MR2 SW20 Quad Tail Light Mod

The following is a guide to changing your tail lights on a Rev 3+ MR2 (or Rev 1/2 if you're using the Rev 3+ loom) from oO—Oo to oo—oo / OO—OO… I.e:

The theory here is that Toyota gave you 4 lights in total but at any given time, only 2 work for tail lights while the other two work for brake lights – something which I find the look of very strange. Now I know there are other guides and such online for doing similar mods, but I haven't found any that were actually decent nor easy to find… so I've decided to write this up with the goal of sharing the success I've had given how cheap/easy it was for me.

What you'll need:

- An hour or 2 of your time
- 4 x Dual filament bulb sockets (Bay15D / 1157 socket)
- 2 or 4 dual filament bulbs (12V 21/5W) depending what is already installed
- Screwdriver(s) to remove the rear light assemblies
- Side cutters or similar
- Wire strippers (if you've got a pair)
- Solder/soldering iron (if you've got one)
- Electrical cable
- Electrical tape

A bit of history here… When I first bought my MR2 I was disappointed that I had 4 bulbs but the whole lot didn't light up in unison. I knew it was pretty straight forward but the biggest problem I had was finding the required materials – either dual filament sockets (Narva don't sell these and there aren't easy to find alternatives) nor the '91-92 harness which already comes with dual filament sockets.

After a lot of trawling I came across these:

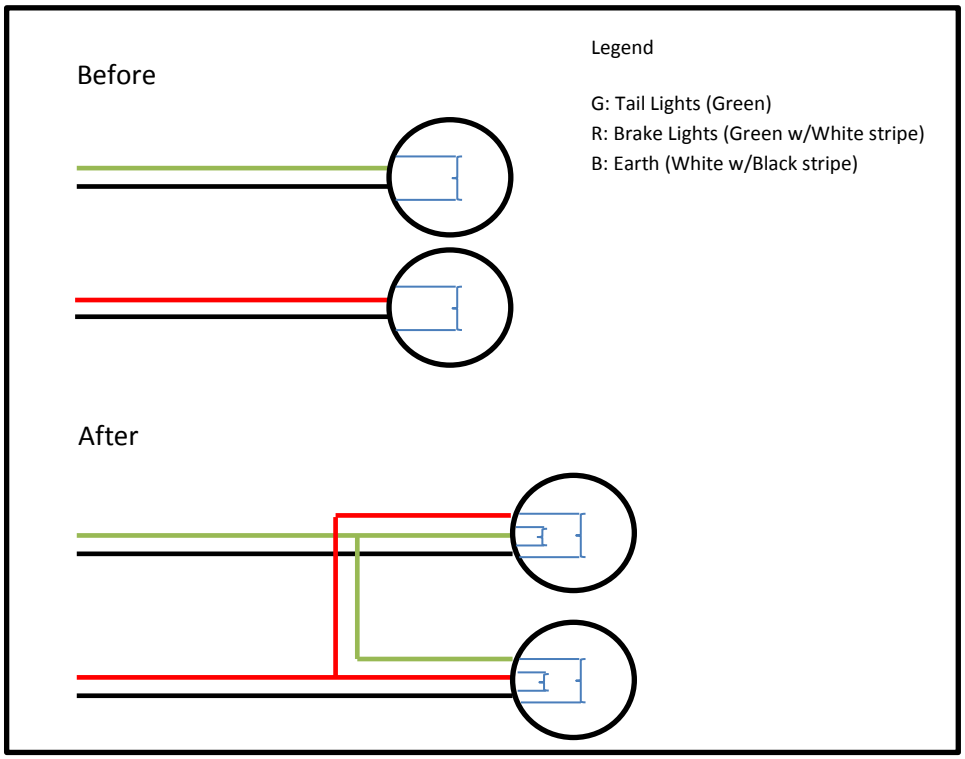
I found them on eBay, and came in at roughly $5 each. Simply search for 'Double Contact Bay15D' or 'Double Contact 1157' and go from there – the supplier I found was from Hong Kong and they were good for free postage. The Bay15D/1157 is the socket type for the standard tail/brake bulbs we use here in Australia, and given that these are a universal socket they also screw into the MR2 taillights and are relatively secure by themselves. I certainly haven't felt the need to use tape or anything to hold them in, even if they only have 2 securing points.

You can see here the difference between factory (left) and the new socket (right). We need the two contact points to operate the two filaments: one for the tail lights and one for the brake lights. You may also find that one of the factory plugs actually has a dual socket already attached, but only has 2 wires running to it… As far as I've figured out there's no easy way to modify them to connect the extra filament, so I ended up buying 4 and just building everything from scratch. Your experiences may vary, and this is only intended as a guide so feel free to take some creative license here. Note I take no responsibility for any damage caused in the process of doing this modification. All you need is some basic electrical skills to wire them in and you'll be laughing!

