Tesla Model 3

Active Sound Installation Guide

V1.1

April 2020

Supplied Parts

Single Generator Kits

Quantity	Description	Notes
1	Milltek Sport Active Sound Module	Metal Cased Module
1	Milltek Sport Active Sound EV Gateway	Smaller Plastic Case Module
1	Wiring Loom for Single Generator Installation	
1	Blue Posi-Tap Wiring Connector	
2	Red Posi-Tap Wiring Connectors	
1	Sound Generator (MSSGFK04)	4 x M8 x 16mm Bolts and Washers
1	Chassis Mounting Plate (MSSGFK13)	
1	LH Mounting Bracket (MSSGFK20)	3 x M8 x 16mm Bolts & Washers / 1 x M6 x 16mm Bolt with Washer and Nyloc Nut
1	LH Outlet Pipe (MSSGFK22)	1 x 66.5mm Band Clamp
1	Tailpipe Finisher (MSSGFK24)	4 x Self Tapping Screws
10	Cable/Zip Ties	

Dual Generator Kits

Quantity	Description	Notes
1	Milltek Sport Active Sound Module	Metal Cased Module
1	Milltek Sport Active Sound EV Gateway	Smaller Plastic Case Module
1	Wiring Loom for Dual Generator Installation	
1	Blue Posi-Tap Wiring Connector	
2	Red Posi-Tap Wiring Connectors	
2	Sound Generator (MSSGFK04)	8 x M8 x 16mm Bolts and Washers
2	Chassis Mounting Plate (MSSGFK13)	
1	LH Mounting Bracket (MSSGFK20)	3 x M8 x 16mm Bolts & Washers / 1 x M6 x 16mm Bolt with Washer and Nyloc Nut
1	RH Mounting Bracket (MSSGFK21)	3 x M8 x 16mm Bolts & Washers / 1 x M6 x 16mm Bolt with Washer and Nyloc Nut
1	LH Outlet Pipe (MSSGFK22)	1 x 66.5mm Band Clamp
1	RH Outlet Pipe (MSSGFK23)	1 x 66.5mm Band Clamp
2	Tailpipe Finisher (MSSGFK24)	8 x Self Tapping Screws
10	Cable/Zip Ties	

- **Installation of the Sound Generator Hardware and Connecting the Wiring Loom**

NOTE - Installation is possible by either removing the rear bumper or the under tray, we recommend removal of the rear bumper as the clips holding the under tray can be easily damaged during removal.

This process requires access to the underside of the vehicle, if this is completed without access to a vehicle lift or ramp please ensure the car is secure on axle stands, never work under a vehicle purely on jacks, if working on a 4 post vehicle lift then it helps to have the rear wheels lifted to gain easier access to the retaining plastic rivets and torx screw holding the bumper in place.

1. Open the rear trunk and remove the lower trim panel.



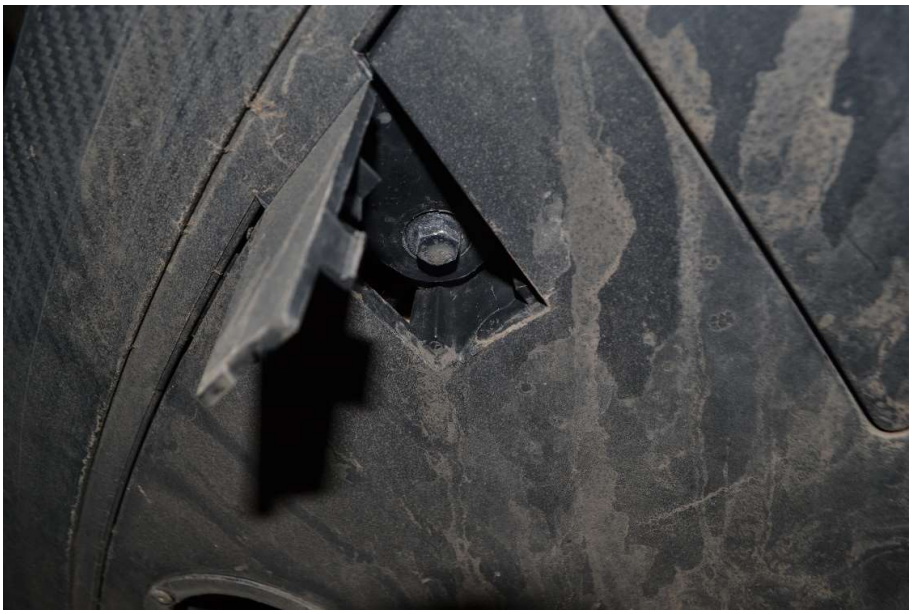
2. loosen the rubber seal on either side of the trunk area and unscrew the top retaining screw on each of the rear taillight.



