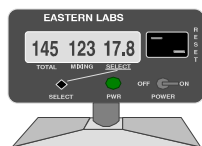


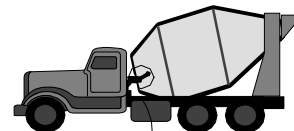
REV-MASTER Counters

N.Y.S.D.O.T. Approved

EASTERN LABS



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INSTALLATION

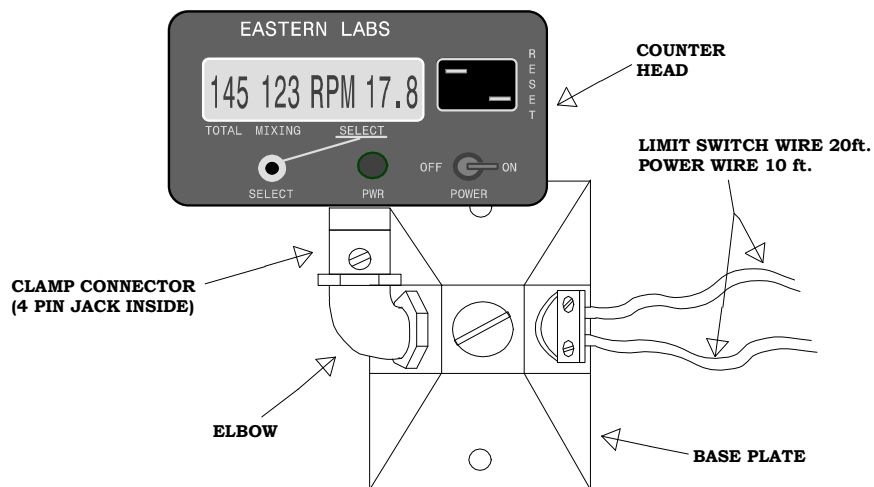
REV-MASTER

Model 021-988

MOUNTING THE REV-MASTER

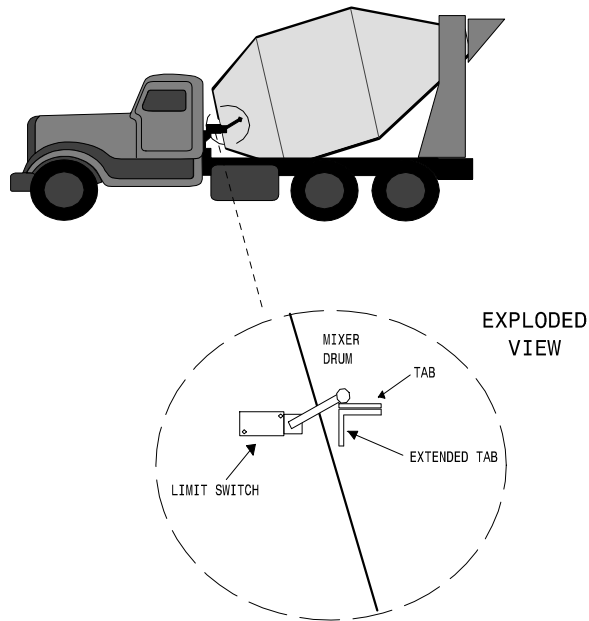
Notice that there is a 4 pin plug extending out from the clamp connector of the counter and a 4 pin jack extending out of the elbow on the base plate. Carefully plug these together and set the counter's clamp connector over the elbow with the plug and jack inside them. In the future if there is a need for repair just reverse this procedure and send in the counter without the base.

Mount the counter and base in a convenient location. The elbow can rotate on the mounting base and counter can rotate on the elbow by loosening the screw on the clamp connector. Adjust these so that face of the counter is directly facing the driver. This will give the driver the best resolution of the display. Tighten down the locknut on the elbow to the base and tighten down the screw on the clamp connector.



LIMIT SWITCH MOUNTING

To prevent false counts, this counter compensates for bounce in the limit switch due to overshoot of the arm. For the microprocessor to tell between a correct count and an faulty one, **the limit switch must be actuated for at least 1/10 second.** Therefore it is recommended that the limit switch be mounted as close to the center of the drum as possible. If this is not convenient, the tab that actuates the limit switch may have to be extended as shown in the drawing. There is a test to see the actuation time in the checkout procedure.



REV-MASTER WIRING

Extending from the mounting base there are two wires. The 20 ft. wire is for the limit switch and the 10 ft. wire is for power.

