

**Diagnostic Sheet**

FROM: Maserati TSO  
TO: Maserati Network



PERSONAL SERVICE LAB

MASTERS OF CARE

# R1 sound system faults



DATE: December 5, 2024

This Diagnostic Sheet serves as a guide and provides additional diagnostic info for troubleshooting "Premium" and "High Premium" sound systems on certain Maserati vehicles.

**MODELS:** M156 QP, M157 Ghibli and M 161 (MY21 to newer).

Proceed as follows if the fault concerning one of the speakers is found:

- check power, earth, electrical connection and wiring conformity of the speaker
- if no faults are found in the check, proceed with the checks below and record the outcomes.

## 1) Preparing the car

Before performing the following checks, reset the sound system to default settings by following the procedure indicated in the Owner Handbook of the car (**Restore Setting to Default**).

## 2) Check the operation of the "Media"

Switch on the radio and check the correct operation of the front and rear LH/RH speakers using a medium (e.g. USB stick). Use the Balance command in the radio menu to perform this check.

Is sound output correct from each of the front and rear LH and RH speakers? \_\_\_\_\_  
If the sound output is not correct from a speaker, indicate which one \_\_\_\_\_

## 3) Check "Info2" operation (use mobile phone):

Activate the Bluetooth connection and check the correct operation of the front LH/RH speakers via a call and/or app.

Is sound output correct from each of the front LH and RH speakers? \_\_\_\_\_  
If the sound output is not correct from a speaker, indicate which one \_\_\_\_\_

Indicate the following for the problem complained of by customer:

Customer - Telephone model: \_\_\_\_\_

Customer - Operating system and SW version: \_\_\_\_\_

Customer - App used for sound playback (e.g. Spotify, app music): \_\_\_\_\_

Indicate the following for the test performed in the workshop:

Dealer test - Telephone model: \_\_\_\_\_

Dealer Test - Operating system and SW version: \_\_\_\_\_

Dealer Test - App used for sound playback (e.g. Spotify, app music): \_\_\_\_\_

#### 4) Check "Info1" operation (use car navigator - if present):

Activate the navigation function and check that the front and rear driver-side speakers work correctly during navigation instructions.

Is sound output correctly from each of the driver-side speakers? \_\_\_\_\_

If the sound output is not correct from a speaker, indicate which one \_\_\_\_\_

#### 5) Check "Info1" operation (from steering wheel controls):

Activate the voice commands from the steering wheel controls and check the correct operation of the front LH/RH speakers. Is sound output correct from each of the front LH and RH speakers?

\_\_\_\_\_

If the sound output is not correct from a speaker, indicate which one \_\_\_\_\_

If a fault is found during the checks in steps 1, 2, 3, 4, an accurate ETM - AMP pin-out check must be carried out, i.e. check the continuity of the pins of the corresponding section and indicate whether OK or KO following the instructions below.

- 1) Checklist 1: M161 - High Premium Sound System (OPT 4JF)
- 2) Checklist 2: M157/M156 - High Premium Sound System (OPT 4JF)
- 3) Checklist 3: M161 - Premium Sound System (OPT 4YG)
- 4) Checklist 4: M157/M156 - Premium Sound System (OPT 4YG)

### Checklist 1: M161 - High Premium Sound System (OPT 4JF)

**Perform the following checks**

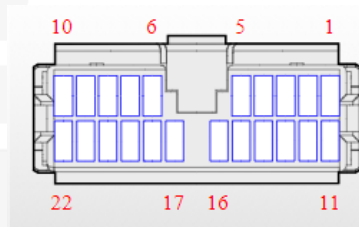
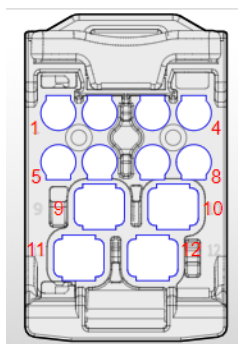
- Measure the resistance of the wiring harness from pin A1 ETM to pin D13 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A2 ETM to pin D3 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A3 ETM to pin D14 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A4 ETM to pin D4 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A5 ETM to pin D15 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A6 ETM to pin D5 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A7 ETM to pin D18 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A8 ETM to pin D6 AMP \_\_\_\_\_

**M069**  
Modulo intrattenimento telematico - ETM (Mid RRM - VP3)

	A	B	C	D	E	G	I	L	M
1	CL	0.5	HiFi Loudspeaker Rear Left sgn(m)						
2	CB	0.5	HiFi Loudspeaker Rear Left sgn(p)						
3	VB	0.5	HiFi Loudspeaker Rear Right sgn(m)						
4	VR	0.5	HiFi Loudspeaker Rear Right sgn(p)						
5	GV	0.5	HiFi Loudspeaker Front Left sgn(m)						
6	GL	0.5	HiFi Loudspeaker Front Left sgn(p)						
7	ZB	0.5	HiFi Loudspeaker Front Right sgn(m)						
8	Z	0.5	HiFi Loudspeaker Front Right sgn(p)						
10	RL	2.5	KI30 Radio Receiver Mod						
11	N	2.5	RRM gnd						

