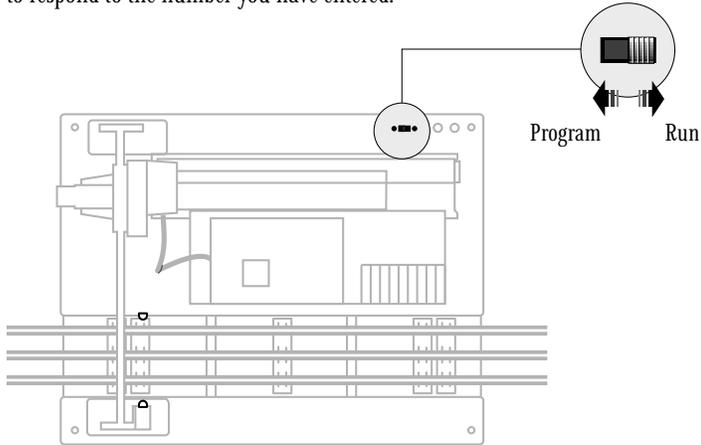


## Assigning your Culvert Unloader a New ID#

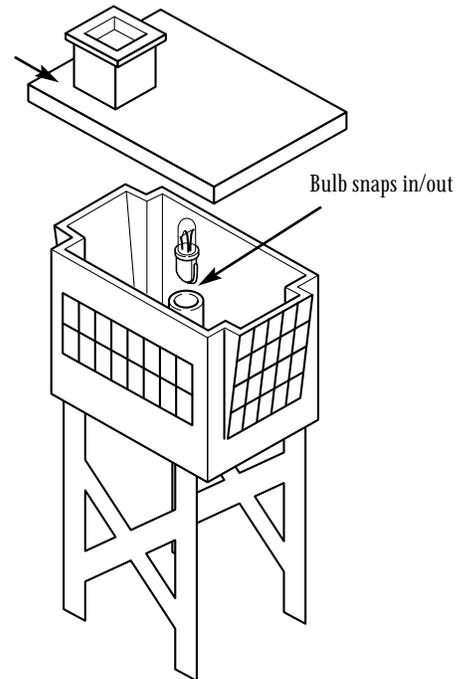
As your fleet of command-equipped Lionels grow, it may be necessary to give your culvert unloader its own ID#. Choose any number from 1 and 99. Turn the Command Base ON. Power up, then slide the culvert unloader's control switch to the "PROGRAM" position. Using the CAB-1, press ENG, the culvert unloader's ID#, then press the SET button located under the CAB-1's removable panel. When the hazard lights flash, that is your signal that the programming has been accepted. Slide the control switch on the accessory into the "RUN" position. Your culvert unloader is now programmed to respond to the number you have entered.



## Replacing the lamps in your Culvert Unloader

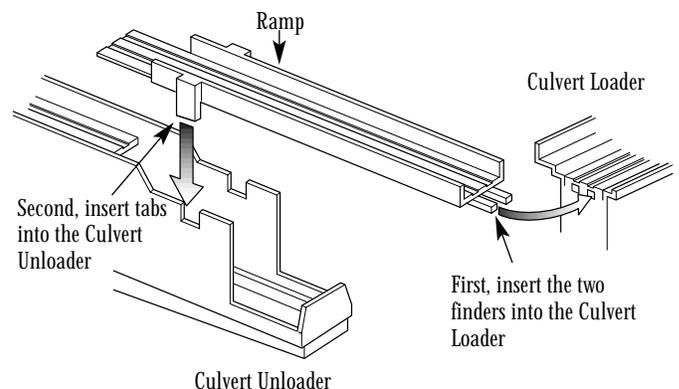
During the course of normal operation, the lamps in your culvert unloader may require replacement. To replace the lamp inside the house, simply remove the roof from the house, remove the expired lamp, and install a fresh one. For all other components, we recommend that replacement be done at a Lionel Authorized Service Center or a factory repair here at Lionel L.L.C. Please see below for more information on locating an Authorized Lionel Service Center near you, or for sending it here to us at Lionel.

Lift Control Tower  
Roof



## Connecting your Culvert Unloader to your Culvert Loader

You will notice that inside the packaging of your culvert unloader there is an additional piece. This additional piece is used to connect your culvert unloader to your 342 culvert loader. To connect both of these accessories together, simply slide the two fingers of the connecting ramp into the holes located on the ramp of the 342 culvert loader. You can then lie the connecting ramp down until the tabs fit into place. (Please see the diagram below) Now both your 342 culvert loader and 345 culvert unloader have been attached. You can now load and unload your culvert gondola with ease and take your culvert pipes to its final destination.



