

# Installing KITT Window Sound Effect

by Anthony Giannakis

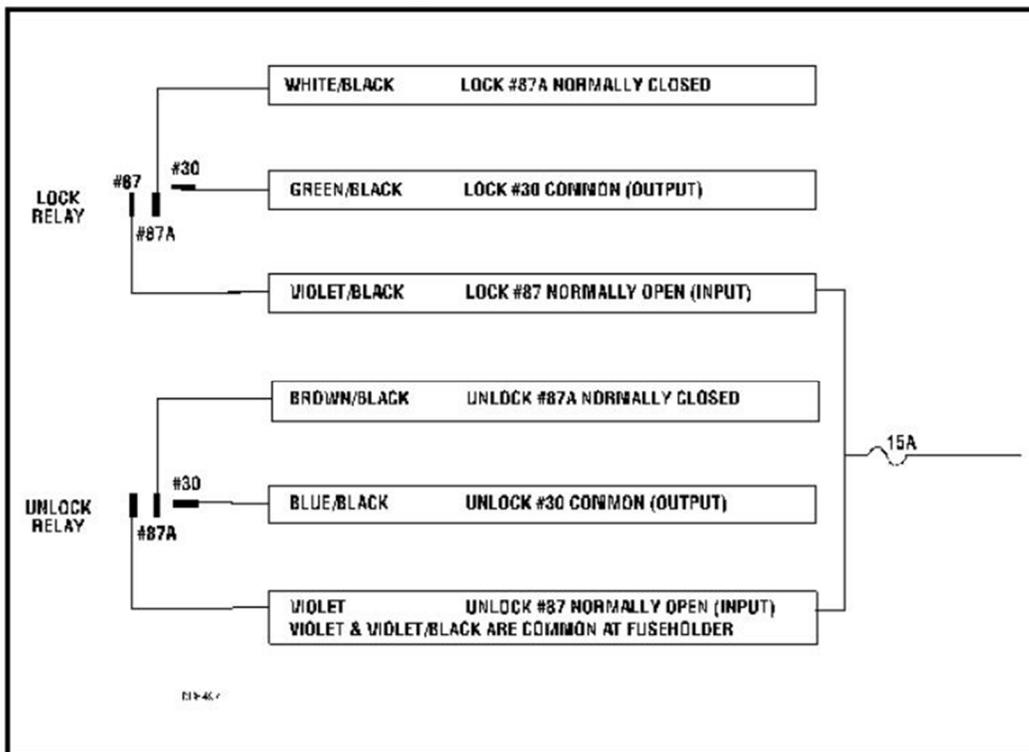
**I am NOT responsible for any damages done to your car by modifying it. You have decided to modify the electrical within your own vehicle, no one else!**

Parts List:

- [4 channel Soundboard Mono output](#) ... With 1 gig Mirco SD card and extended ribbon cable
- (2) Dei 451M relay packs ... <https://www.amazon.com/Install-Essentials-451M-Door-Module/dp/B0009SZHR4>
- Small speaker 2 inch to 3.5 inch ... 8 ohm at least 10 watts
  - I used a DVC (Dual Voice Coil) speaker because I am going to use this ONE speaker for both Window SFX and Lower console SFX from a 2nd soundboard.
- 3M Super 33+ Black electrical tape **OR** Heat shrink
- 25 feet of 14 awg wire. What color is up to you.
- 8" inch Cable/Wire ties
- 20 feet of 18 awg wire. What color is up to you.

