

**«Filter-MST»
Technical Manual**

Unit Description 2
 Unit connection..... 2
 Table 1. Unit port outputs assignment..... 3
 Table 2. Technical data and operation conditions..... 4
 Table 3. Standard delivery kit..... 4

Unit Description

Filter-MST (v 2.2) unit (hereinafter referred to as “the unit”) is designed for Maserati Quattroporte vehicles. The unit’s purpose is to remove the blocking of video feed on the original monitor, which is automatically blocked when the car starts moving.

The unit is connected to the CAN-bus breakage and matches with it on hardware and software levels. The unit is fully transparent for both the vehicle and diagnostic equipment and does not interfere with the vehicle electronic equipment operation and original video system control and functioning.

The unit can operate in one of two modes: active (ON) and passive (OFF).

Information about unit operation mode is stored in permanent memory and its condition will not change should the power be deactivated.

In order to operatively deactivate the unit it is necessary to connect a button to it and install it in the vehicle’s interior. Unit activation and deactivation is carried out with long pressing of this button (for no less than 2 sec) when the ignition is ON.

In case if deactivating the unit will be unnecessary while its operation will be unnecessary. In this case it is necessary to activate the unit during its installation in the vehicle. The unit will be always on.

Activated unit removes video feed blocking from the original screen without interfering with other equipment’s operation.

Deactivated unit retransmits CAN-bus signals without changing them. In the meantime, vehicle equipment operation including the display is carried out in accordance with original algorithms.

LED is used for indicating the unit’s condition. It can be installed in any area or not installed at all. If the unit is OFF or the ignition is OFF then LED is always OFF. When switching the unit ON the LED turns ON for no less than 4 sec then shuts down. The LED indicates that the unit is ON by lighting with every pressing of control button for the time it is pressed and also by lighting for 4 sec when switching the ignition ON. For all the other cases, the LED is always OFF.

When the CAN-bus switches to hibernation mode, the unit enters the energy saving (standby) mode regardless of whether it is ON or OFF.

It is recommended to switch the unit OFF in case of: putting the car on maintenance in the service station, or when you need to use the standard navigation system and while you do not need to use the unit.

Unit connection

CAN bus is a twisted pair of pink-white (CAN-L) and pink-black (CAN-H) wires. Two twisted pairs with such wire colors are connected to the main unit’s port (see Fig. 1).

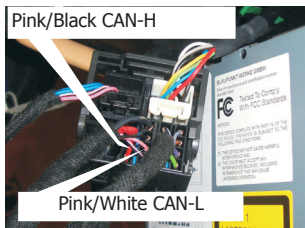


Fig. 1. CAN bus contacts’ location in main unit’s port

The unit is to be connected in the breakage of the one connected to contacts No. 9 (CAN-H0) and No. 10 (CAN-L). This pair is connected to the same port to which the unit’s power supply wires are connected (black and red-yellow wires). CAN bus to which the unit is to be connected and the main unit’s power supply wires are in the same harness.

Unit port outputs numbering is shown in Fig. 2.

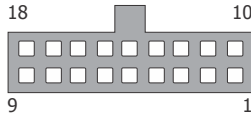


Fig. 2 Unit port outputs numeration, from the wiring viewpoint.

Output assignment is shown in Table 1

Table 1. Unit port outputs assignment.

No	Wire Color	Type	Assignment
1	Black	Power supply	«Ground»
2	Brown	CAN 2	CAN-L vehicle data bus (to the main unit)
3	Brown	CAN 1	CAN-L vehicle data bus
4	Green/Black	(-) Output	To the blue wire of the LED
5	Green/White	(-) Input	Alternative unit activation/deactivation button
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	Red	Power supply	+12V unit supply
11	Brown/Red	CAN 2	CAN-H vehicle data bus (to the main unit)
12	Brown/Red	CAN 1	CAN-H vehicle data bus
13	Green	(+) Output	To the red wire of LED
14	-	-	-
15	-	-	-
16	-	-	-
17	-	-	-
18	-	-	-

It is necessary to cut both CAN bus wires. CAN 1 unit's wire pair is connected with CAN bus from the vehicle's side, while CAN 2 unit's wire pair is connected to the bus from the main unit's side. Brown wires of the unit are connected with pink-white wires of the vehicle, while brown-red wires of the unit are connected with pink-black wires of the vehicle.

The black wire of the unit coming from the contact No. 1 of the unit port is connected to the vehicle body in the areas defined by manufacturer for connection of the original electrical equipment ground.

Unit's red wire is connected to the one of the car wires with +12V constant voltage.

Green/white wire is connected to vehicle's ground via normally open alternative control button in case when the button installation is necessary.

(+) power supply wire can be connected to red-yellow wire of the vehicle coming to contact No. 15 of the same port to which CAN bus is connected.

Black wire of the unit (Ground) can be connected to the black wire of the vehicle that is connected to contact No. 12 of the same port.

Table 2. Technical data and operation conditions

Characteristic	Data
Voltage, V	9 ... 15
Max. current in working mode, mA	100
Max. current in standby mode, mA	1,5
Temperature, °C	- 40 ... + 85
Relative humidity, %	95

Table 3. Standard delivery kit

Item	Q-ty
Central unit	1 pc
Cable harness with terminal	1 pc
LED indicator with wiring	1 pc
Technical Manual	1 pc
Package	1 pc

Product warranty is provided for 1 year since the moment of the sale if all the installation recommendations have been followed. In case of warranty case please contact to the company which sold this product to you.

Distributor _____ Date of sale _____



Manufacturer «TEC electronics» Ltd.
 Product is produced according to TY 4372-006-78025716-10.
 Certificate of origin No POCC RU.AB75.B00340
 Product corresponds to regulatory documents:
 ГОСТ P 41.97-99, ГОСТ P 50789-95