



INSTALLATION INSTRUCTIONS

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| PART NUMBER | 158-8619R |
| PART DESCRIPTION | KW MOTOR RESISTANCE WIRING ASSY |
| REV DATE | 10/21/2014 |
| MACHINE MODELS | KW |



Basic knowledge on ALL aspects of the lane machine, including mechanical, electrical and operating software.

TOOLS NEEDED:

Phillips Screwdriver

11/32" wrench

wire cutters



TECHNICAL NOTE

Please thoroughly read the instructions prior to performing the installation of this assembly.

To avoid any potential problems, if at any time during the process you have a question, stop and contact our Tech Support department at the numbers listed below.

Please visit our growing library of videos to see if these instructions are available!



www.youtube.com/user/KegelBowling81



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1. Set machine down in the operating position.
2. Make sure E-Stop is in the off (down) position before starting.
3. Unscrew the (4) screws securing the top of the existing resistance box in the machine on the PC Plate and remove.
4. Take the top off the resistance box supplied (w/ molex block & wires installed) & secure onto the bottom of the resistance box remaining on the PC Plate. In doing so, make sure the terminal block is on the side closest to the relays.
5. Cut all existing wire ties off the harness from in front of the relays at CR4 around to the back of the relays CR2.
6. Secure the new resistance box wires into the relay bases as follows:
 7. Red 11" – CR2 #8 location
 8. Red 18" – CR3 #12 location
 9. White 11" – CR2 #5 location
 10. White 18" – CR4 #12 location
11. Completely remove the wires from the harness that were in the relay locations that the new wires replaced. Using the wire ties supplied, neatly secure all wires to the harness.
12. Turn the power back on and verify proper operation. If machine does not walk straight, complete the following to balance the drive motors:

Adjusting the Drive Motors

Balancing the Two Walker Drive Motors

The two drive motors are "balanced" with a long 22 AWG yellow wire. This wire is used on either the 7-pin or the 10-pin drive motor, depending on which motor needs more resistance.

The wire only receives current while the machine is traveling on the approach and it is only creating a small amount of resistance in the circuit to balance the two motors so they will run at the same speed. A longer length of wire will make the motor run slower.

To balance the motors on the Walker, first determine which motor is using or needs the resistance wire. The instructions below are written as if there is no resistance wire.

1. Go to the **MOVE MACHINE** screen and position the machine as if it was going to the next lane.



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2. Line the rear panel up with the approach boards so they are parallel with each other.
3. Press the **UP ARROW F4** and let the machine run until it stops.
4. Check to see if the rear panel is still parallel with the approach boards. If one side only advances ½ an inch this may not be a concern (unless you want it absolutely perfect).
5. Press the **DOWN ARROW F3** and observe if the machine advances back to where it started.
6. Do this exercise several times to see if the machine repeats its movements forward and back.
7. If the machine repeats its error and is off by as much two boards, then replace the proper jumper with a wire between 6 and 8 feet (1.8 to 2.4 m) to start with. If the machine does not travel the same in both directions then you will need to split the difference when adjusting the resistance wire.

- If the yellow resistance wire is used to control the **7-pin motor** it will be connected to the two terminals on the left hand side of the black box (red wires).

- If the yellow resistance wire is used to control the **10-pin motor** it will be connected to the two terminals on the right hand side of the black box (white wires).

- When stripping the wire, remove ½ inch of the insulation so you can fold the wire in half when inserting into the terminal block.



Be certain to turn the power off when adjusting the wire length.

8. After you have installed the length of wire (which we hope is a little long to start), repeat steps 1 through 5 and observe the movement of the Walker.
9. Shorten the yellow wire if needed in 6 to 12 inch increments (~15 to 30 cm) and then test the results. Continue until the motors are balanced and the machine travels straight. Put the excess wire inside the black box along with the jumper when finished.

The length of wire used will vary from machine to machine and it may be necessary to move the resistance wire to the other motor after motors break in.

Before operating, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith.



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