**E013**  
Amplificatore (AMP)

	A	B	C	D
1	L	0.35	B CAN H HIFI	
3	CB	0.5	HiFi Loudspeaker Rear Left sgn (p)	
4	VR	0.5	HiFi Loudspeaker Rear Right sgn (p)	
5	GL	0.5	HiFi Loudspeaker Front Left sgn (p)	
6	Z	0.5	HiFi Loudspeaker Front Right sgn (p)	
11	BR	0.35	B CAN L HIFI	
13	CL	0.5	HiFi Loudspeaker Rear Left sgn (m)	
14	VB	0.5	HiFi Loudspeaker Rear Right sgn (m)	
15	GV	0.5	HiFi Loudspeaker Front Left sgn (m)	
18	ZB	0.5	HiFi Loudspeaker Front Right sgn (m)	



## Checklist 2: M157/M156 - High Premium Sound System (OPT 4JF)

### Perform the following checks

Measure the resistance of the wiring harness from pin A1 ETM to pin D13 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A2 ETM to pin D3 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A3 ETM to pin D14 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A4 ETM to pin D4 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A5 ETM to pin D15 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A6 ETM to pin D5 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A7 ETM to pin D18 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A8 ETM to pin D6 AMP \_\_\_\_\_

#### M069

Modulo intrattenimento telematico - ETM (Mid RRM - VP3)

**A B C D E G H I L M**

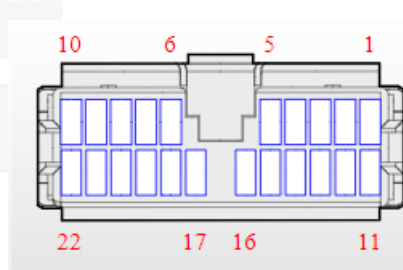
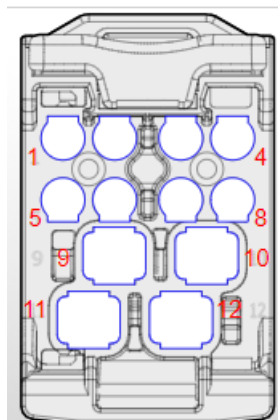
1		CL	0.5	HiFi Loudspeaker Rear Left sgn(m)
2		CB	0.5	HiFi Loudspeaker Rear Left sgn(p)
3		VB	0.5	HiFi Loudspeaker Rear Right sgn(m)
4		VR	0.5	HiFi Loudspeaker Rear Right sgn(p)
5		GV	0.5	HiFi Loudspeaker Front Left sgn(m)
6		GL	0.5	HiFi Loudspeaker Front Left sgn(p)
7		ZB	0.5	HiFi Loudspeaker Front Right sgn(m)
8		Z	0.5	HiFi Loudspeaker Front Right sgn(p)
10		RL	2.5	KI30 Radio Receiver Mod
11		N	2.5	RRM gnd

#### T001

Amplificatore (AMP)

**A B C D**

1		L	0.35	B CAN H HIFI
3		CB	0.5	HiFi Loudspeaker Rear Left sgn(p)
4		VR	0.5	HiFi Loudspeaker Rear Right sgn(p)
5		GL	0.5	HiFi Loudspeaker Front Left sgn(p)
6		Z	0.5	HiFi Loudspeaker Front Right sgn(p)
11		BR	0.35	B CAN L HIFI
13		CL	0.5	HiFi Loudspeaker Rear Left sgn(m)
14		VB	0.5	HiFi Loudspeaker Rear Right sgn(m)
15		GV	0.5	HiFi Loudspeaker Front Left sgn(m)
18		ZB	0.5	HiFi Loudspeaker Front Right sgn(m)



### Checklist 3: M161 - Premium Sound System (OPT 4YG)

#### Perform the following checks

- Measure the resistance of the wiring harness from pin A1 ETM to pin F15 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A2 ETM to pin F4 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A3 ETM to pin F16 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A4 ETM to pin F5 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A5 ETM to pin F17 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A6 ETM to pin F6 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A7 ETM to pin F18 AMP \_\_\_\_\_
- Measure the resistance of the wiring harness from pin A8 ETM to pin F7 AMP \_\_\_\_\_

#### E156

Modulo intrattenimento telematico - ETM (Mid RRM - VP3)

**A B C D E G H I L M**

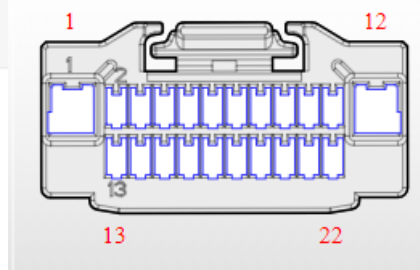
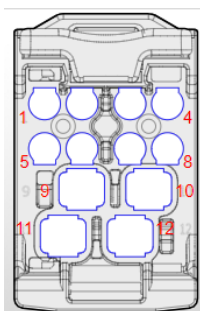
1		CL	0.5	HiFi Loudspeaker Rear Left sgn(m)
2		CB	0.5	HiFi Loudspeaker Rear Left sgn(p)
3		VB	0.5	HiFi Loudspeaker Rear Right sgn(m)
4		VR	0.5	HiFi Loudspeaker Rear Right sgn(p)
5		GV	0.5	HiFi Loudspeaker Front Left sgn(m)
6		GL	0.5	HiFi Loudspeaker Front Left sgn(p)
7		ZB	0.5	HiFi Loudspeaker Front Right sgn(m)
8		Z	0.5	HiFi Loudspeaker Front Right sgn(p)
10		RL	2.5	KI30 Radio Receiver Mod
11		N	2.5	RRM gnd

