



SEPDISP14

Modification instructions

Ver. 3.0



WARNING: THIS PROCESS IS RECOMMENDED ONLY TO EXPERT AND QUALIFIED STAFF.

THE FOLLOWING MODIFICATION IS NECESSARY FOR THE CORRECT FUNCTIONING OF SEPDISP14 LCD DISPLAY.

- Replace the display in an ambient temperature of 25 °C.
- After replacing the LCD, switch on the cluster on a test bench with the CAN-BUS generator SEP-CAN-MODUS to measure the voltage between the points A and B (see picture 1). Alternatively, it is possible to switch on the module directly on the car, but this second option is not recommended.
- If the voltage measured is between 8,10V and 8,30V no modification is needed.
- If the voltage is, instead, lower than 8.10V or higher than 8,30V the modification is necessary. The operations to carry out are explained in the following paragraph "EEPROM MODIFICATION", and distinguished according to the code of EEPROM on the PCB (see picture 2), the 93C66 or the 93C56.



Picture 1



Picture 2

WARNING: THIS PROCESS IS RECOMMENDED ONLY TO EXPERT AND QUALIFIED STAFF.

MODIFICATION FOR EEPROM 93C66

NOTE: For this modification, it is necessary to use an EEPROM programmer.

We recommend our **SEP-EECLIP**.

- De-solder the EEPROM **93C66** highlighted in picture 2, located on the PCB;
- First, set the programmer reading in hexadecimal (HEX);
- **ATTENTION:** Make a backup of the EEPROM, before the modification.
- To reach a voltage between 8,10V and 8,30V, identify the locations **001D** and **0027** and modify their values: increasing or decreasing the values by 1 HEX unit, the variation will be +/- 0.09V.

If not familiar with hexadecimal calculation, it is possible to use the **calculation tool in the box below**, simply typing in the values.

VERIFICATION

Once these operations have been done, save the file just modified and upload it on the EEPROM. Solder back the **93C66** EEPROM on the PCB, switch on the instrument cluster and check again the tension between points A and B (see picture 1).

Verify, then, if a voltage between 8,10V and 8,30V has actually been reached.

If not, decrease or increase the values of the locations until the voltage is between that range.

MODIFICATION FOR EEPROM 93C56

NOTE: For this modification, it is necessary to use an EEPROM programmer.

We recommend our **SEP-EECLIP**.

- De-solder the EEPROM **93C56** highlighted in picture 2, located on the PCB;
- First, set the programmer reading in hexadecimal (HEX);
- **ATTENTION:** Make a backup of the EEPROM, before the modification.
- To reach a voltage between 8,10V and 8,30V, identify the locations **00F7** and **00FD** and modify their values: increasing or decreasing the values by 1 HEX unit, the variation will be +/- 0.09V.

If not familiar with hexadecimal calculation, it is possible to use the **calculation tool in the box below**, simply typing in the values.

VERIFICATION

Once these operations have been done, save the file just modified and upload it on the EEPROM. Solder back the **93C56** EEPROM on the PCB, switch on the instrument cluster and check again the tension between points A and B (see picture 1).

Verify, then, if a voltage between 8,10V and 8,30V has actually been reached.

If not, decrease or increase the values of the locations until the voltage is between that range.

CALCULATION OF THE NEW VALUES OF THE LOCATIONS (Tool to use only on computers. For the mobile version [click here](#))

Type in the value of the voltage measured on the PCB between the points A and B (pic. 1)

Type in the HEX value of the location 001D

New value to type in the location 001D

Type in the HEX value of the location 0027

New value to type in the location 0027

*How to identify the locations 001D and 0027 on the EEPROM

Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000000	00	00	24	00	29	00	38	00	AA	00	88	00	00	00	00	00
00000010	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00000020	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

CALCULATION OF THE NEW VALUES OF THE LOCATIONS (Tool to use only on computers. For the mobile version [click here](#))

Type in the value of the voltage measured on the PCB between the points A and B (pic. 1)

Type in the HEX value of the location 00F7

New value to type in the location 00F7

Type in the HEX value of the location 00FD

New value to type in the location 00FD

*How to identify the locations 00F7 and 00FD on the EEPROM

Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
000000D0	00	00	24	00	29	00	38	00	AA	00	88	00	00	00	00	00
000000E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
000000F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00