3. Complete the removal of the taillight by disconnecting the electrical connector and removing the nut on the inside securing the light unit and put the light units to one side safely.



4. Now from the underside of the vehicle remove the bolt on the under tray, note there are two under the clips on either side



5. Now remove the plastic rivets holding the wheel arch liners to the bumper and undertray, these run inside the wheel arch and to the back of the under tray

6. Pull back the arch liner to gain access to the torx screw holding the corner of the bumper to the rear quarter panel and remove this



7. Starting on the left-hand side (as you are looking at the vehicle) slowly unclip the bumper cover to gain access to the rear parking sensor connector housing to enable this to be disconnected



8. Now the bumper cover and under tray can be fully removed from the vehicle, place this on a soft surface and ensure it cannot fall and cause damage to the cover.

9. The Sound generator now needs to be mounted to the supplied bracket using the M8 x 16mm bolts and washers.

10. Next the sound generators and bracket can be fitted to the chassis rails to the rear of the car, if installing one generator only this is fitted to the left-hand side of the vehicle (as you are looking at the car).



11. Two M8 x 16mm bolts are used to secure the rear of the bracket to the open holes in the back of the plate for the crash bar



12. The M6 bolt, washer and nyloc nut are used for the side hole of the bracket to the body of the vehicle



13. The final bolt is fitted to the chassis rail, the mounting plate supplied is slide inside the rail and the final M8 x 16mm bolt fixes through the bracket and chassis rail to securely hold the sound generator in place



14. The outlet pipes are recommended to prevent any vibration on the under and do require the under tray to be cut, if the volume of the system is not run above 75% then it is possible to leave these disconnected, if so skip to step 18

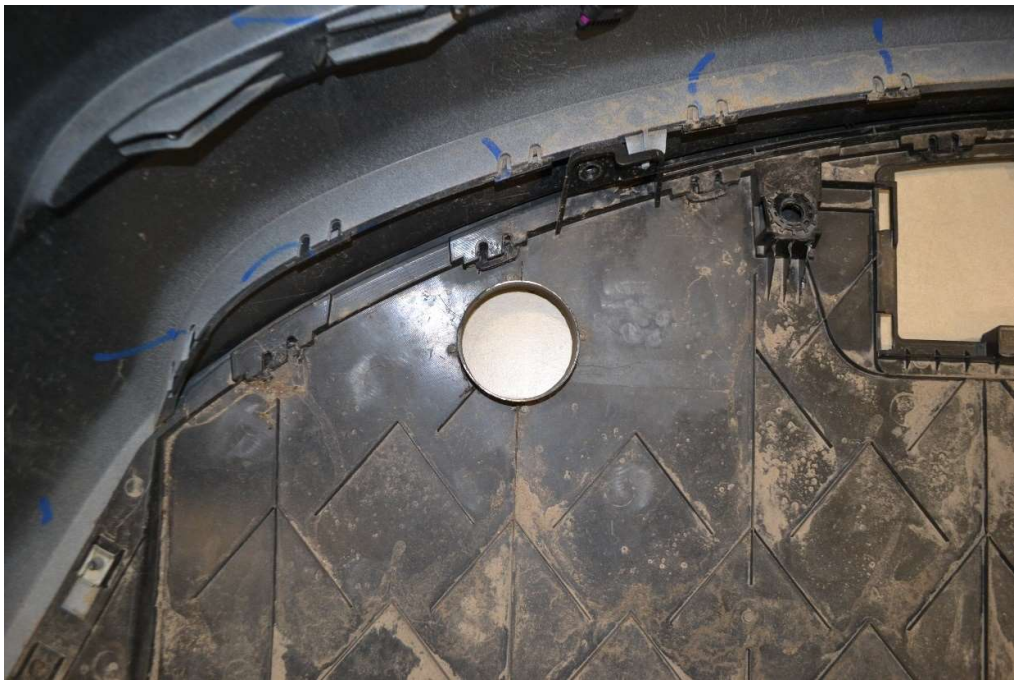
15. Place the clamp loosely on the outlet pipe (slotted end) and fit this onto the outlet of the sound generator, ensure the clamp securing nut is facing down and towards the wheel arch so can be tighten once the rear bumper is refitted.