### Example *Assign a new ID# to your Command-equipped culvert unloader*

Command Base ON

PowerMasters set to CMD or traditional power supplies ON FULL

Set the culvert unloader control switch to PROGRAM

Turn track power on (PowerMasters):



Press BOOST

Program the culvert unloader with a new ID#:



Press ENG



Press a number you choose (the ID#)



Press SET

Set control switch to RUN

Your culvert unloader remembers its ID# forever; change it any time with these steps

We recommend that you chose an easy to remember ID# for your "engine". Some possibilities are part of the product number, your age, any two digit number that is not used by another engine. If you like, write the number on a small piece of tape and put this on the bottom of the culvert loader to aid in remembering.



# 345 Culvert UnLoader

(6-12983) Conventional or (6-22975) Command Control

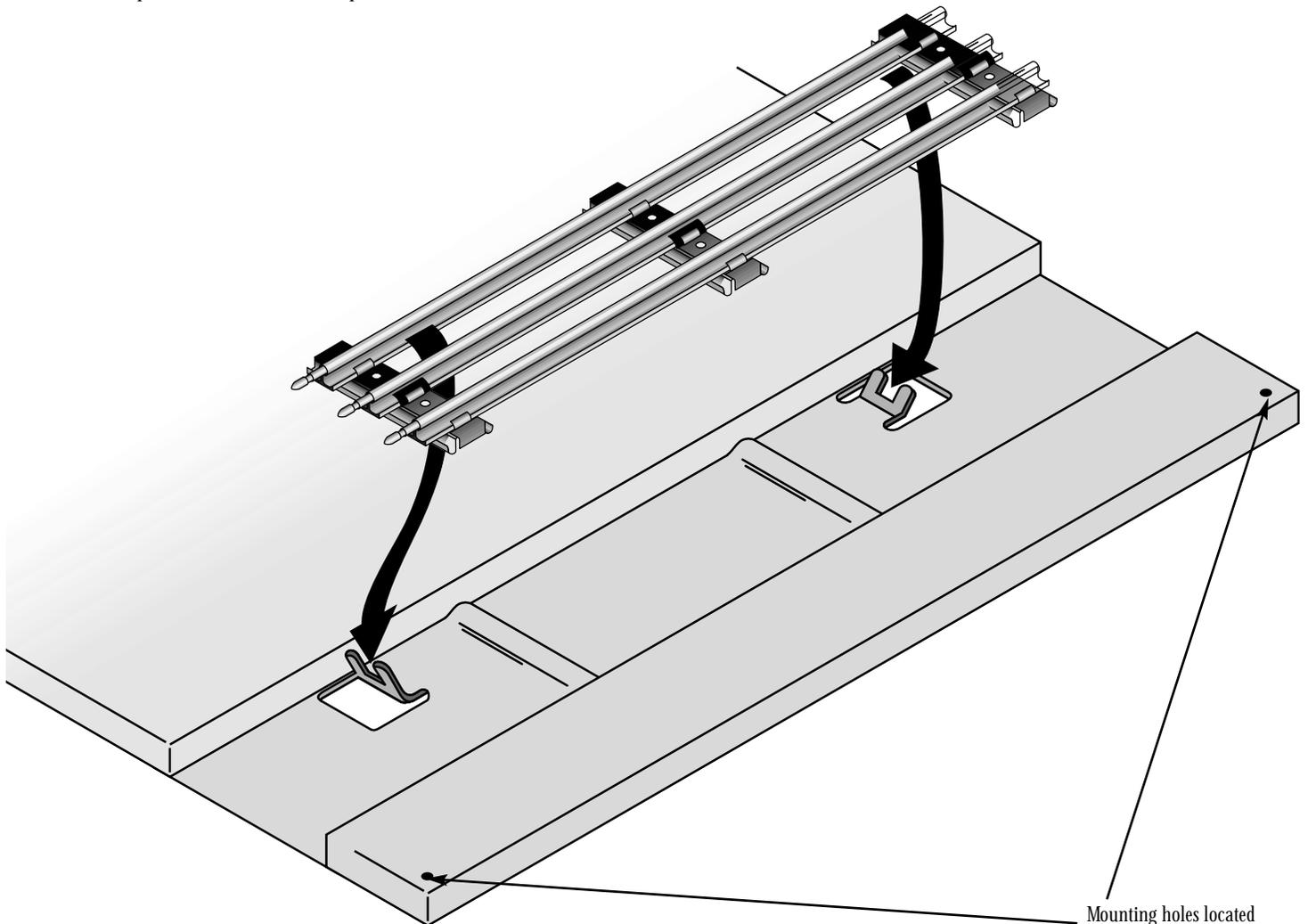
**C**ongratulations on your purchase of the Lionel 345 Culvert Unloader. This classic Lionel accessory has all of the terrific action and traditional quality of the original. The culvert unloader is made of stamped steel and injection molded plastic construction and features two powerful DC motors and optical sensors for years of reliable operation. The culvert unloader can be placed on any Lionel O or O-27 three-rail layout and is designed to operate at 12-18



