

Convertible Rear Window Control Modifications (Jaguar XK8/R)

Jaguar engineers restricted the raising of the convertible rear quarter windows when the top is down. This document describes a modification to override this restriction and allow a **quick** press on the ROOF CLOSE button to raise the windows. This provides for a quieter ride with less wind buffeting.

Holding the roof close button will raise the top in the normal fashion. (Pressing the roof lower button already lowers the rear windows when the top is down as a standard feature).

A second modification retracts the rear quarter windows automatically (auto-down) when the roof is down and then is closed. This is necessary to prevent damage to the seals of the convertible top by the rear quarter windows during the top closing sequence.

I recommended that these modifications be used in conjunction with one another. However, if a window up feature has already been implemented with a dedicated switch (as described in Rev. Sam's You-Tube video); the auto-down modification can be implemented by itself.

WARNING:

This information is provided in good faith, however it may have unknown consequences. Any property damage or injury resulting directly or indirectly from use of the information provided in this document is entirely your responsibility.

A note about T-Taps:

This document describes connection to car wiring with T-Taps. T-Taps are convenient and easy to use. Unfortunately, they are not as reliable as soldered or crimped connections. For the utmost reliability of your connections, I recommend the use of soldered or crimped connections.

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Part I – ADDING REAR WINDOW RAISE FEATURE (with top down) USING THE EXISTING ‘ROOF UP’ BUTTON

Parts List:

Qty 1, DEI 528T Pulse Timer (available on ebay for \$10-\$12):

<http://shop.ebay.com/? from=R40& trksid=p5197.m570.11313& nkw=dei+528T & sacat=See-All-Categories>

Qty 1, 12 volt standard automotive relay, SPST or SPDT (about \$6 at Radio Shack <http://www.radioshack.com/product/index.jsp?productId=2062477>), or get a fog light relay at Advance Auto Parts or Autozone). These relays can be found cheaper on ebay.

Qty 1, 1N4001 Diode (About \$1.00 at Radio Shack, <http://www.radioshack.com/product/index.jsp?productId=2036268>)*

Qty 4, 18-22 ga. Red T-taps

Qty 1, 18-22 ga. Red Inline crimp splice

Qty 1, 18-22 ga. Red ring or spade terminal

18-20 ga. stranded hookup wire (red, white and grey shown, but any colors can be used)

Misc. size tie wraps

Electrical tape (fabric preferred) and/or heat shrink tubing.

*Note: Some relays have a built in diode. The diode **IS REQUIRED** here but can be omitted if it is built into the relay. In either case, be sure to take note of the correct polarity (diode cathode (-) goes to positive signal for reverse bias).

Procedure:

1. Prepare the DEI 528T Pulse timer:

-Cut the orange wire off and tape up or cover the end with heat shrink. Be careful not to confuse the orange, red and brown wires.

-Cut the blue wire loop and tape up or cover the open ends with heat shrink

-Set the variable resistor with a small screwdriver to the approx. the 8 o'clock position, which will provide about a 4 second pulse (see below).

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2. Remove shifter trim surround and console wood paneling. Later model cars have a metal surround that removes with 4 screws. Earlier model cars have a snap on plastic surround with a metal bracket underneath secured with 4 screws; refer to this thread for removal tips for the plastic surround with a credit card:
<http://www.jaguarforums.com/forum/xk8-xkr-17/1999-shifter-ring-47432/>
3. Remove the four screws securing the console storage tray, hinge and padded cover. Set the cover and tray assembly aside.
4. Remove the rear seat bottom:
 - Remove the vinyl stud caps at the lower front of the seat cushions
 - Remove the 10mm nuts at the lower front of the seat cushions
 - Undo the two snaps over the rear center seat belt latch 'gloves'
 - Lift up the front of the seat cushion
 - Push the center seatbelt latches through the 'glove' while pulling the bottom cushion free.
5. Remove the rear seat back.
 - Remove the two Phillips screws at each shoulder belt guide and let the shoulder belt glides drop in front of the rear cushion.
 - Remove the two Phillips screws at the under-cushion brackets.
 - Lift out the rear cushion.
6. Remove the carpet from the convertible top stowage tray.
7. Open the trunk and remove the battery compartment cover and the audio system carpeted covering on the right hand sidewall.

