

# A Full-Function ICC Switch For Prevost Coaches

This do-it-yourself project will allow owners of Prevost motor coaches to modify their wiring to create a full-function switch that can be used to signal other motorists and is controlled via the directional signal lever.

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After reading the article titled "Installing a Full-Function ICC Switch" by Ken Wilson, L13812, in the September 1987 issue of FMC Magazine, we immediately constructed such a circuit for our Holiday Rambler Class A motorhome. And, we have since modified the circuitry in our current Prevost coach conversion to allow us the convenience of following the recommended protocols for safe passing during the nighttime and daytime hours.

During the daytime hours, truckers signal to passing drivers that it is okay to re-enter the driving lane by flashing their headlights. And we have noted that at night truckers give the "you're clear" signal by turning off their headlights rather than flashing their bright lights. (When we installed halogen headlights on our coach, we understood why; the much brighter halogens can be blinding and hazardous.) This signal is also used at intersections or in other traffic situations when you wish to yield the right-of-way. Blinking the marker lights by turning them on momentarily during the daytime hours and off during the nighttime hours is a way of saying "thank you."

While the ICC system we had on our Holiday Rambler allowed us to flash our lights, it did not allow us to turn the headlights off and on as a signal to other motorists. However, in that coach the headlight switch was accessible without the driver taking his or her eyes off the road. Our Prevost bus conver-

sion had a courtesy signal system that allowed for blinking the marker lights at night (when they were already lit) and for flashing the bright lights. Switches on the directional signal lever controlled these functions. The headlight and marker light switches are on the lower dashboard, requiring the driver to take his or her eyes off the road in order to blink the marker lights during the day or to turn the headlights

rotary switch designed to control electric windshield wipers. Since the electric windshield wipers were not introduced until 1990, this switch is unused and can be deployed to activate this new relay that controls the low-beam headlights.

For those who own a coach with electric windshield wipers, or who wish to be able to dim the headlights as well as flash them by pulling on the direc-

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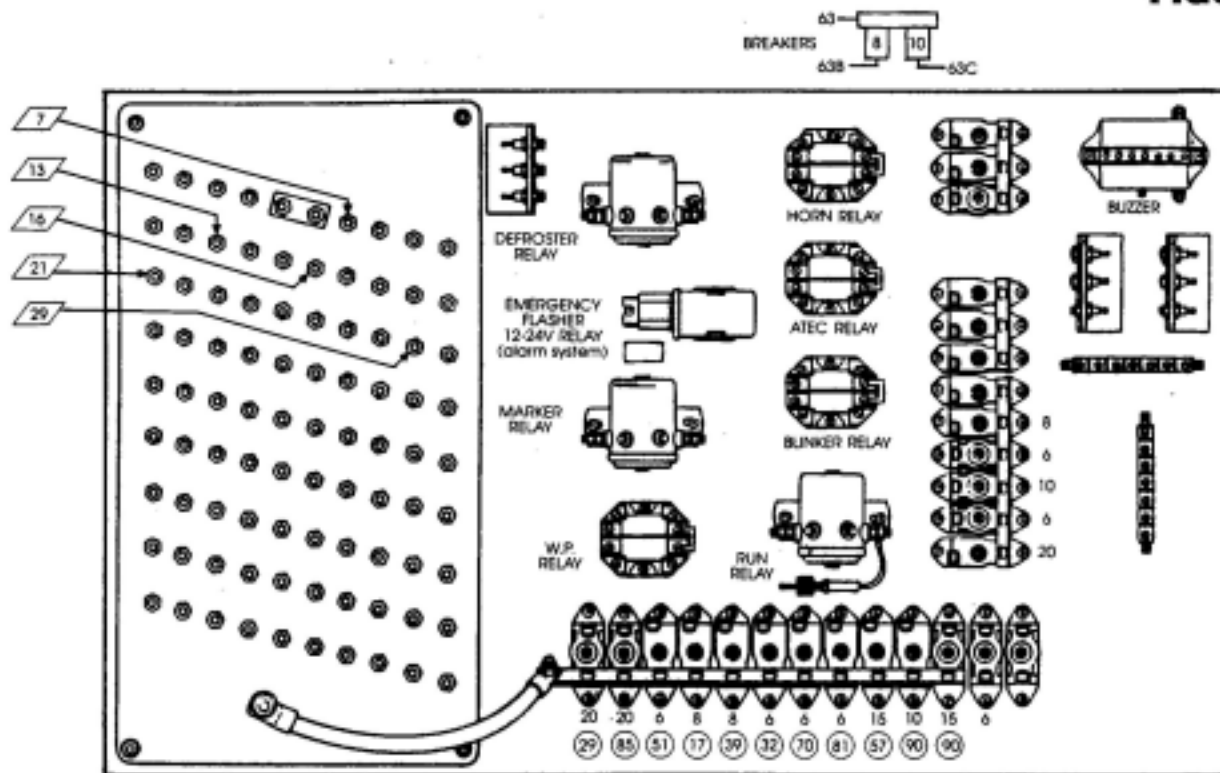
***It is possible to modify the Prevost ICC system to obtain a full-function circuit, all controlled on the directional signal lever. The daytime blinker requires the addition of one relay and minor rewiring of the Prevost "blinker" relay. The modification is applicable from mid-1985 to unit number 707 (1990).***