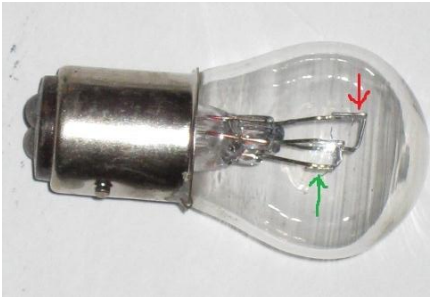
Let's begin ☺

1. Start by removing the tail lights. There's plenty of guides for this if you need something more detailed, but just use a flat blade screwdriver (preferably wrapped in a cloth) to remove the triangle piece on the side of the lights, which will reveal 2 screws. Remove these screws plus the screw on the top of the light accessible from the boot and the light assembly should come out easily.
2. Remove the existing bulbs/sockets/wiring from the light assembly. For ease of working I'd also recommend disconnecting the loom from just inside the boot carpet and pulling the whole loom out.

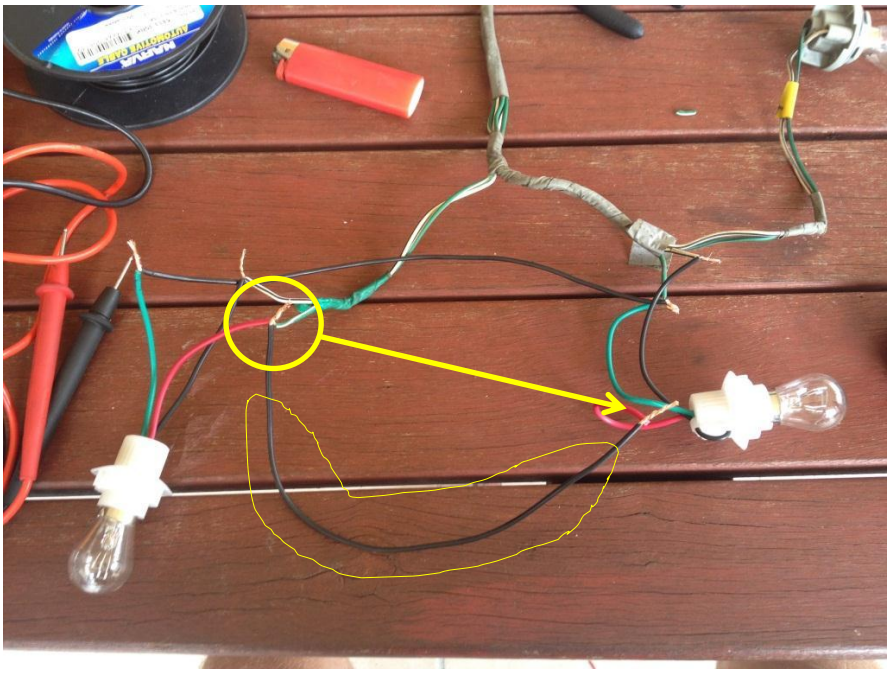
3. The way we're going to wire this up is as follows. Note the colours in the diagram aren't representative of the colours that are actually present in the loom, but I've included what wires you're looking for in the legend.



4. Remove the old sockets from the existing loom, using the side cutters to snip the wires. I recommend leaving ~5cm of wire on the socket side in case you want to revert back to the factory setup – never a good idea to cut yourself short.
5. Strip all wires you'll be using, both on the car's loom side and also on the new socket side. You should have (per brake light assembly): 2 x ground, 1 x brake and 1 x tail, as well as 3 x cables on the new socket.
6. You'll need to figure out which of the cables on the new socket activates the brake filament and which one activates the tail filament. It's easiest to start with the tail light circuit as you have the capability to leave the parkers on and test that way compared to needing someone to stand on the brake pedal while you figure it out.
7. Begin with the middle section of the car loom – you're looking for the white w/black stripe wire and the solid green wire that are taped together. Connect the black wire on your new socket to the white w/black stripe wire, this will be your ground no matter which socket you're working on.
8. Turn on the car's parkers. Plug a dual filament bulb into the socket (note they are directional), and taking the solid green wire from the cars loom, connect it to the new socket, one cable at a time. You're looking for the top filament to light up (red arrow below) – it will be a lot dimmer than the other filament.



9. Note the colour wire on the new socket which controlled the tail filament. It's safe to assume that the other wire will control the brake filament, but if you want to be sure connect it to the other side of the loom (using the green w/white stripe wire) and repeat the process, although you will need an assistant or a heavy weight to keep the brake pedal held.
10. Once you have the wires of the new socket sorted, it's time to make some new connections. To provide both sockets with both signals, you will need to get another section of wire and run it to the other socket as I have done below with the black wire (highlighted in yellow). You can see where I've joined the green/white from the cars loom to the red on my new sockets, and ran a black wire to the red of the other socket. This process needs to be repeated for both the tail and brake circuits – I only twisted the wires together for the sake of testing, and gave myself slack so I could re-loom all the wires together.



11. It's advisable to take the new and improved loom to the car and test it all before making it permanent. Once you're happy with how it all works, solder all the connections to provide a reliable connection (if you don't have a soldering iron, twisting and taping will suffice but it's certainly not ideal), and finish off the connections with some good old fashioned electrical tape to insulate the connections from the car's body and each other. Re-attach the loom, and re-insert the light assembly, making sure you don't pinch any cables
12. Repeat steps 1-11 for the other side
13. You now have Quad Tail Lights!!!

For only $20 and an hour or 2 of my time, I hope you can be as happy as I am with the result!