16. Tighten the clamp by hand to hold the outlet pipe in place for now.

17. Now on the under-tray place this onto some carboard to prevent damage and from the top locate the points marked on the image below and using a 3 inch hole saw cut an opening on the sides of the under-tray for the sound generator outlets



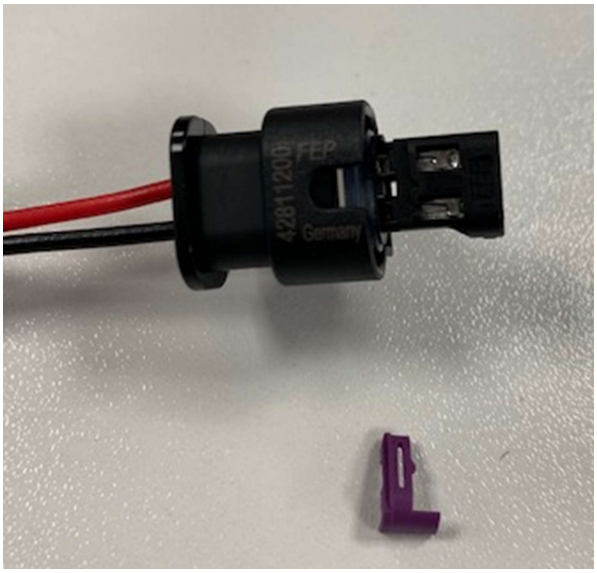




18. De-burr the hole cut into the plastic undertray and now from the underside insert the trim finisher and fix to the plastic with the 4 self-tapping plastic screws

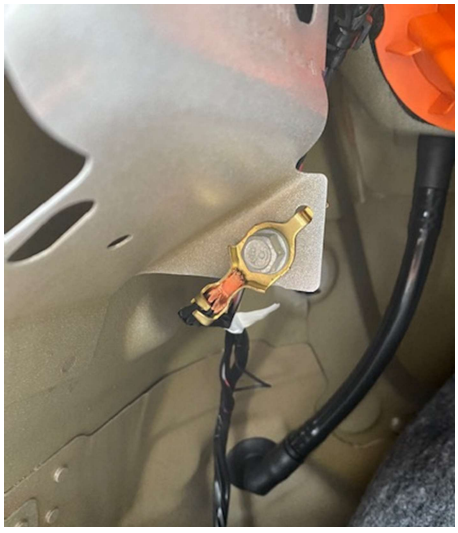
19. Working from the trunk now, place the supplied wiring loom into the space behind the left hand side taillight and feed the cable for the Sound Generator(s) under the carpet below the central storage compartment and using one of the existing grommets in the trunk floor towards the sound generator(s)

20. It can be easier to de-pin the cable from the two black connectors, slide the purple locking piece from the connector and depress the top of the silver pins and gently slide the cables out of the connector (NOTE – Red goes to PIN 2 and Black to Pin 1)



21. Connect to the plug on the Sound Generator(s) ensure they click in place and secure the cable with the supplied cable / zip ties.

22. Now locate a suitable earth point and connect the brown wire with round ring connector to the vehicle's chassis (as shown below under the taillight)



23. The remaining pair of cables, Red 12v switched live feed and the CANBUS twisted pair now need to be run along the side of the vehicle behind the trunk side carpet up and over the wheel arch.

24. Remove the rear seat based by sliding the black release switches in the white locking mechanisms



25. Pull the seat cushion base up and out to remove and safely place to one side.

26. Drop down the folding seats on the left-hand side of the vehicle and remove the side bolster carefully to allow access to the wiring loom being passed through from the rear of the vehicle. Bring the 12v Red cable and CANBUS cables from the rear of the vehicle down to the rear seat area.