There are hyperlinks in **BLUE** font within this PDF. Click on them for websites and Download links

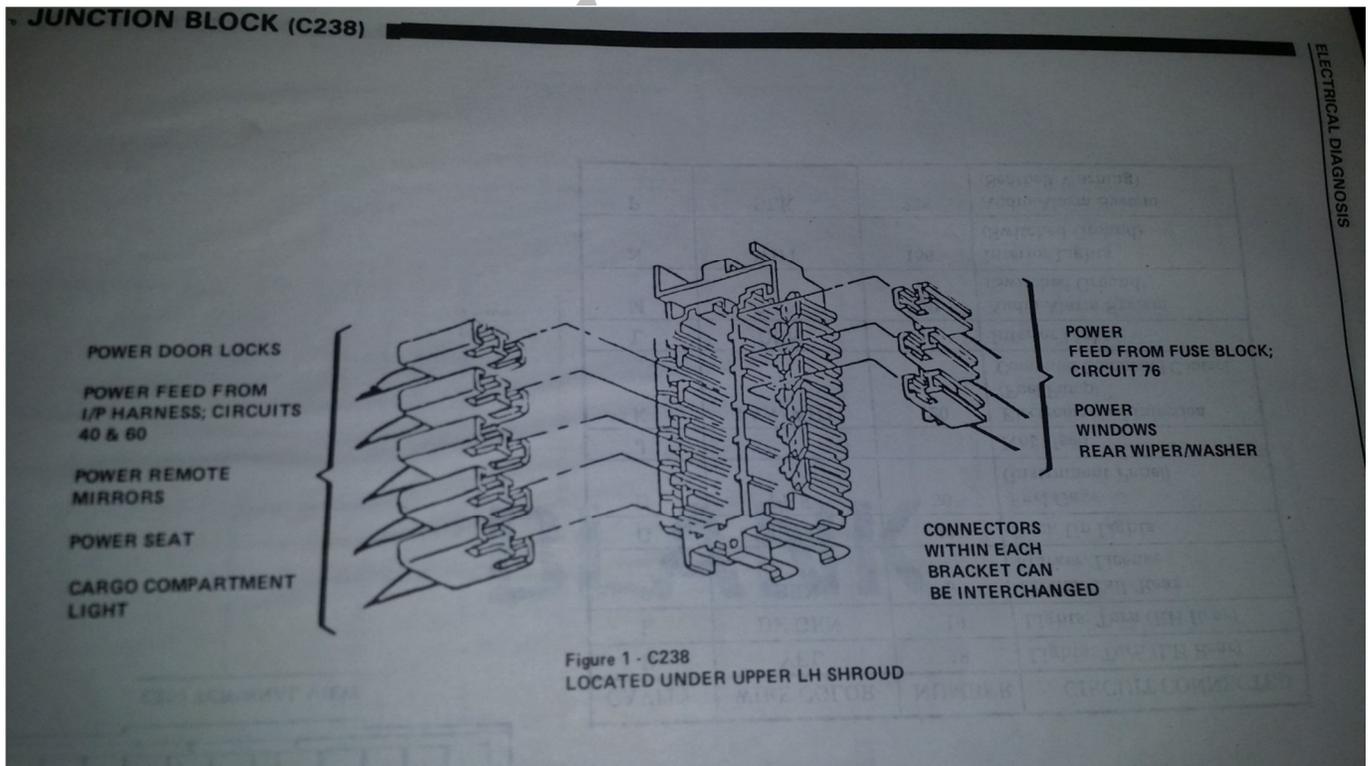
The Dei 451M relay pack has 2 separate relays inside. A Dei 451M common use is for controlling door lock system with car security systems, but with a little know-how. It can be utilized for so much more. FYI ... My first KITT had 7 of these Dei 451M. Below is a pin out and wire color for those familiar with relays.



First thing I did with the 451M was prep it on my bench. Twist the bigger Brown and White wires together and the bigger Blue and Green wires. The thin Red wire needs to be tapped into the Violet wire. I also removed the 15 amp fuse from the violet wire and solder all 3 violet wires, with the thin red wire, together. I covered it using heat shrink. But 3M Super 33+ black electrical tape from Lowe's or Home Depot is good too. Do this to both Dei 451M units.



You also have to add a 14 awg power wire into each door. I went to the "Power Distribution" center in my car, above the Hood release lever, on the kick panel. (This is where GM supplies the power for the windows too.) This power distribution block is in all 3rd gen from 82-88. Look at photos below for reference of the power distribution block and its location within the car.