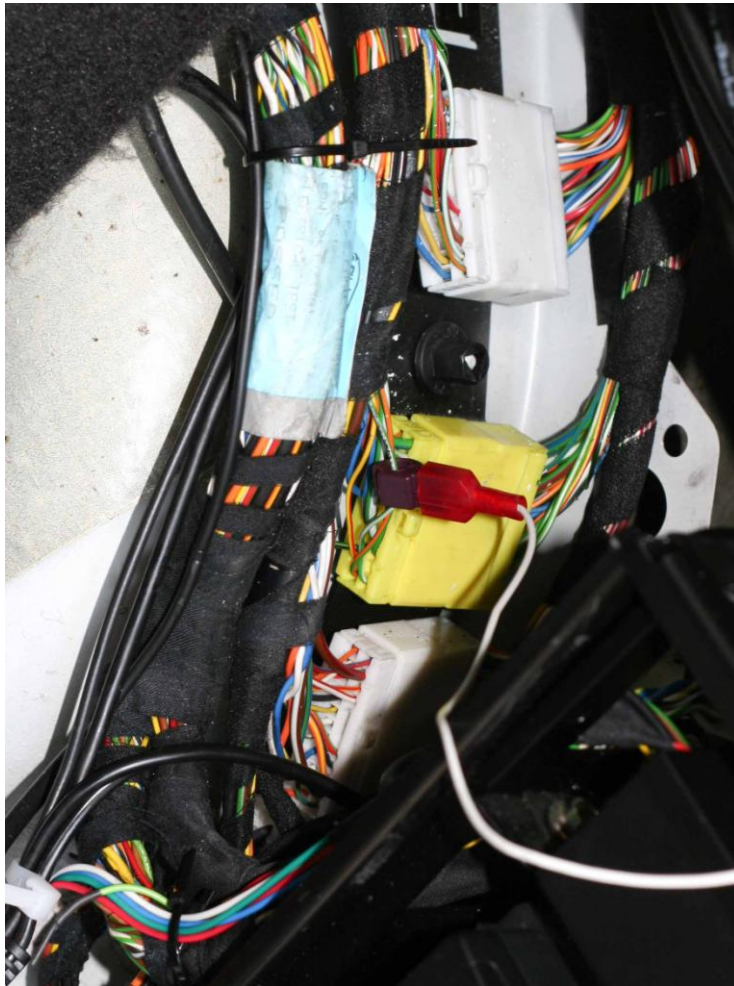
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8. Run two wires from the trunk to the console

-Pass a length of white and a length of violet hookup wire (you can use different colors if you want, just keep track) through the rear firewall through the same opening as the convertible top hoses go through. *(Note: the violet wire is for use in Part II.)* You can use a piece of solid, stiff building #12 or #14 wire to temporarily tape the hookup wire to and fish it through the opening. Inside the cabin route the wires behind the convertible headliner side curtain, down to the rear seat bottom and across to the console, following and tie wrapping to existing harnesses where possible. Thread the wires into the rear of the console. Be careful to route the wire so that it does not get pinched by the convertible top mechanism (this is easiest if you also remove the rear side trim pieces, but if you are careful you can do it without removing the rear side trim pieces).

9. Wire from the 'Top Down' micro-switch Green-White wire to the console

-Use a red T-tap to connect the White wire to the Green-White wire in the trunk over the right wheel well. See photo below and drawing at end of this section:



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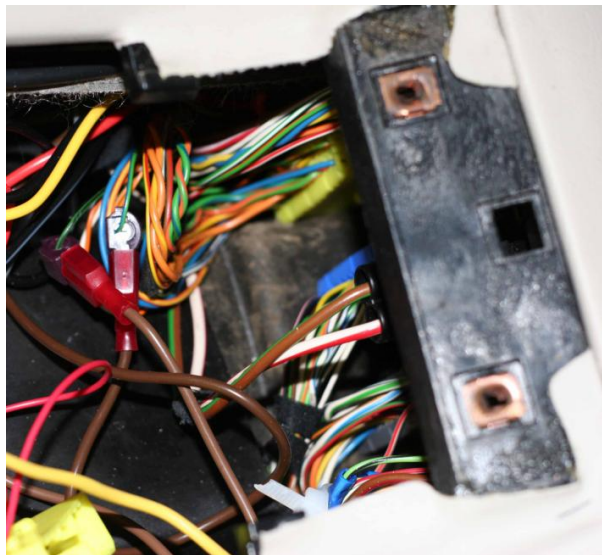
10. Pass a wire from the 'ROOF UP' switch in the front of the console to the rear of the console.