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on and off at night.

It is possible to modify the Prevost ICC system to obtain a full-function circuit, all controlled on the directional signal lever. The daytime blinker requires the addition of one relay and minor rewiring of the Prevost "blinker" relay. The modification is applicable from mid-1985 to unit number 707 (1990). Bill Campbell of Prevost Car Inc. has advised us that as of that date, Prevost coaches are equipped with a day-night blinker circuit. To the present time, however, no provision has been made for turning on and off the headlights via the directional signal lever. To do this, a second cubic relay is required. Directional signal switch assemblies used since 1985 (identified by two-spoke steering wheels) contain a

tional signal lever, a second circuit is illustrated. This circuit functions as follows: when the directional signal lever is pulled during the daytime (headlights off), it flashes the bright lights. When the lever is pulled at night (headlights on), the low beams blink. If the driver wishes to flash the bright lights at night, it is necessary to push the lever forward momentarily. Note: the lever must be manually returned to the low-beam position to turn off the bright lights. The installation of this circuit in coaches without electric windshield wipers is an option. Owners of Prevost coaches built after 1990 (those containing a three-function ICC capability) may wish to add the fourth function as described later in this article.

**FIGURE I**

### STEPS FOR WIRING A DAYTIME BLINKER

1. In the front wiring compartment, identify junction post #7 and #29, as well as relay #27. See Figure 1.

This relay is noted as "Blinker Relay" in the diagram attached to the inside of the compartment door. R27 is an eight-pin, sealed relay that fits into a socket. It is a double-pole, double-throw relay. The double poles are wired in parallel, thereby doubling the amperage rating of the contacts. Terminals 1/8 are throw contacts. Terminals 3/6 are normally open (NO), and terminals 4/5 are normally closed (NC). See Figure 2.

2. Locate wire #63A. This is connected to R27 at two points (terminals 1/8 and 4/5).

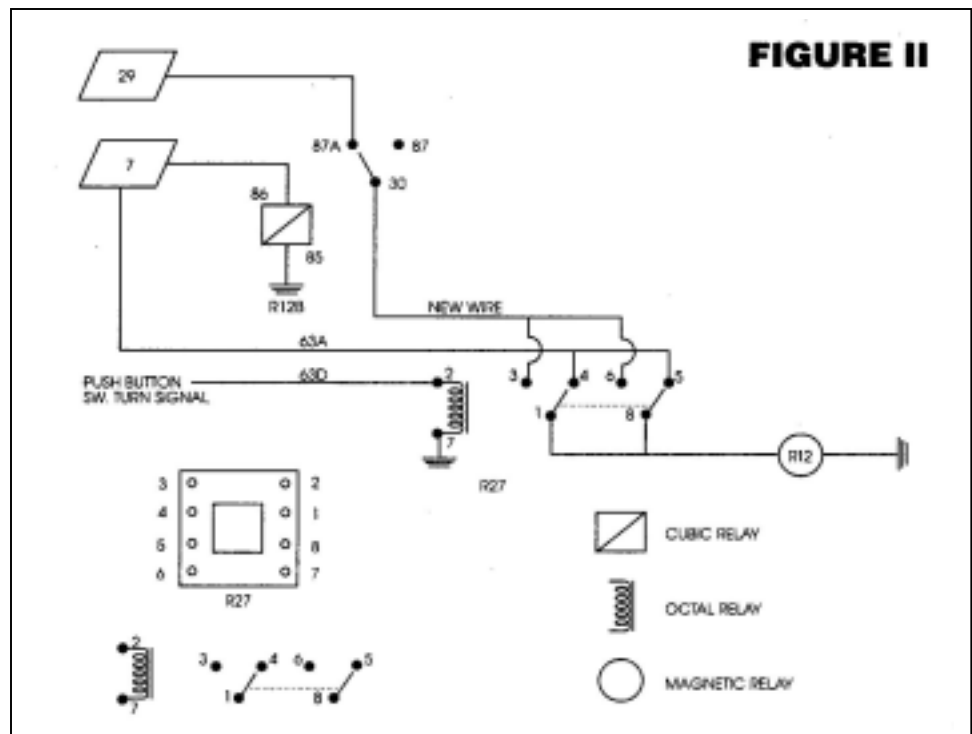
Note that one wire (63A is directed to junction post #7, and the other (also labeled 63A) is connected to R12 (marker light relay). Verify that the wire going to R12 originates from terminal 1/8 of R27. If not, transpose wires 63A so that junction post #7 is connected to terminal 3/6 of R27, and R12 is connected to terminals 1/8 of R27.

