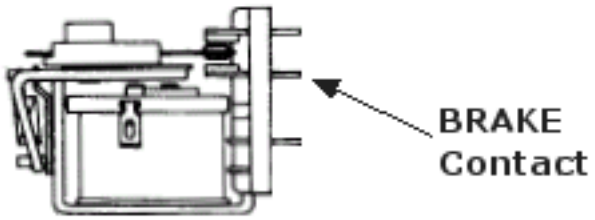

FIG 1

7. Reinstall the Amplifier Chassis, taking care not to let the tubes hit the lower motor.
8. Unplug the Leslie motor(s) from the amplifier sockets.
9. Install the controller, using the 4 screws provided, in a location that will allow the plugs to reach the Leslie amplifier sockets.
10. Plug the unmarked plug into one of the sockets formerly occupied by the motor plugs.
11. Plug the marked plug into the accessory socket this is the "3rd" socket, usually unoccupied; sometimes marked "Reverb Amp".
12. Plug each motor into the inline outlets of the motor controller.
13. Route the cables from the middle compartment to the lower compartment using the slot where the original motor cables were

    NOTE: It may be necessary to make the slot slightly deeper to accommodate the new cables.

14. Check that DIPswitch on the controller is set so that 1, 3 & 4 are off and 2 is on.
15. Reinstall the upper, middle, and lower backs.
16. Reconnect the cables and test for proper operation.

HOW TO ADJUST THE SLOW SPEED SETTING

CAUTION: DISCONNECT ALL EQUIPTMENT FROM POWER BEFORE PROCEEDING.

The 4 control switches are encoded in binary. Don't worry if you don't know what that means, simply follow the chart below. Those who do understand binary coding should still consult this section, as it explains some of the unpredictable results you can expect from some settings.

The number you select sets the delay between pulses that the motor receives, therefore 8 will run slower then 6 because 8 results in the motors being turned on less frequently.

The system also runs on a 120 cycle clock, when coordinated with the power line, this can result in certain settings that seem to not fit the general pattern. The worst offender is setting 1, where the motor ends up fighting it's self and as a result turning VERY slowly.

The "Effect" column below should be used as a general guide. It shows the operation of the unit in an average Leslie, but wear and other factors may vary your results. Once you have determined the correct setting, no further adjustments will be necessary.

The "X" marks show settings that are not recommended.

#	1	2	3	4	Effect	#	1	2	3	4	Effect
0	OFF	OFF	OFF	OFF	X (Fast)	8	ON	OFF	OFF	OFF	Moderate Low Normal
1	OFF	OFF	OFF	ON	X	9	ON	OFF	OFF	ON	X
2	OFF	OFF	ON	OFF	High Normal	10	ON	OFF	ON	OFF	Very Low Normal
3	OFF	OFF	ON	ON	X	11	ON	OFF	ON	ON	X
4	OFF	ON	OFF	OFF	Normal	12	ON	ON	OFF	OFF	X
5	OFF	ON	OFF	ON	X	13	ON	ON	OFF	ON	X
6	OFF	ON	ON	OFF	Low Normal	14	ON	ON	ON	OFF	X
7	OFF	ON	ON	ON	X	15	ON	ON	ON	ON	X

The default setting is for "4", however should that seem too slow or if the Leslie has trouble rotating smoothly, you can try setting the switches for a lower number.

For example, if 6 were too slow you would want to try a setting of 4, which would be OFF – ON - OFF – OFF.

FINAL CHECK

- Check all connections for proper hookup.
- Turn on Leslie Power.
- At this point the motors should be turning FAST, this is NORMAL and will last for approximately 30 seconds.
- After 30 seconds, setting the Leslie control switch to ON should make the rotors turn at Fast speed. Setting the control switch to OFF should result in the rotors turning at slow speed.