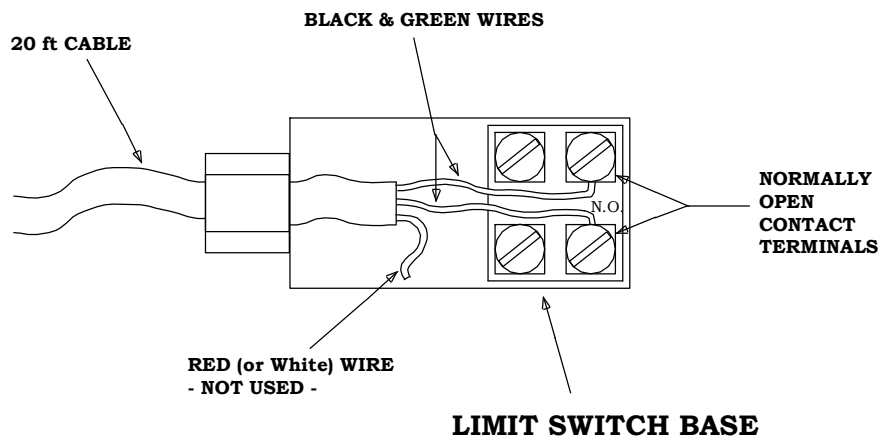
POWER

Note: It is recommended by the N.Y.S.D.O.T. that you wire the power after the ignition switch.

The two inner wires that are used in the power wire are red and black, the green is not used. Connect one to the hot line and the other to ground. It makes no difference which goes where so long as you use the red and black wires, the counter works either way.

LIMIT SWITCH

The limit switch wire uses the green and black inner wires, the red wire is not used. Now run the 20 ft. wire through a strain-relief connector and attach to the correct terminals as per diagram below. Be sure to protect the wire through holes and sharp edges with rubber grommets or equivalent.



Note: Limit Switches ordered thru Eastern Labs are preset for counterclockwise operation. If the rotation or head position needs to be changed there are instructions in the limit switch's box and on the head on how to do so.

CHECKOUT

Turn on the REV-MASTER and notice that green power light comes on and after about one second the display reads

LOCKOUT >> RESET. This is the normal lockout state. Now plug in the reset cord into the reset jack on the counter until the display changes to **REMOV RESET JACK**. Once reset is removed the display changes to the operating mode,
000 000 RPM 00.0.

To test to see if the limit switch tab on the mixer drum is long enough for the 1/10 second debounce compensation, push the select switch a few times until the right hand of the display reads **LSA 0.00**. This is the **L**imit **S**witch **A**ctuation time. Rotate the mixer drum to the highest speed and make sure the LSA is at least 0.10 seconds. If it is not then the limit switch's tab needs to be extended as shown in the drawing on page 2.

Push several times the select switch until the right hand of the display changes to RPM 00.0. Now rotate the drum at about 3 rpms or less on the display. This is a check to see if the limit switch is connected correctly. The display should show counting on the total side for each rotation of the drum and not have ERROR LIM SWITCH be displayed for a short period between rotations. If the latter is true then this is an indication that the limit switch wire is connected to the normally closed contacts and should be reconnected to the normally open contacts.

By pushing the select button, other right side displays available are:

PS 6-18 PreSet low and high (usually 6 to 18 rpms)

TIM 0:00 TIME since reset in hours and minutes

TPR 0.00 Time Per Revolution of the drum in seconds

Another error display is ERROR PRESET REV, meaning that the low and high dip switch settings are reversed, in other words the low side is greater than the high side.