3. Select a location for installing a cubic relay part #56-1230, available from Prevost. Wire this added relay (designated as R12B) as follows:

- A. Terminal 86 to junction post 7.
- B. Terminal 85 to ground

- C. Terminal 87A to junction post 29.
- D. Terminal 30 to terminal 3/6 of R27

During the day when the marker lights are off, junction post 29 provides 24 volts to terminals 3/6 of R27. Acti-



vating R27 with the push button on the end of the directional signal lever causes activation of R12, which turns on the marker lights. At night when the marker lights are on, 24 volts are present at junction post 7, thereby activating both R12B and R12. No voltage is present at terminal 3/6 of R27. Pushing the button on the end of the directional signal activates R27, which interrupts continuity between junction post 7 and R12., turning off the marker lights.

### HEADLIGHTS CONTROLLED BY ROTARY SWITCH ON DIRECTIONAL SIGNAL LEVER

1. Locate and separate connector C74. This is situated behind the dashboard at the left side of the steering column.
2. Attach a 6-foot wire to the position adjacent to the existing wire 53. See figure 3. Upon assembly, it will be connected to the violet/black wire.
3. Reconnect C74.
4. Use a voltmeter to confirm that 24 volts are present in the new wire when the rotary switch on the directional sig-

5. Route the wire, through the conduit, to the front wiring compartment and then to the steering compartment.
6. Identify the headlight module located in the lower left part of the steering compartment, and then locate relay R25.
7. Identify and disconnect wire 58B from terminal 7 of R25.
8. Install new cubic relay R12C at a convenient location. This is part number 56-1230. Install the part as follows:

- A. Terminal 86, attach new wire from C74.
- B. Terminal 85 to ground
- C. Terminal 87A, attach wire 58B
- D. Terminal 30 to Terminal 7 of R25.

