

# If the towed vehicle's brake lights override the turn signal...

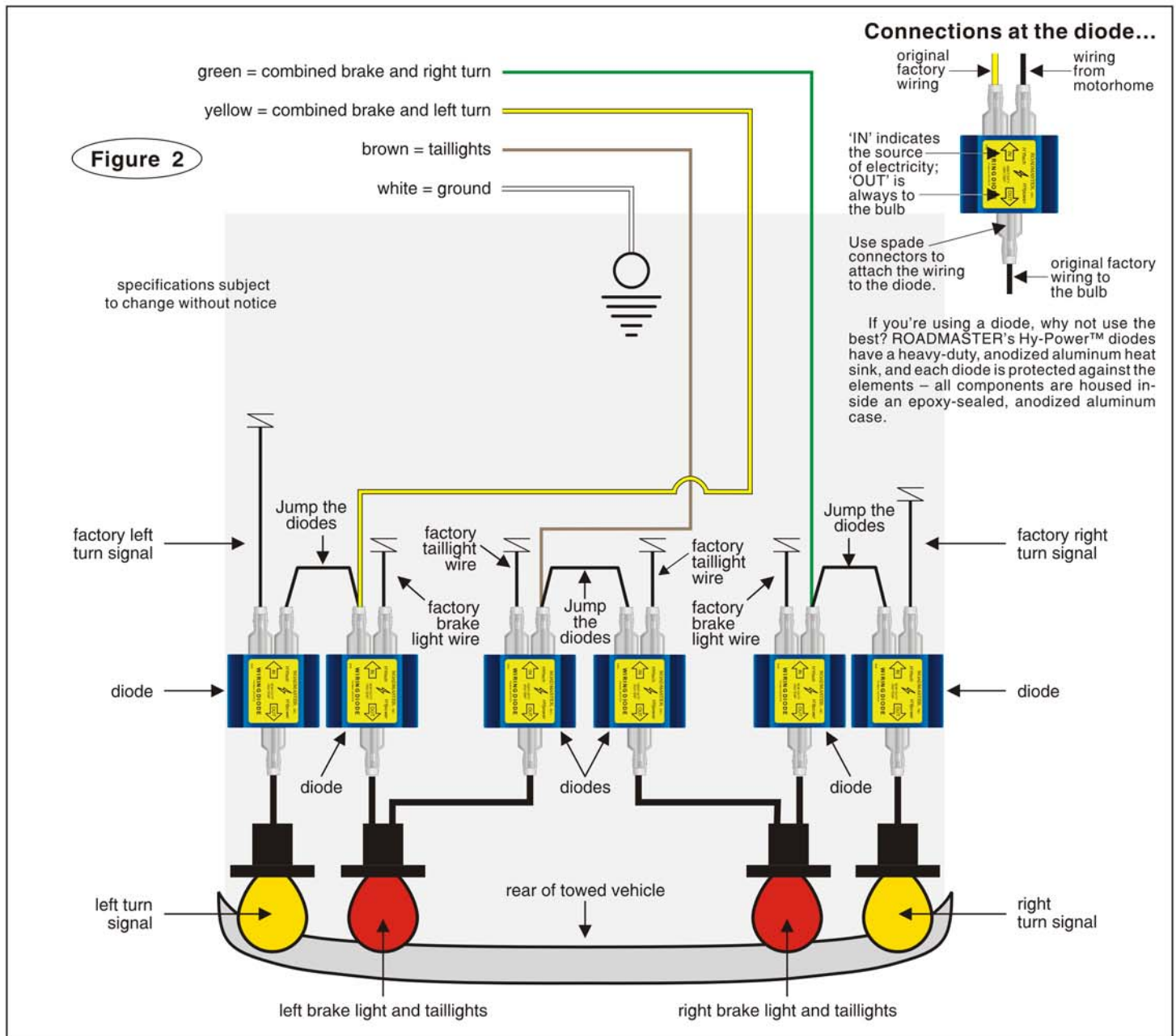
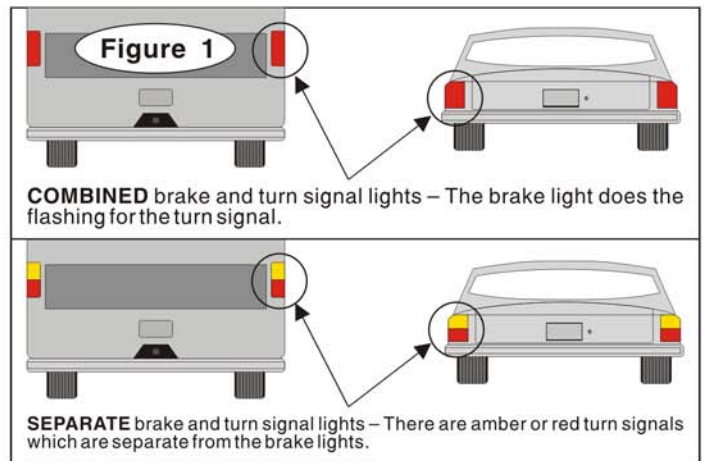
There are a variety of methods available which will allow the towed vehicle's brake lights and turn signals to work in conjunction with the motorhome's. These methods are based on the type of lighting systems in both the motorhome and the towed vehicle. There are two types: combined or separate.

