

# INSTALLATION INSTRUCTIONS

2650-1349-00 Rev. A



## MODEL NUMBER

### RTD-7

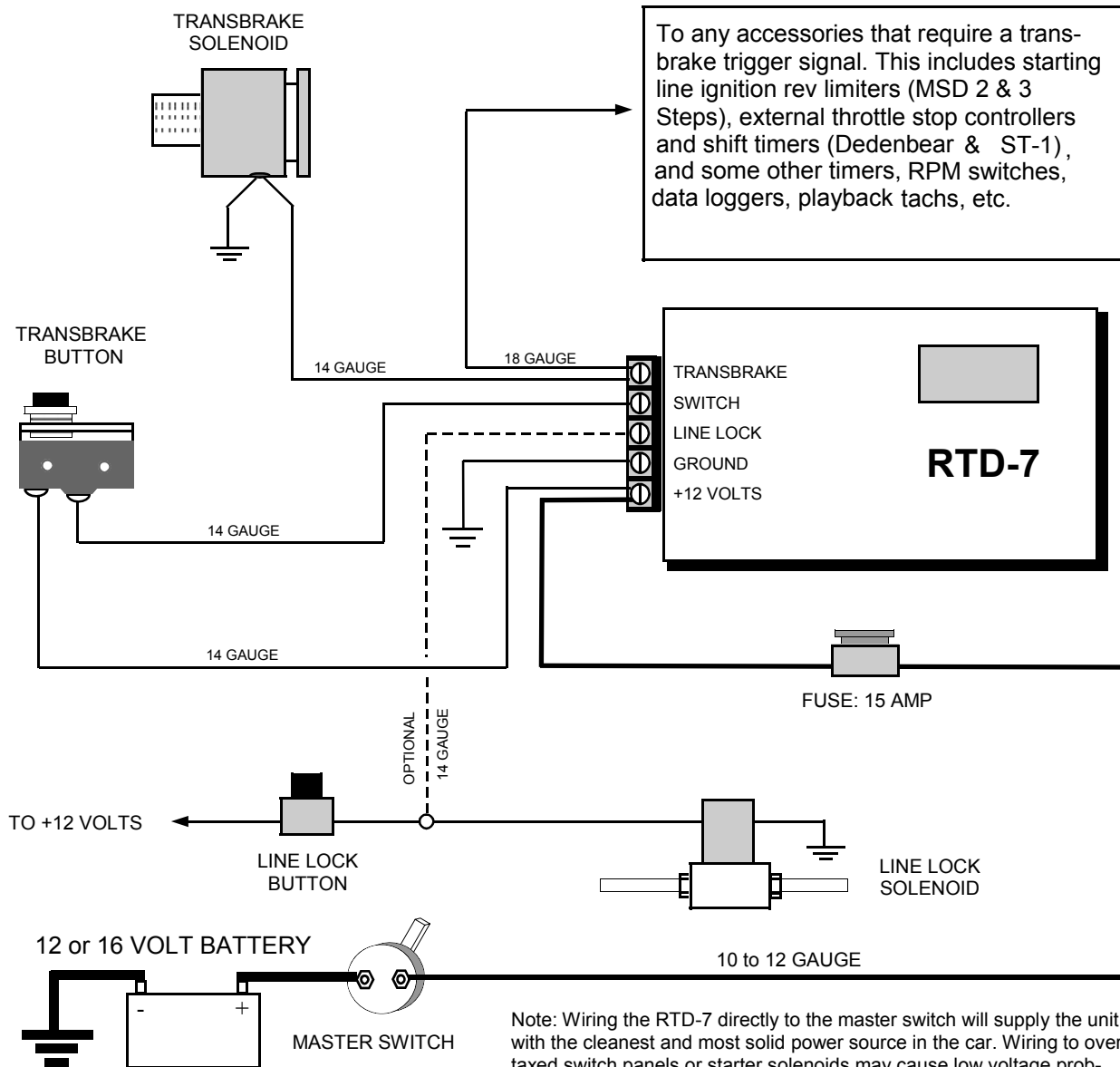
Reaction Time Delay

## INSTALLATION

Using screws through the rubber grommets in the base, mount the RTD-7 away from heat, vibration and the ignition system. Make sure the driver can reach the buttons when strapped in. Angle the unit so the thumbwheel switches can be easily read.