volts alternating current. If you have purchased the Culvert Unloader 6-12983, it is the conventional model. Please follow the instructions for its installation and operation. If you own the 6-22975 Command Control version of this new classic, installation is almost the same. Look for the differences as called out in this instruction sheet and enjoy the additional benefits that Command Control brings to your culvert unloader.

## Installation of your Culvert Unloader

**F**or optimum operation, its location on your layout should be flat and level. After securing your culvert unloader to your layout using the four mounting holes, snap one section of track into position on the base (see illustration below).



Mounting holes located at the four corners

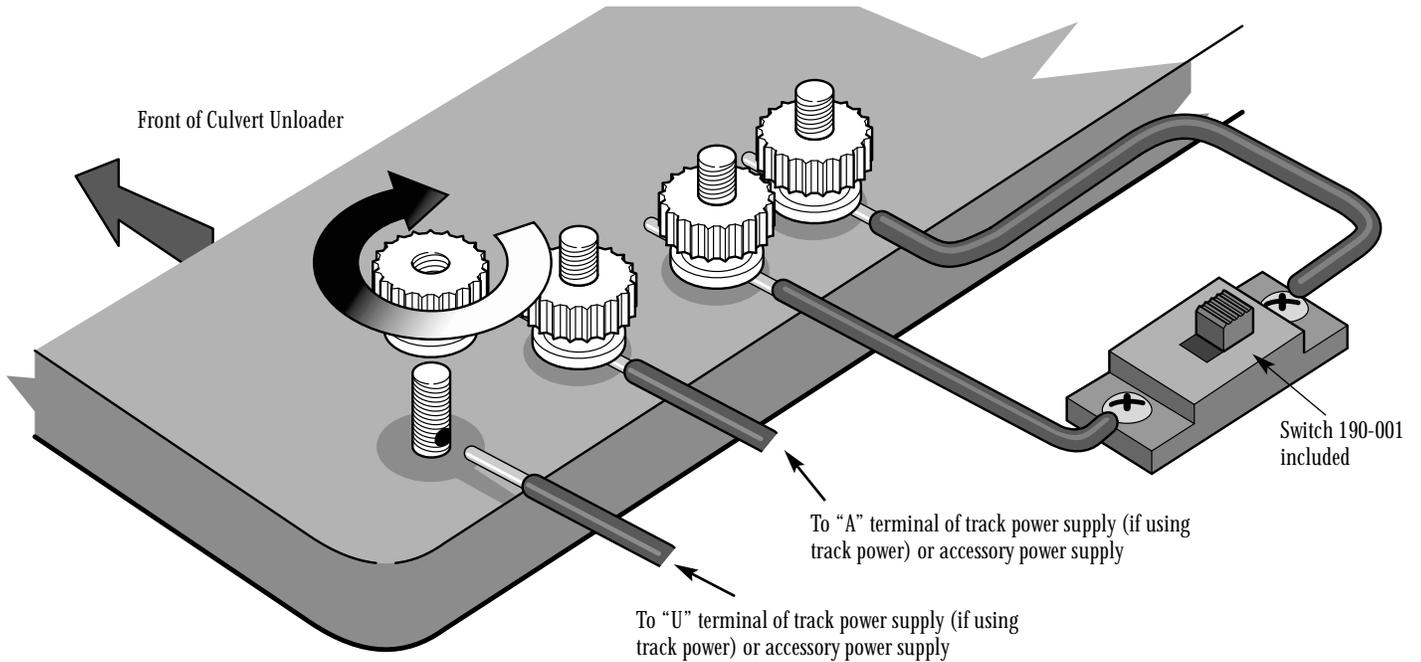
## Wiring your Culvert Unloader for Conventional Operation