-Pass a length of grey wire (you can use different colors if you want, just keep track) hook up wire front the front of the console to the rear. This can be accomplished without removing the console by slipping the wire up above the carpet on the left side of the console.

-Use a red T-tap to connect the Grey wire to the Yellow/Red at the UP/DOWN switch in the front of the console to the left of the shifter. See photo below and drawing at end of this section:



11. Using a red T-Tap, connect the BROWN wire from the Pulse Timer to the Green-Black WINDOW-UP relay wire. See photo below and drawing at the end of this section. (Note: there are 2 Green-Black wires in this cable at this connector RH12, make sure you use the one that is third wire from the bottom of the connector – ask me how I know !)

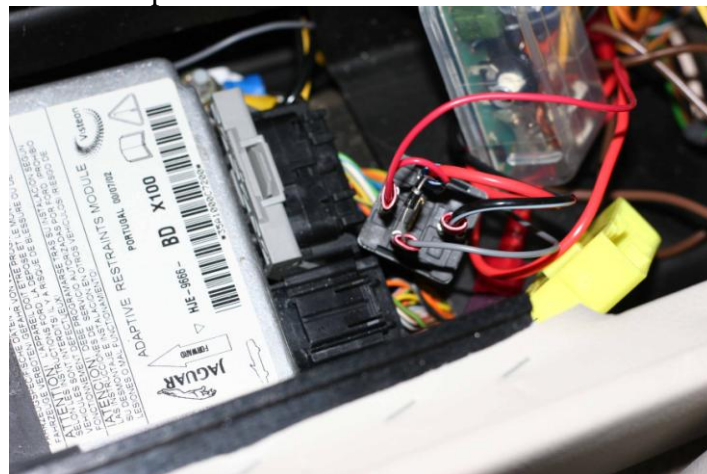


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12. Using a red T-Tap, connect the RED wire from the Pulse Timer and a new red wire to connect to the relay to the Brown-Red B+ wire at the telephone connector on the left side of the console. See photo below and drawing at the end of this section.