How you chose to get the 14 awg wire ran from one side to the other is up to you. Most common way is placing it under the carpeting. Remove both Door panels and the rubber boot in between the door and the car. This will help you get the 14 awg through the boot and into the car door. Do NOT pull the wire the tight, it needs to be a little loose to flex and bend.

FYI ... Pink wires are for 12v Key ignition sourced. The Orange wires are 12v Battery sourced. You have to decide RIGHT NOW if you want the windows to work all the time. OR ONLY when the key is turned on, just like the factory is now.

For 89 to 92 3rd Gen from, there is NO "Power Distribution" center. Instead GM just went off the back side of the fuse block.

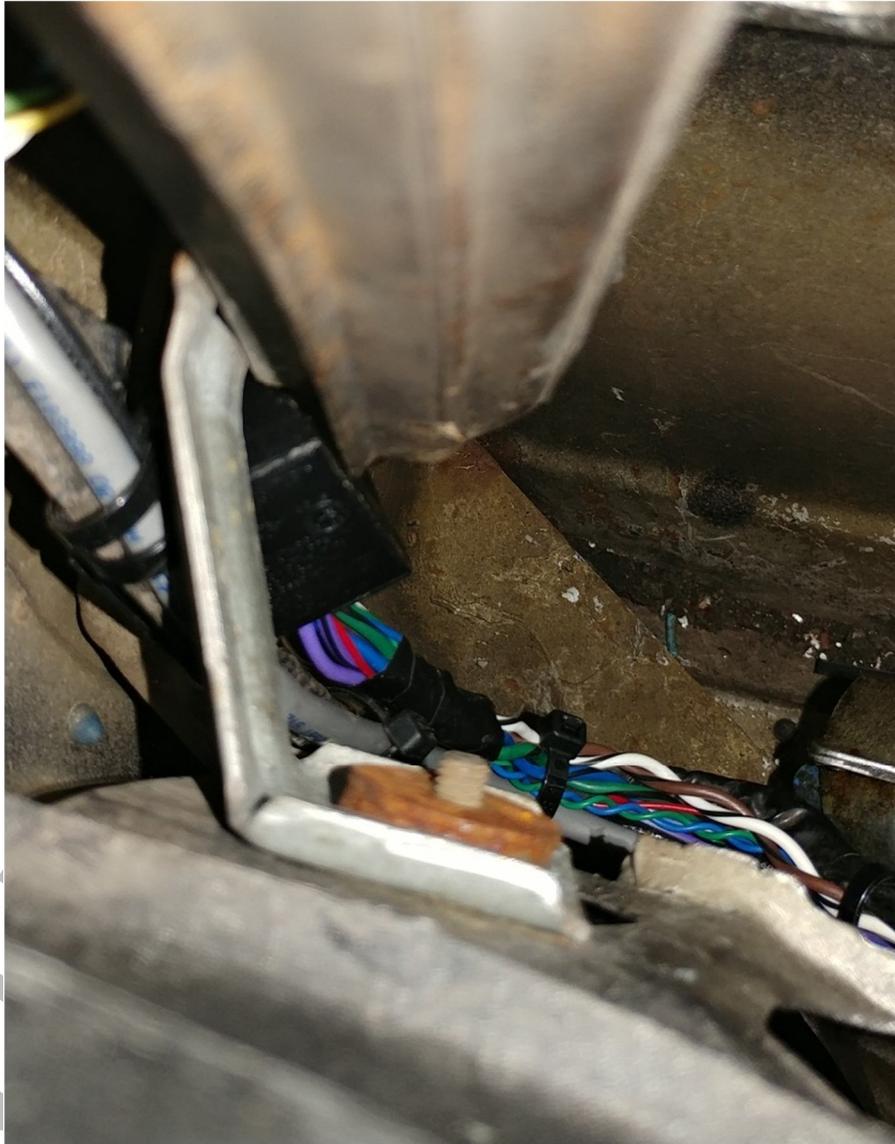
Each of the Dei 451M relay packs came with a 15 amp fuse on the violet wire. I relocated one the 15 amp fuse close by to where I am getting the power source for the windows. *(Keeping these fuses intact with 451M would place the fuse inside the doors. If that fuse blows or get corroded from being in the door. The door panel has to be removed to change out the fuse. I am NOT doing that!)*

Using a 12V battery has the source for power windows.