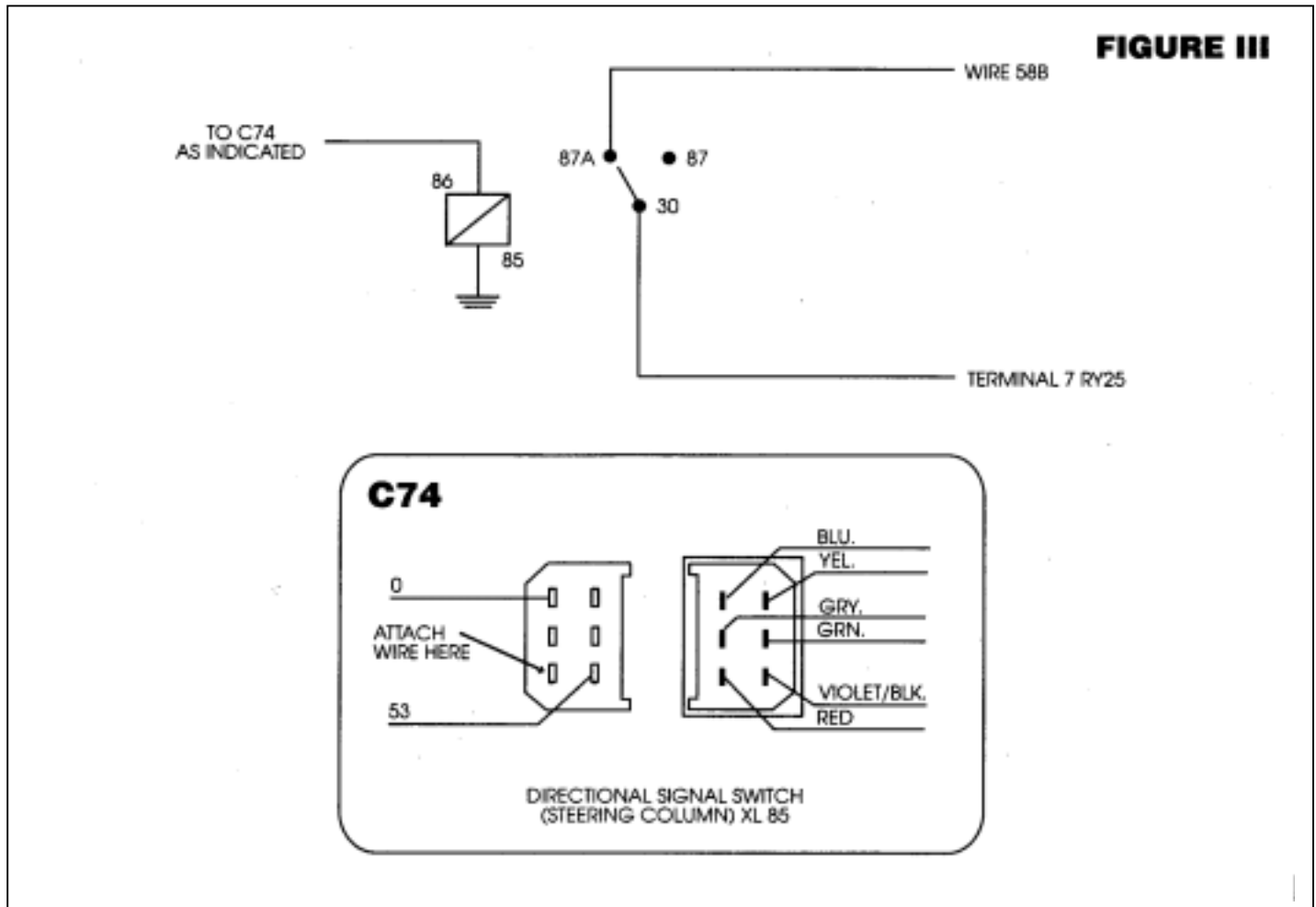
R12C is normally off. Fully rotating the directional signal lever clockwise activates this relay, which interrupts wire 58B from activating R25. To turn the headlights back on, rotate the lever counterclockwise, thereby allowing wire 58B to activate R25 in a normal fashion.