In a **combined** system, the brake light does the flashing for the turn signal; in a **separate** system, there are amber or red turn signal lights which are separate from the brake lights (see Figure 1).

If both vehicles have separate lighting systems, the towed vehicle's brake lights should not override the turn signal. The other three possibilities are:

1. The motorhome has a combined system, and the tow-

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ed vehicle has a separate system; or

2. Both vehicles have combined systems; or

3. The motorhome has a separate system and the towed vehicle has a combined system.

Methods which will allow the towed vehicle's brake lights and turn signals to operate in tandem with the motorhome's, for each of these three possibilities, are described below.

*Note: the following instructions apply to the majority of vehicles. However, applications vary. Before wiring, refer to the owner's manual, or ask the dealership or manufacturer, for vehicle-specific information. Wiring information for many vehicles is also available on this website, under "Vehicle Specific Information."*

### **Combined (motorhome) to separate (towed vehicle)**

If the motorhome has a combined lighting system and the towed vehicle has a separate lighting system, there are three alternatives. The first two methods are non-intrusive – they bypass the towed vehicle's wiring.

1. Disconnect the towed vehicle's lighting system (towing only) and install magnetic tow lights (part number 2100 or 2120).

2. Disconnect the towed vehicle's lighting system (towing only) and install a taillight wiring system (part number 155).

3. Rewire the towed vehicle's turn signals, taillights and brake lights (a Universal Wiring Kit, part number 154, plus two additional Hy-Power™ diodes, part number 792). Refer to Figure 2.

To rewire the towed vehicle's turn signals, taillights and brake lights...

A. First, cut the factory turn signal, taillight and brake light wires, as close to the lights as possible.

B. Next, install the six diodes in line, as shown in Figure 2, as close to the lights as possible.

### **CAUTION**

Attach the diodes as close to the vehicle's lights as possible, to avoid interaction with other circuits which may be tied into the turn signal or brake light wires.

Attaching the diodes farther away may cause the towed vehicle's lights to work improperly, and may also cause damage to other electrical components in the vehicle.

### **CAUTION**

Failure to install diodes, as shown in Figure 2, will create a backfeed through the electrical system, which will allow electrical current from the towed vehicle to disrupt one or both of the vehicles' electrical systems. Also, the supplemental braking system (if installed) may function improperly. Other consequential damage may also occur.

C. On each side, jump the brake and turn signal diodes, as shown in Figure 2.

### **CAUTION**

Unless the brake and turn signal diodes are jumped, the towed vehicle's brake light circuits will override the motorhome's turn signals – the towed vehicle's turn signals will not operate in conjunction with the motorhome's turn signals.

D. Test to verify that the diodes have been properly installed...

1. The towed vehicle's turn signals and brake lights will both flash when one of the motorhome's turn signals is on; and

2. When the motorhome's turn signal and brake lights are both on, the towed vehicle's brake lights will stay illuminated, while the turn signal flashes.

### **Combined or separate (motorhome) to combined (towed vehicle)**

If both the motorhome and the towed vehicle have combined lighting systems, or if the motorhome has a separate system and the towed vehicle has a combined system, there are four alternatives. The first two methods are non-intrusive – they bypass the towed vehicle's wiring.

1. Disconnect the towed vehicle's lighting system (towing only) and install magnetic tow lights (part number 2100 or 2120).

2. Disconnect the towed vehicle's lighting system (towing only) and install a taillight wiring system (part number 155).

3. Install an on-off toggle switch that, when the vehicle is being towed, will disable power from the cold side of the brake light switch.

### **CAUTION**

If the towed vehicle is equipped with either a BrakeMaster or 9700 supplemental braking system, the toggle switch must be attached downstream from the connection to the motorhome monitor wire. If the toggle switch is installed upstream from the connection, it will disable the monitor light.



### **WARNING**

After towing, toggle the switch back.

The vehicle's brake lights and turn signals will be disabled if the switch is not toggled back. Drivers behind the vehicle will not be alerted when the vehicle stops or turns, which may cause an accident.

Failure to follow these instructions may cause property damage, personal injury or even death.

4. Install a Brake-Lite Relay (part number 88400). Refer to the installation instructions on this website.



Towing and Suspension Solutions