Wire the RTD-7 as shown below. The RTD-7 is 12 and 16 volt compatible; no voltage reducers are needed when using in a 16 volt system. Make sure the power lead is fused and comes straight from the master switch. The ground should be wired to a solid chassis ground, not sheet metal panels.

The line lock output is optional. If wired the line lock will set with the transbrake on the starting line reducing the chance of rocking. The line lock will release with the transbrake at launch. If you do not wish to use the line lock feature, simply do not wire it in.



Note: Wiring the RTD-7 directly to the master switch will supply the unit with the cleanest and most solid power source in the car. Wiring to over-taxed switch panels or starter solenoids may cause low voltage problems. An on/off switch is not needed in the power wire as the RTD-7 automatically turns itself on at application of the transbrake and off after transbrake release.

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## RTD-7 DELAY SETTING

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### PRO TREE RACING

The RTD-7 is used to keep a car from red lighting on a pro tree by delaying the release of the transbrake. Typical delay settings on a pro tree range from 0.001 to 0.050. If your car will not red light on a pro tree, set the RTD-7 to 0.000.

### FULL TREE RACING

By delaying the release of the transbrake, it becomes possible to release the transbrake button on the top (first) amber bulb of the christmas tree. Releasing off the top bulb is the preferred method because it is more consistent than a bottom bulb release. The increased consistency comes from not anticipating the bottom bulb and being able to just "hit" the top bulb as quick as possible allowing for a more natural human reaction. Top bulb release also allows the driver to stage and release the button the same every pass. If the car is launching late or early, changes to reaction times can now be made by adjusting the RTD-7 instead of having the driver try to mentally speed up or slow down.

Typical delay settings for launching off the top bulb are 0.950 to 0.990 for door cars and 1.020 to 1.080 for dragsters and altered. Delays as low as 0.850 for slower cars and as high as 1.100 for very hard-launching cars can be reached.

### CROSSING OVER

When racing a full bracket tree or a cross talk tree, if you are the faster car your opponent will be leaving first. This means his/her top amber bulb will light first on a bracket tree, or both top bulbs will light at the same time on a cross talk tree. In this situation, you need to cross over. Crossing over allows you to release the transbrake button on your opponent's top bulb (full tree) or your top bulb (cross talk tree). Crossing over is possible with the RTD-7 by manually calculating the handicap and adding it to your delay time. For example your delay setting is 1.020 and you are dialed in at 8.50, your opponent dials in at 9.70. Subtract your dial from your opponent's dial ( $9.70 - 8.50 = 1.20$ ) then add it to your delay setting ( $1.20 + 1.020 = 2.220$ ).

Note: If you do a lot of crossing over, "Crossover" delay boxes that automatically calculate the handicap and add it to your delay time are available from Dedenbear. Call for details.

### OPERATION

Set the thumbwheel switches to your desired delay setting. Shallow stage the car. Press the transbrake button to set the transbrake. Release the transbrake button at the flash of all three amber bulbs (pro tree) or at the flash of the top amber bulb (full tree); the RTD-7 will continue to hold the transbrake for the preset delay time. When the time expires, the RTD-7 will release the transbrake solenoid launching the car.

If you accidentally release the transbrake button before the christmas tree starts, you can press the button back down before the delay time expires. The RTD-7 will reset itself and go back to the full delay time allowing you to release like normal.

Warning: The RTD-7 has no down track transbrake lock out. If you accidentally press the transbrake button after launch the RTD-7 will power out and reset the transbrake. To avoid this, mount the transbrake button in a location where it is easy to release, but not easily bumped.

### ADJUSTING FOR EARLY (RED) LIGHTS

When a car red lights, it has left too early. To compensate for this in the RTD-7, you must add time to the delay setting. For example, if you had 0.980 in your delay setting and went  $-0.040$  red, you would want to add at least 0.040 to your setting making it 1.020. In addition, a "cushion" of 0.010 is usually added on top to avoid cutting another red light making the delay setting 1.030.

### ADJUSTING FOR LATE (GREEN) LIGHTS

When a car green lights, it has left too late. To compensate for this in the RTD-7, you must subtract time from the delay setting. For example, if you had 0.980 in your delay setting and went  $+0.040$  green, you would want to subtract 0.040 from your setting making it 0.940. A "cushion" of 0.010 is usually added back to the delay setting to avoid cutting a red light making the delay setting 0.950.

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## LIMITED 1 YEAR WARRANTY

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