### HEADLIGHTS CONTROLLED BY PULL SWITCH ON SIGNAL LEVER

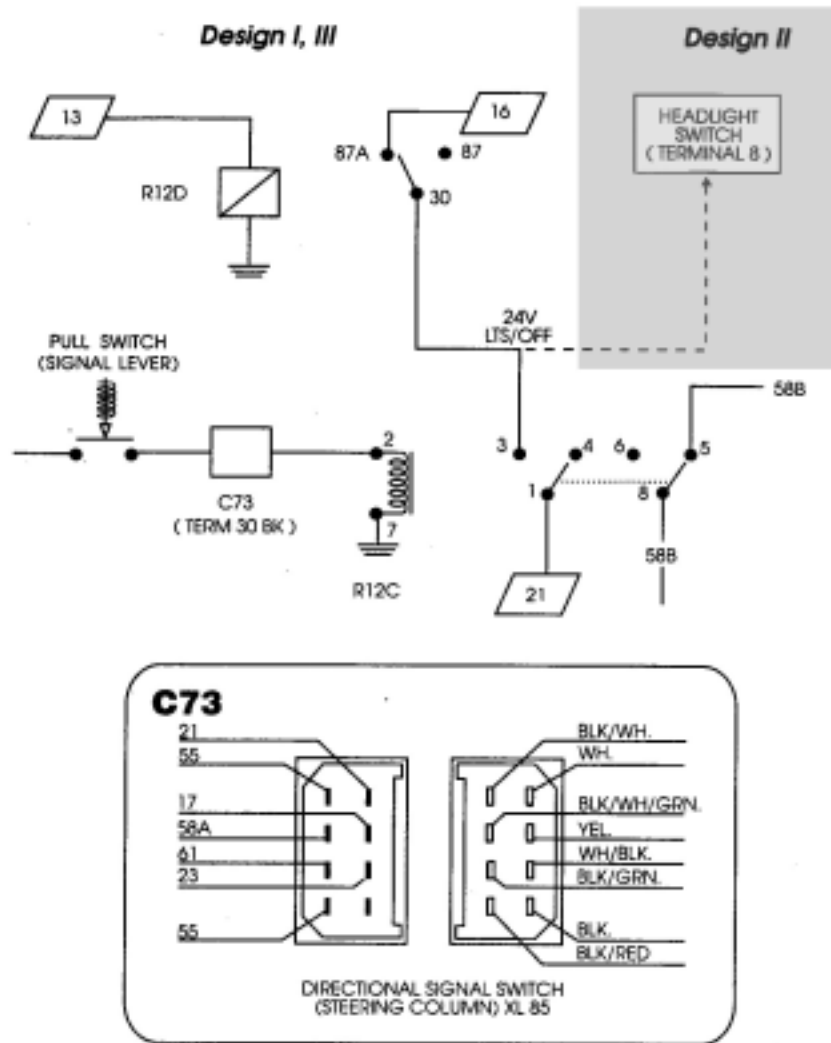
Identify the type of headlight switch present. Through the years, three different types have been used. The first design utilized separate push-button switches to activate the headlights and the marker lights. The second design utilized separate rocker switches. The third design used a single switch with two "on" positions. Position 1 activated the marker lights, and position 2 activated both the marker lights and the headlights. The latter design is similar to many automotive headlight switches. Modification of designs 1 and 3 requires the addition of one octal relay and one cubic relay. Modification of design 2 can be accomplished using only one octal relay (R12C), or it may also be wired in a similar fashion to designs 1 and 3.

#### Wiring for R12C, with rocker switch (design 2):

1. Run wire from terminal 8, headlight switch to terminal 3, R12C.
2. Disconnect wire 55 at C73, termi-



**FIGURE IV**



nal 30, identified by black wire. This wire should have continuity with junction 21. Once continuity is confirmed, tape exposed end. See Figure 4.

Note: do not remove wire 55 from terminal 56A, identified by the white wire.

3. Install new wire at terminal 30, C73. Connect this wire to terminal 2, R12C

4. Connect terminal 7, R12C to ground.

5. Interrupt wire 58B (located near headlight relay panel I lower left corner of steering compartment). Connect the interrupted ends of wire 58B to terminal 5 and terminal 8 of R12C.

6. Connect wire 55 (removed in step 2) to terminal 1, R12C. If R12C is located closer to junction 21, leave wire 55 taped, and add a wire between junction 21 and terminal 1, R12C.

**Wiring for R12C, with design 1 or 3 switch (optional for design 2):**

**PARTS LIST**

2 or 3 cubic relay	Prevost part #56-1230
2 or 3 cubic relay bases	Prevost part #56-1183
1 or 0 octal relay	Prevost part #56-1010
1 or 0 octal relay	Prevost part #56-1223
4 per each, terminals for cubic relay	Prevost part #56-1181
1 terminal for C74	Prevost part #56-1108
16-gauge wire	
Numerous ring and spade terminals	

1. Connect terminal 3, R12C, to terminal 30, R12D.
2. Follow steps 2 through 6, same as above instructions for design 2.

For designs 1 and 3, an additional cubic relay, R12D, will be required to provide 24 volts when the headlights are off. This relay may be installed in any of three locations: 1. In the front wiring panel, depending on available space; 2. In the upper part of the steer-

ing compartment, just below the front wiring panel. (We constructed a special board to mount numerous additional relays in this location); 3. Near the headlight relay panel in the lower left corner of the steering compartment.

**Wiring for R12D:**

1. Terminal 86 to junction 13.
2. Terminal 85 to ground.
3. Terminal 87A to junction 16.
4. Terminal 30 to R12C, terminal 3