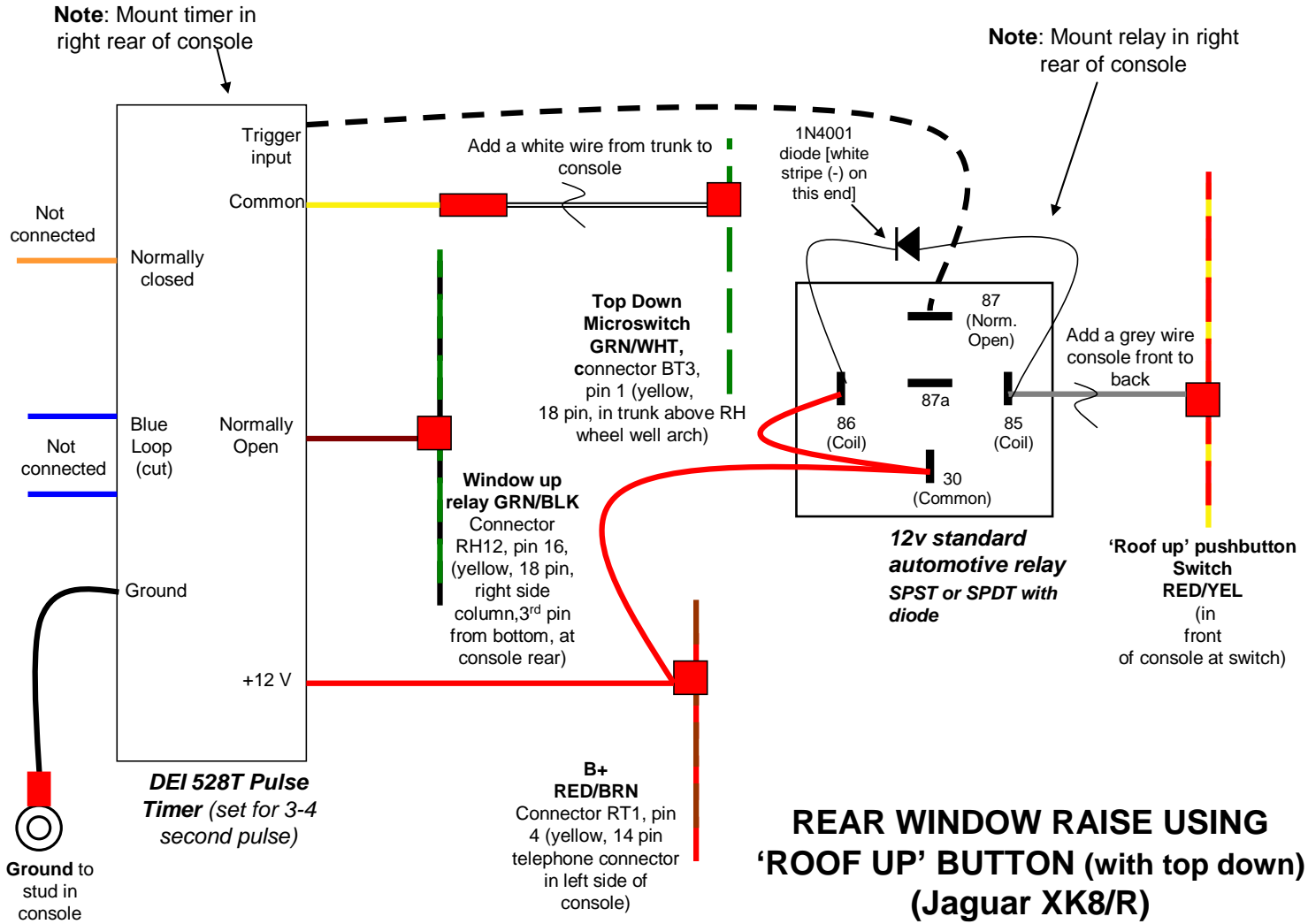
13. Complete all remaining connections of the relay and pulse timer in the right rear of the console as shown in the drawing at the end of this section (this can be accomplished with the console in place (though it might be a bit easier with the console removed)). The relay wiring is shown in the photo below:



14. Tuck the relay and the pulse timer into the right-hand side of the console, against the carpet.

15. Reinstall the shifter trim surround and console wood paneling.

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Part II – ADDING ‘AUTODOWN’ REAR WINDOW DROP FEATURE WHEN CONVERTIBLE TOP IS RAISED

Parts List:

Qty 1, DEI 528T Pulse Timer (available on ebay for \$10-\$12):

http://shop.ebay.com/?_from=R40&_trksid=p5197.m570.11313&_nkw=dei+528T&_sacat=See-All-Categories

Qty 1, 12 volt standard automotive relay*, SPST or SPDT (about \$6 at Radio Shack <http://www.radioshack.com/product/index.jsp?productId=2062477>), or get a fog light relay at Advance Auto Parts or Autozone). These relays can be found cheaper on ebay.

Qty 2, 18-22 ga. Red T-taps

Qty 2, 14-16 ga. Blue T-taps

Qty 1, 18-22 ga. Red Inline crimp splice

Qty 1, 14-16 ga. Blue ring or spade terminal

18-20 ga. stranded hookup wire (black, green and violet shown, but any colors can be used)

Misc. size tie wraps

Electrical tape (fabric preferred) and/or heat shrink tubing.

*Note: Some relays have a built in diode. A diode is **NOT** required here, but will not cause harm if it is built into the relay, as long as polarity is observed (diode cathode (-) goes to positive signal for reverse bias).

1. Prepare the DEI 528T Pulse timer:

-Cut the orange wire off and tape up or cover the end with heat shrink. Be careful not to confuse the orange, red and brown wires.

-Set the variable resistor with a small screwdriver to the approx. the 8 o'clock position, which will provide about a 4 second pulse.