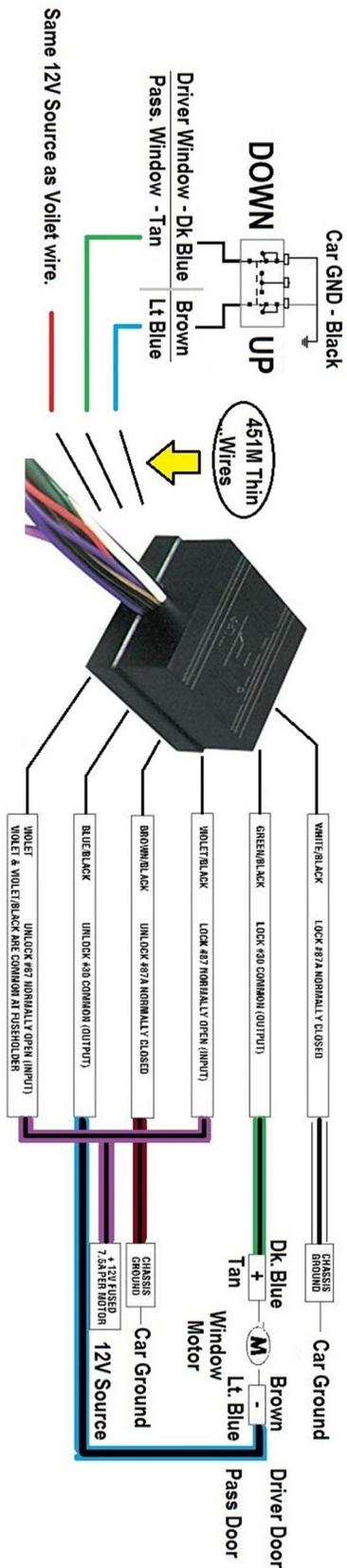
- You can roll up and down the windows at any time. Since SOME KITT/KARR electronics are able to be on WITHOUT a key ignition ON. Either by using my Main Module V2 with standard electronics OR ZA electronics. You may NOT have the key ON during car shows and still want to roll UP and DOWN the windows.
- If you have a car security system that is capable. AND you are capable of wiring it. You may want to interface the security system and Windows together by using the Negative outputs from the security system. Thus allowing you to roll UP and DOWN the windows by way of Security Key transmitter/Fob.
- I am fairly certain that the upcoming Knight OS would also be able to interface with these window relays that are being added.

Using either a 12V Battery or 12V Key ignition as the window source is up to you. It's all about personal preference.

With the added 14 awg wire in the door and following the big bulk of wires from GM that are also in the door. I placed the 451M in the door and also wire/cable tied it to the pre-existing bulk of GM wires. Make sure the 451M wires are facing downward. See photo below. It is a tight fit in here. You'll need a Band-Aid when done ☺



Time to wire the 451M in the door by following the wiring diagram I made below. I soldered all my connections and covered them using heat shrink OR 3M Super 33+ black electrical tape. I DO NOT RECOMMEND USING CRIMPABLE BUTT CONNECTORS... But it's your car.



ANTHONY

The Brown and White wires from Dei 451M need to you to a car ground. I put these wire to a 10mm screw on the door. See photo below. If that is NOT good enough for you, you will have to run an additional 14 awg wire back into the car for a chassis ground. Where you Ground these 2 wires for the relay is your choice.



Now that the doors are done, time to move to the switches. At both switches ... you have to remove the PINK wire from the actual window switch plug. Then take the BLACK ground wire out of the window switch plug and place it where the PINK wire was ... If you do NOT move the BLACK wire. The window switch will be backwards. UP will be DOWN and DOWN will be UP ... LOL!