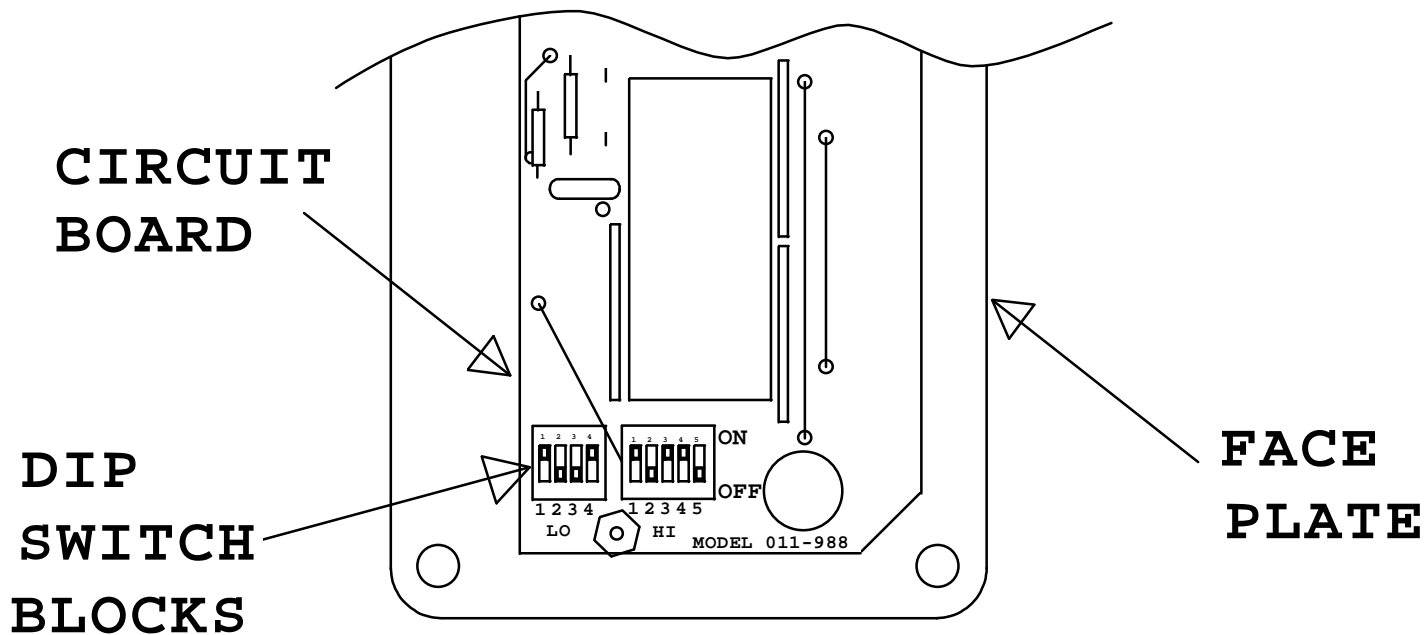
CAUTION !!!!! POSSIBILITY OF AN ELECTRIC SHOCK

The reset cord should be plugged into a circuit that is Ground Fault Interrupted (G.F.I. Circuit Breaker Protected).

PRESET CHANGES

This section is for changing the low and high rpm presets for the mixing counter. To do this remove the counter by loosening the clamp connector screw and disconnecting the 4 prong jack and plug. Next remove the 4 corner screws and pull the counter from the case (Caution: the counter might be snug and require careful prying from each side as not to break the face plate). On one end of the circuit board you will see two dip switch blocks. The 5 position one is for the high rpm setting and the 4 position one is for the low rpm setting. Select the desired settings as per chart on page 6.

Reverse the disassembly procedure to install the counter. Turn the counter on and reset. Push the select button so the right side of the display shows **PS** and your selected settings. If the display shows **ERROR PRESET REV** the presets are reversed (i.e.: 18 to 6 instead of 6 to 18). Redo this procedure and make the necessary corrections.



X = OFF
O = ON

<u>LO-SET</u>					<u>HI-SET</u>				
1	2	3	4	RPMS	1	2	3	4	5

X = OFF
O = ON

	X	O	O	O	1	X	O	O	O	O
	O	X	O	O	2	O	X	O	O	O
	X	X	O	O	3	X	X	O	O	O
	O	O	X	O	4	O	O	X	O	O
	X	O	X	O	5	X	O	X	O	O
*	O	X	X	O	6	O	X	X	O	O
	X	X	X	O	7	X	X	X	O	O
	O	O	O	X	8	O	O	O	X	O
	X	O	O	X	9	X	O	O	X	O
	O	X	O	X	10	O	X	O	X	O
	X	X	O	X	11	X	X	O	X	O
	O	O	X	X	12	O	O	X	X	O
	X	O	X	X	13	X	O	X	X	O
	O	X	X	X	14	O	X	X	X	O
	X	X	X	X	15	X	X	X	X	O
					16	O	O	O	O	X
					17	X	O	O	O	X
					18	O	X	O	O	X
					19	X	X	O	O	X
					20	O	O	X	O	X
					21	X	O	X	O	X
					22	O	X	X	O	X
					23	X	X	X	O	X
					24	O	O	O	X	X
					25	X	O	O	X	X
					26	O	X	O	X	X
					27	X	X	O	X	X
					28	O	O	X	X	X
					29	X	O	X	X	X
					30	O	X	X	X	X
					31	X	X	X	X	X

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