-Note: DO NOT cut the blue loop



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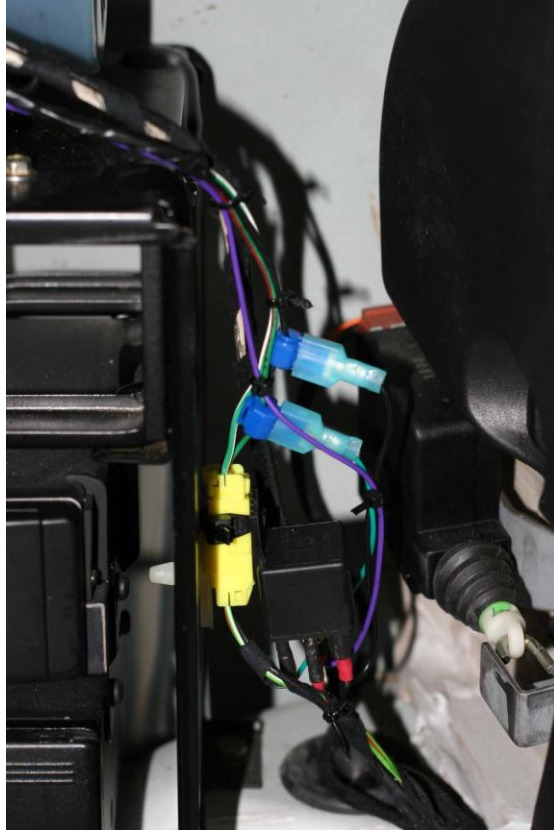
2. Skip to step 3 if you have completed Part I. If you are just performing the Auto-down feature addition only, then follow Part I, only steps 3-8 to gain access for wiring. Also, if you are just performing the Auto-down feature addition, you only need to run one (violet) wire in Part I, step 8. The white wire is not needed.

3. Wire the relay to the red/green and black control valve wires in the trunk near the pump per the drawing at the end of this section and the photo below with blue T-Taps. Note that the violet wire runs back to the center console (wire was pulled in Part I, step 8).

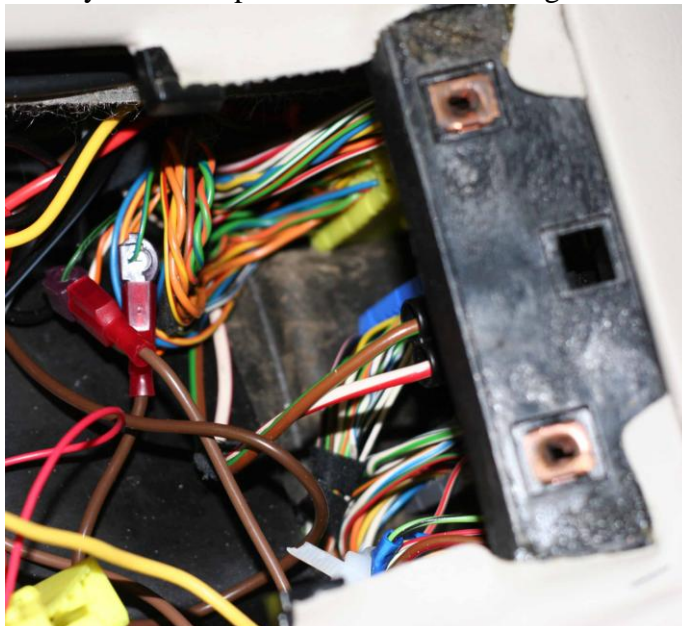


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4. Mount the relay to the yellow pump valve connector on the right side of the audio rack with a tie wrap. See photo below:



5. Using a red T-Tap, connect the BROWN wire from the Pulse Timer to the Green-Blue WINDOW-DOWN relay wire. See photo below and drawing at the end of this section.