Remember ... The PINK wire you removed is key ON power sourced. I placed black electrical taped on it and left it alone. I will use it for something else later.

TESTING .... With the relays in doors. Wires all connected and power being applied. You should be able roll the windows up and down now.

If your windows do NOT work.

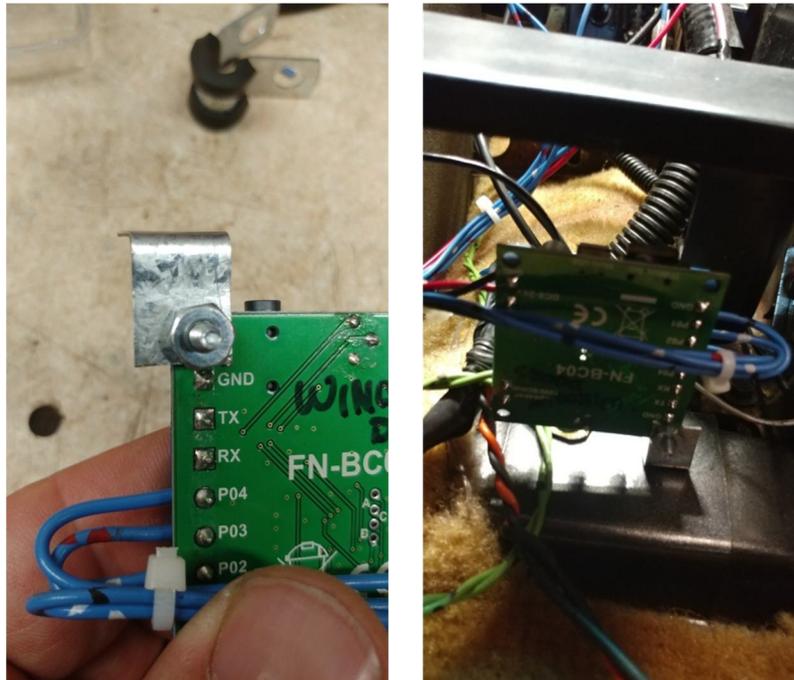
- Double check the 2-pin plug on the window motor. Maybe it came unplugged.
- Verify you are getting power to the Dei 451M violet wire.
- If the window Up and Down are reversed. Swap the THIN Blue and Green wire around at the 451M in the door affected. Now re-test.

## Time for the Soundboard!

I prepped the sound board on my work bench. I use (8) 18 awg wires, each cut 2 feet long for this. I placed the wires into the in the terminals indicated below.



You have to figure out how to mount the soundboard in the center console on your own. I used a thin, but rigid piece of metal to mount it vertically to conserve space within the center console cavity. Notice that I have the MicroSD in the up position.

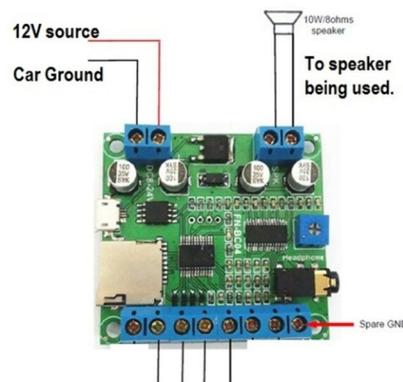


The Soundboard needs to be powered on with your windows. Meaning ... if you have the windows operating with a key ON you can use the old PINK wire from the window switches to power the soundboard. If you have the windows working at ALL times. You need to tap into an ORANGE wire in the center console for the powering the soundboard. There are 2 orange wires in the center console. Either for the cigarette lighter or for the center console lid lamp. You can ground the soundboard from anywhere. A screw or a black wire within the center console ... Your pick.

You can use the 2<sup>nd</sup> fuse holder from the 451M on the power source of the sound board. Swap out the 15 amp fuse with a 3 amp fuse. No bigger than a 5 amp fuse, if a 3 amp fuse is not be found.