27. Move both the driver and passenger seats fully forward and then ensure the car is powered off by selecting the **"Power Off" option from the menu**

28. Remove the plastic cover on the back of the centre console, this unclips from the sides



29. Now feed the CANBUS twisted pair cable under the carpet and up in the back of the centre console below the blue multi pin connector (shown below is later spec from late 2019 build car with 26 pin connector, earlier cars have a smaller 20 pin connector)



30. Using the Red Posi Lock connector locate the following pin on the connector: -

    Pin 18 = CANBUS High – Connect the Orange with Black Tracer Wire

    Pin 19 = CANBUS Low – Connect the Orange with Brown Tracer Wire

    Note – Alternative colours are sometimes used for the CAN BUS wiring as outlined below: -

    Blue with Red Tracer = CAN BUS High (Pin 18)

    Red Solid Wire = CAN BUS Low (Pin 19

31. Ensure the cable is secure and not going to trapped when refitting the cover and re-install the plastic cover back onto the centre console.

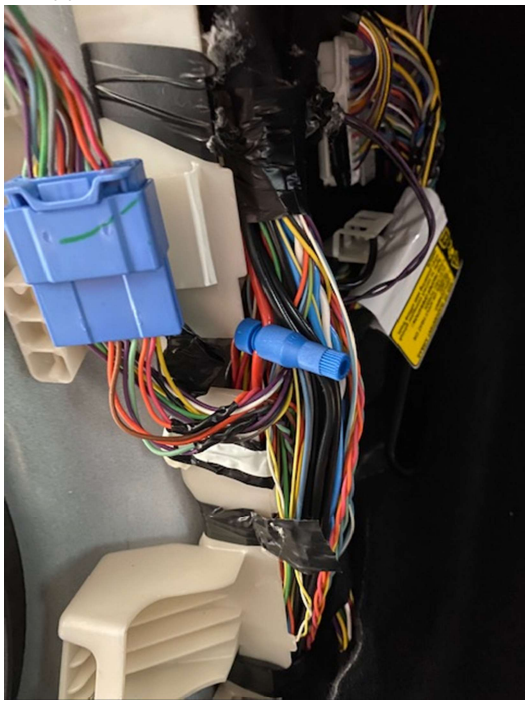
32. Now run the 12v Red cable to the front footwell, the plastic sill covers can be lifted with a trim removal tool and cable can be secured with the original wiring loom using the supplied cable/zip ties

33. The front left door sill trim will need to be removed to gain access to the 12v Switched live source, to the side of the dashboard the small trim panel needs to be removed to allow the plastic rivet to be accessed that holds the top of the door sill trim in place, with this removed you can now locate the 12v Switch live source.

34. On newer build cars the VC-LEFT module will already have a wire in place so you can use this to tap from for the power using the blue POSI-Lock connector, VC-LEFT Connector without a wire in place is shown below: -