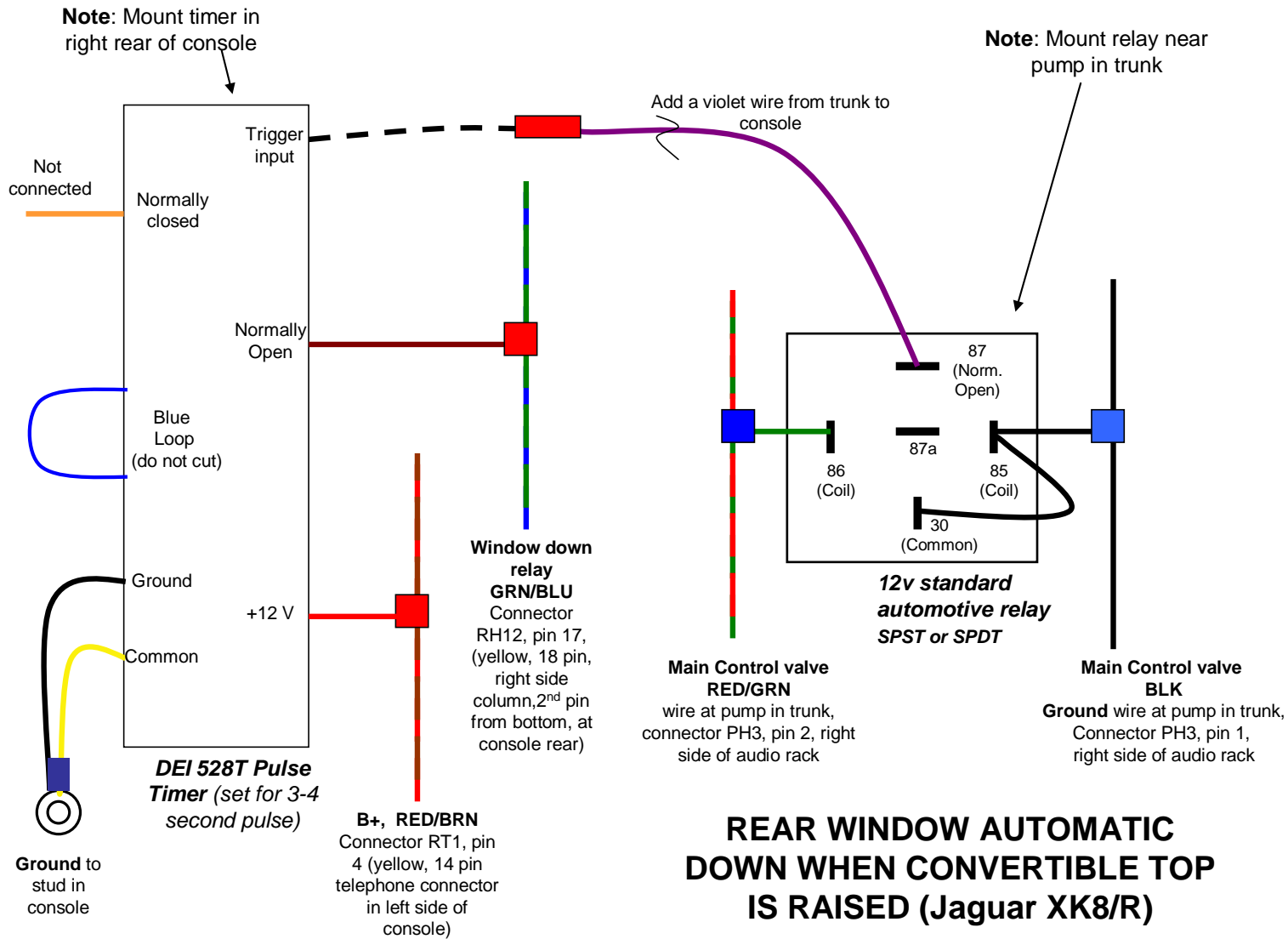
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6. Using a red T-Tap, connect the RED wire from the Pulse Timer to the Brown-Red B+ wire at the telephone connector on the left side of the console. See photo below and drawing at the end of this section.



5. Wire the Pulse timer and all remaining connections in the center console per the drawing at the end of this section.
6. The Delay Timer can rest in the right rear of the console beside the carpet.
7. Carefully dress up all loose wiring with tie wraps and/or electrical tape.
8. After testing the system, re-install the convertible tray carpet, the rear seats, the audio rack carpeted side cover in the trunk, the battery cover in the trunk and the center console storage box and cover.

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REAR WINDOW AUTOMATIC DOWN WHEN CONVERTIBLE TOP IS RAISED (Jaguar XK8/R)

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