The soundboard requires a negative (Ground) to any of its 4 inputs to trigger playback sound. You splice these 4 soundboard inputs directly to the 4 wires at the window switch plugs. Dark Blue, Brown, Light Blue and Tan.

The speaker you're using also directly wires to the soundboard. This is NOT a stereo soundboard. So you will NOT see a + or - at the speaker terminals indicating speaker polarity. Just wire it up.



Tap into EACH one of the 4 window switch wires and place them here go here.

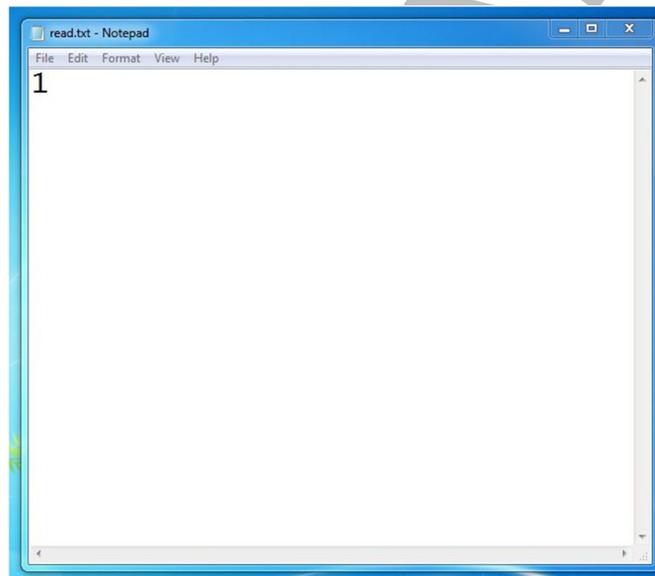
All speakers have a magnet on them. So it may seem to be possible that the speaker doesn't have to be fastened down because the speaker will stick to the gear shifter. DO NOT BELIEVE THIS!!! Fasten the speaker down with at least one screw. I used the same rigid metal strap to fasten the speaker like I did with the soundboard.

Programming the Micro SD card ... Ultimately all you would need is a small 128MB Micro SD card for this application, but you can use up to a 32gig. FlyRonTech.com has a [manual](#) for this unit and includes steps for memory card programming.

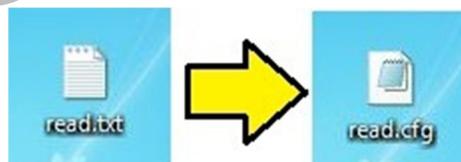
It's pretty easy ... Insert the memory card into a computer. Format the card using "FAT32". Drag and drop the Window sound effects to the memory card ROOT folder. Each sound file needs to be named 001 ... 002 ... 003 ... 004 . All 4 of my sound files are the same, just renamed 001 002 003 004. Wav OR MP3 sound files can be used.

I extended the time of the original sound to accommodate my old window motors. Here is the [link](#) for you to download the WAV sound file.

Now you need a config file for the soundboard to operate. For windows users, open a new NOTEPAD file from the start menu under 'Accessories'. In the new NOTEPAD simply type ... 1 ... in the NOTEPAD file. 'Save as' the file with the name 'READ.txt' on to the memory card. I am NOT sure how to do this with a Mac iOS.



Now go to the memory card and right click on the 'READ.txt' notepad file you just created and select 'Properties'. You need to change the file extension from a .txt to a .cfg ... So the filename should now say ... 'READ.cfg' ... See Photo below.



If you can NOT see the extension within the file name, you will have to make it appear by unchecking the "hide extensions for known file types" within your Windows computer. Here is a [YouTube video](#) on how to do that. Now put the Memory card into the soundboard wait about 10 seconds. Hit the window switches. Everything should work. ☺

Here is a link to my demo video after installing this sound board ...

<https://youtu.be/CISqIPJZKZI><https://youtu.be/CISqIPJZKZI>