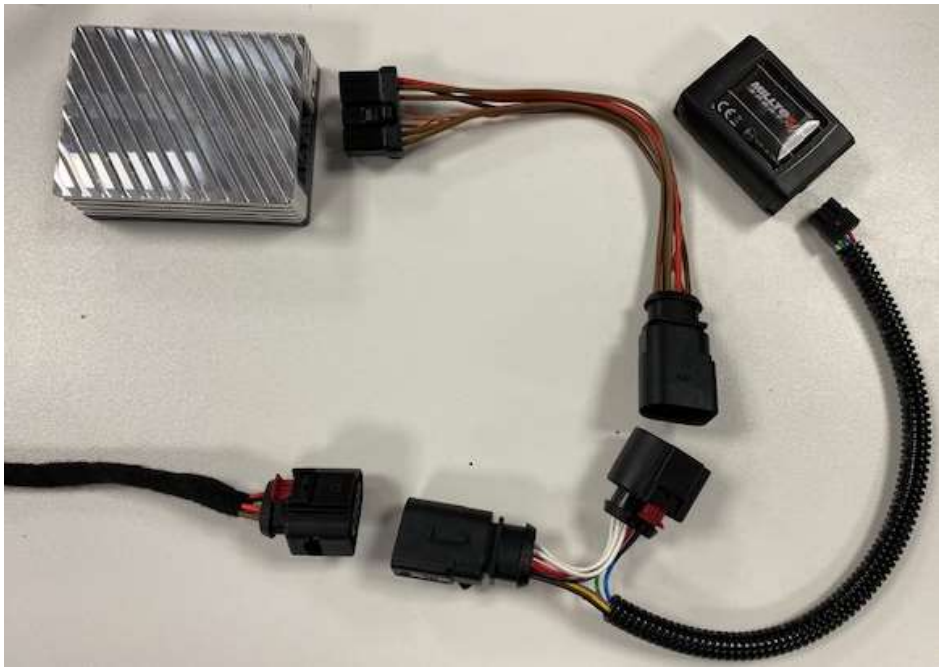


35. If no wire is present connect the 5mm spade connector on the provided loom directly to the pin on this empty slot of the VC-LEFT connector and secure the cable, if the red wire is present trace this down to the main loom, remove the spade connect on the provide loom and connect to the red wire using the supplied POSI-Lock connector.



NOTE - A useful resource for more info on this can be found on YouTube Credit to "Ingineerix" (Please give him a follow as a thank you)

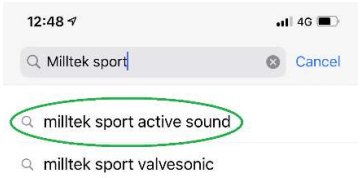
36. Back in the trunk of the vehicle connect the modules to the loom as shown below

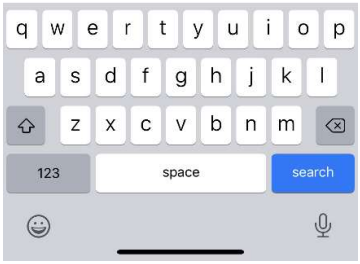


37. The system is now ready to be tested, it is highly recommend you test before fully re-installing the trim panels etc, however to prevent any errors you should loosely re-install the rear bumper and connect the parking sensor cables back together to prevent any errors or fault codes being stored.

- **Setting up the App and Testing the Active Sound System**

1. On your Smart Phone visit the App Store or Google Play Store and search for “Milltek Sport” and select “Milltek Sport Active Sound”

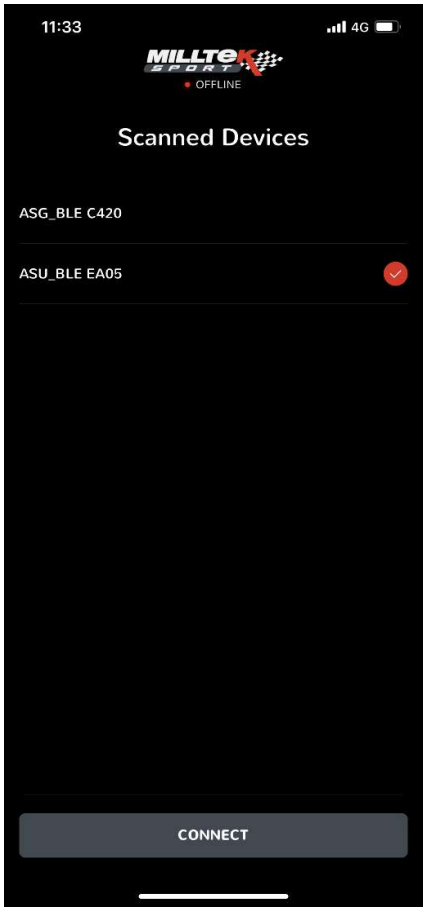




2. Download and install the app (Free of charge), before opening ensure your devices Bluetooth is enabled, if you open the app without Bluetooth enabled it will prompt you, close the app switch Bluetooth on from your devices system menu and restart the application.

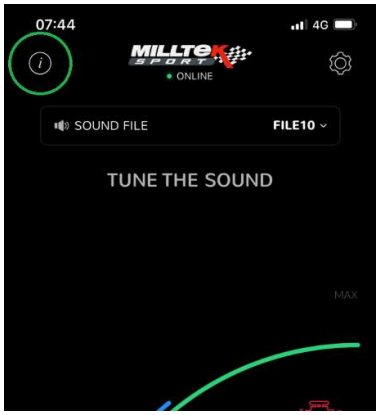
3. Get into the driver’s seat and press the brake pedal to wake/power the car back on, **do not engage “Drive” or attempt to move the vehicle at this time.**

4. Open the application and it will go to the Device selection screen, if all connections have been made successfully the app will show two available devices: -