#### E013

Amplificatore (AMP)

**E F G**

1		N	2.5	SAU GND Premium 1
2		L	0.35	B CAN H HIFI
4		CB	0.5	HiFi Loudspeaker Rear Left sgn (p)
5		VR	0.5	HiFi Loudspeaker Rear Right sgn (p)
6		GL	0.5	HiFi Loudspeaker Front Left sgn (p)
7		Z	0.5	HiFi Loudspeaker Front Right sgn (p)
12		RG	2.5	KI30 HiFi Premium # 1
13		BR	0.35	B CAN L HIFI
15		CL	0.5	HiFi Loudspeaker Rear Left sgn (m)
16		VB	0.5	HiFi Loudspeaker Rear Right sgn (m)
17		GV	0.5	HiFi Loudspeaker Front Left sgn (m)
18		ZB	0.5	HiFi Loudspeaker Front Right sgn (m)



### Checklist 4: M157/M156 - Premium Sound System (OPT 4YG)

#### Perform the following checks

Measure the resistance of the wiring harness from pin A1 ETM to pin H15 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A2 ETM to pin H4 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A3 ETM to pin H16 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A4 ETM to pin H5 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A5 ETM to pin H17 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A6 ETM to pin H6 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A7 ETM to pin H18 AMP \_\_\_\_\_

Measure the resistance of the wiring harness from pin A8 ETM to pin H7 AMP \_\_\_\_\_

#### M069

Modulo intrattenimento telematico - ETM (Mid RRM - VP3)

**A B C D E G H I L M**

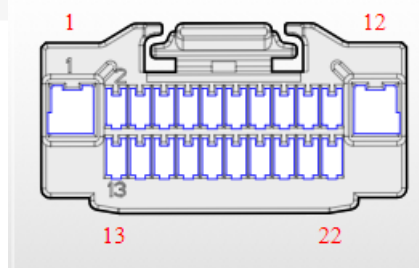
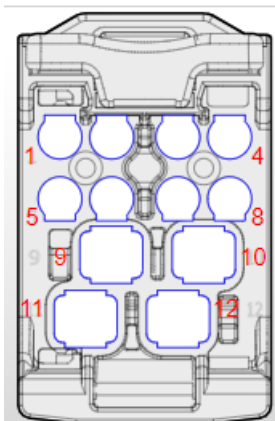
1		CL	0.5	HiFi Loudspeaker Rear Left sgn(m)
2		CB	0.5	HiFi Loudspeaker Rear Left sgn(p)
3		VB	0.5	HiFi Loudspeaker Rear Right sgn(m)
4		VR	0.5	HiFi Loudspeaker Rear Right sgn(p)
5		GV	0.5	HiFi Loudspeaker Front Left sgn(m)
6		GL	0.5	HiFi Loudspeaker Front Left sgn(p)
7		ZB	0.5	HiFi Loudspeaker Front Right sgn(m)
8		Z	0.5	HiFi Loudspeaker Front Right sgn(p)
10		RL	2.5	KI30 Radio Receiver Mod
11		N	2.5	RRM gnd

#### T001

Amplificatore (AMP)

**G H I**

1		N	2.5	SAU Gnd Premium 1
2		L	0.35	B CAN H HIFI
4		CB	0.5	HiFi Loudspeaker Rear Left sgn(p)
5		VR	0.5	HiFi Loudspeaker Rear Right sgn(p)
6		GL	0.5	HiFi Loudspeaker Front Left sgn(p)
7		Z	0.5	HiFi Loudspeaker Front Right sgn(p)
12		RG	2.5	KI30 HiFi Premium#1
13		BR	0.35	B CAN L HIFI
15		CL	0.5	HiFi Loudspeaker Rear Left sgn(m)
16		VB	0.5	HiFi Loudspeaker Rear Right sgn(m)
17		GV	0.5	HiFi Loudspeaker Front Left sgn(m)
18		ZB	0.5	HiFi Loudspeaker Front Right sgn(m)



If no faults are found during all the pin-out checks indicated in the previous steps, accurately troubleshoot the pins of the various connections and make sure that no labile and/or oxidised pins are present.

If no faults are found on the pins and the problem with the sound system persists, open a BOL and attach this document filled out in all its sections; the faulty component to be indicated in the BOL will be "Car Radio Control Unit".

Photos of the following labels must be available if component replacement is required in the BOL:

### **ETM**

- **Front identification label**
- **Lateral Quadcore**

### **AMP**

- **Front identification label**

TECHNICAL SERVICE OPERATIONS