Your culvert unloader will operate best from 12-18 vac. It can be powered with track power or a separate accessory power supply. Connect two insulated wires (included) from the 190-001 switch (included) to the screw posts on the culvert unloader labeled “switch.” This is done by unscrewing the nut off of the post, placing the wire through the hole in the post, and tightening the nut back onto the post to secure the wire in place. Connect

**Note!** Polarity does not matter. If you reverse the unloader wires to your track power or accessory power supply, the unloader will still function without damage to the unit.

another insulated wire from one of the screw posts labeled “transformer” to the “U” terminal of track power supply (if using track power) or accessory power supply. Finally, connect the last insulated wire from the other screw post to the “A” terminal of track power supply or accessory power supply. You are now ready to begin unloading culvert pipes from your gondola.

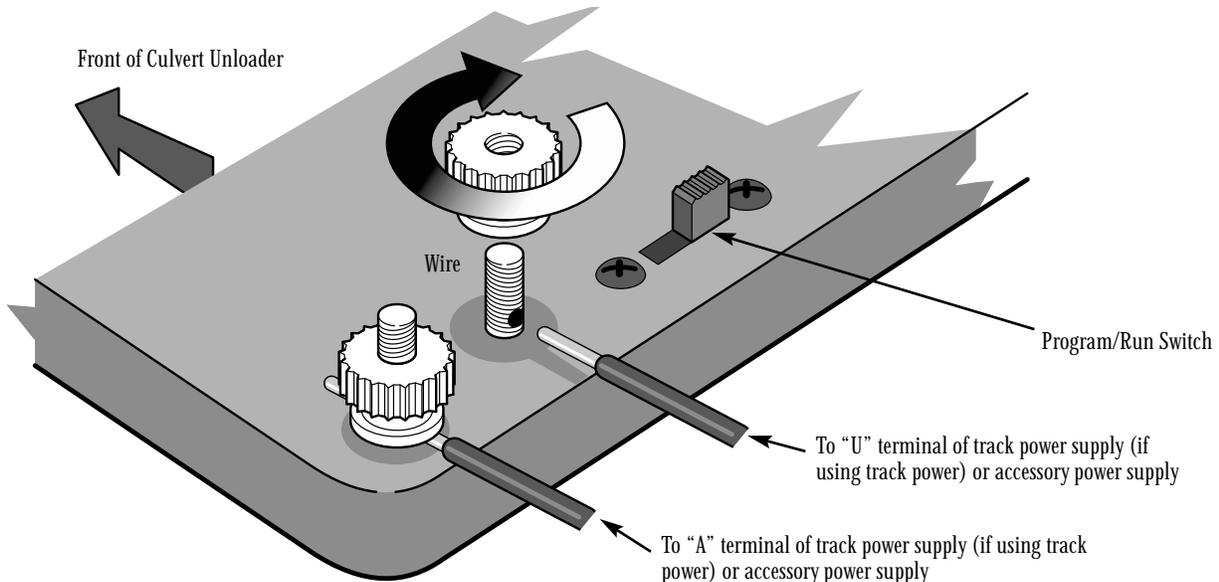
**Note!** You cannot wire the culvert unloader to the Lionel SC-1. Wiring to the SC-1 will result in irreversibile damage to the electronics.



## Wiring your Culvert Unloader for Command Control Operation

Your Command Control culvert unloader can also be powered using track power or a separate accessory power supply. Connect an insulated wire from one of the screw posts labeled “transformer” to the “U” terminal of track power supply (if using track power) or accessory power supply. This is done by unscrewing the nut off of the post, placing the wire through the

hole in the post, and tightening the nut back onto the post to secure the wire in place. Finally, connect the second insulated wire from the other screw post to the “A” terminal of track power supply or accessory power supply. You will notice that the “RUN/PROGRAM” switch is located next to the screw posts. You are now ready to begin unloading culvert pipes from your gondola.