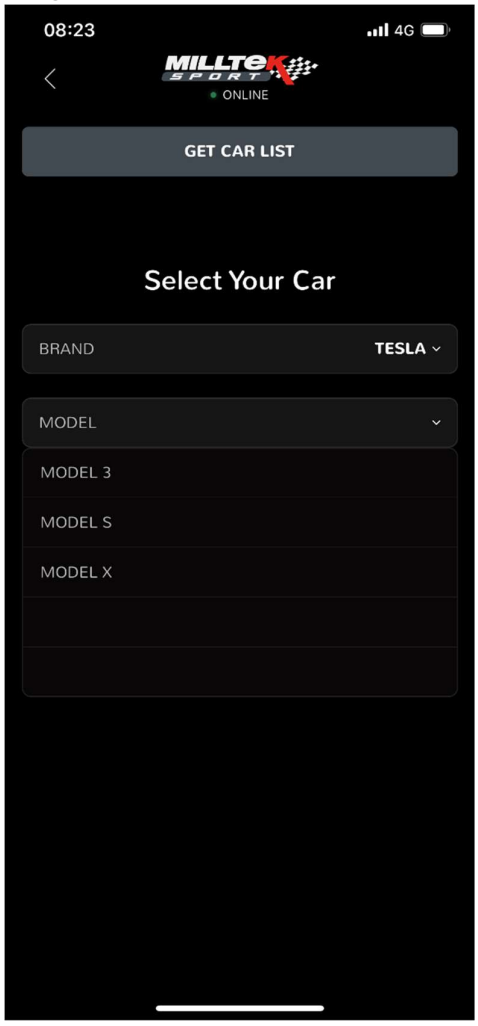


5. Select the device name that starts with “ASU_BLE XXXX” and click on Connect. When Prompted enter the default passcode of “0000”.

6. Now press the “I” icon at the top left of the app screen



7. Then select “Download Manager” and click on “Get Car List”



8. Now select the Make “Tesla”, then the Model “Model 3” and click on download, the control module will be updated with the latest settings for your vehicle, once complete you will get a message confirming.

9. Now return to the App’s main where you can configure the settings. To test ensure the Volume is set to at least 50% by clicking on the Green bar and sliding this higher.

10. Now gain ensuring the car is in **“PARK”!** press the throttle pedal and the Sound generators should respond to your throttle input.

11. For a copy of the full operation manual of the Milltek Sport Active Sound App please email info@millteksport.com to request a PDF copy

- **Completing the Installation**

Once the system has been successfully tested, the remaining trim panels can be re-installed in the reverse order of the removal.

It is imported to check cables are secure and free from being trapped when the trim is re-fitted, the main loom and modules in the left-hand side rear of the trunk should also be secured with the supplied zip/cable ties.

Once the rear bumper is refitted into place on the top clips only, before the under tray is fixed into place with the plastic rivets and bolts, access the clamp holding the outlet pipe onto the sound generator and ensure this is aligned with the hole/trim finisher fitted into the plastic undertray, once aligned tighten the clamp with a 13mm ratchet or spanner. It is possible to access the clamp from the side of the vehicle through the wheel arch.

- ## Troubleshooting

- **Unable to Connect to the module to test?**

    - Check the 12v power cable and using a multi-meter confirm you have 12v DC on the red wire going to the loom powering the Milltek Sport Active Sound Control modules

    - Check the 10amp Fuse on the loom

    - Check the connections for the loom and module are correct as shown in step 36

- **Module is found in the app but cannot connect?**

    - Check you are entering the correct passcode of 0000

    - Power off the car and unplug the modules for 10 mins and try again

- **Module is found by the App, you can enter the passcode but does not respond to the throttle input?**

    - Check the CANBUS connections and ensure these haven't been switched over, this can be confirmed by the "CAN OK" message within the app select the "Diagnostics" option by pressing the "Cog" icon on the main App screen, if it shows "CAN FAILED" then there is an issue with the wiring connection to the vehicle

- **Module is found by the App, you can enter the passcode but does not make any sound?**

    - Check the connection to the Sound Generators and ensure these haven't been damaged or switched over, this can be confirmed by the "Output 1 OK" for Left Hand Generator or "Output 2 Ok" for Right Hand Generator message within the app by selecting the "Diagnostics" option by pressing the "Cog" icon on the main App screen, if it shows "Output X Open / Short" then there is an issue with the wiring connection to the Sound Generator(s)