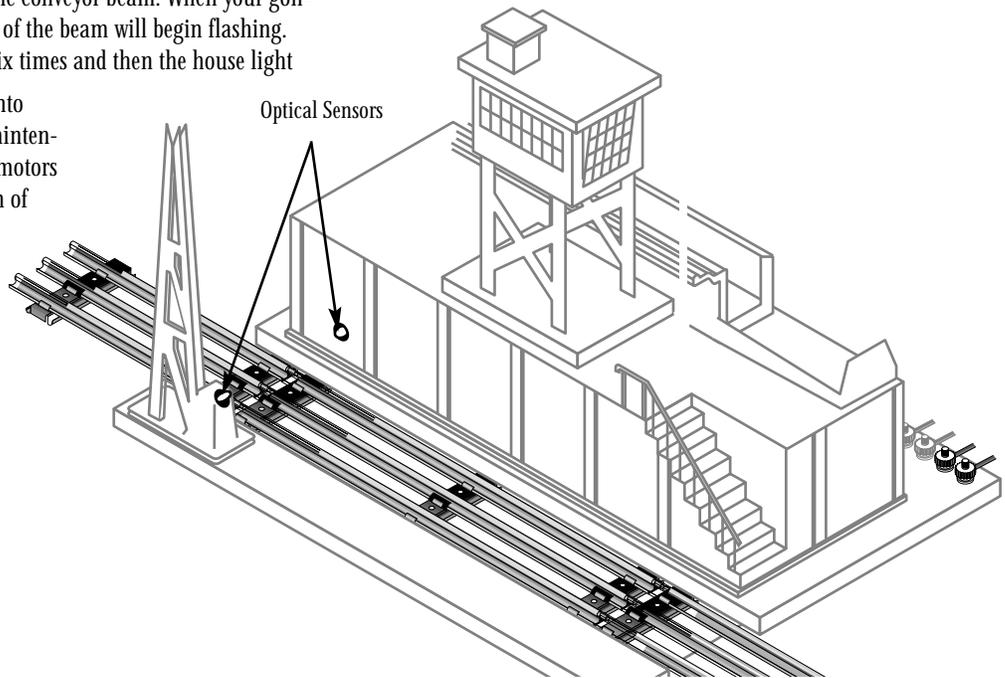
## Operation of your Culvert Unloader in a Conventional Environment

**W**hen properly installed on your layout, activation of the culvert unloader will begin unloading the culvert pipes (7 included) from your culvert gondola (sold separately). In order to begin operation, pull your culvert gondola into place under the conveyor beam. When your gondola is in place, the hazard lights on the top of the beam will begin flashing. The hazard lights will flash approximately six times and then the house light

will turn on. When the house light turns on, you are now ready to unload pipes from your gondola. In order to begin unloading, simply press the 190-001 switch, and the unloader will begin removing pipes from you gondola.

**Note!** A safety feature has been built into your culvert unloader to stop unintentional operation. The conveyor motors will not operate unless the beam of the optical sensor is broken.

**Note!** The software is programmed to index the culvert unloader to the ramp side of the accessory before it will pick up a new pipe when power is first given to the accessory.



## Operation of your Culvert Unloader in a TrainMaster Command Environment

**Y**our command-equipment culvert unloader comes factory programmed with an ID # of "1". To get your culvert unloader in action, set your PowerMaster to CMD or set all power supplies on full. Press ENG and "1" on your CAB-1. Press the boost button; your culvert unloader will begin unloading your gondola for the duration of time, which the boost button is held.

**Example** address Locomotive #1

PowerMasters set to CMD or traditional power supplies ON FULL

 Press ENG

 Press 1 (the ID#)

Press BOOST button

**Note!**

We recommend that you choose an easy to remember ID# for your "engine". Some possibilities are part of the product number, your age, any two digit number that is not used by another engine. If you like, write the number on a small piece of tape and put this on the bottom of the culvert unloader to aid in remembering.



**HALT:** Press HALT to shut down all PowerMaster electrical output on your railroad. Stops all Command-equipped Lionels in operation.



**BOOST:** Press BOOST to activate the culvert unloader and begin unloading.

**Note!**

Motor will run as long as you press on the boost button.



**AUX1 0:** Press AUX 1 and "0" to reset your motor to the "home" position. The hazard lights will flash six times after the motor has been located "home." If the beam is broken, your culvert unloader is ready again for activation, but if the beam is not broken, it will shut down.



**WSTL/HRN:** Press the WSTL/HRN button to help identify what ID# you have given your culvert unloader. With the beam unbroken, press ENG, your ID#, and then the WSTL/HRN button, and the hazard lights on your culvert unloader will flash approximately six times indicating that the ID# you have selected is for your culvert unloader.