

Introduction to reading an EEPROM

Using the CarProg, the user can read an eeprom using various methods. One popular method is on the PCB (Printer Circuit Board) and in most cases, the eeprom can be read. Some examples are the 24C02, 24C04, 24C08, 24C16 and others can be the 83C86 and 95080. In some occasions, the eeprom may not be read and an <u>oscillator</u> may need to be shorted. In other cases, the eeprom may need to be removed to be read.

These are generic examples of some eeproms that were read off-board. The first operation is that the Carprog should be updated at least once a week for the latest software revisions.



Connect the CarProg and open the program. Choose "UPDATE" and wait until the updates are completed.

Choose the EEPROM tab and follow the menu descriptions below.

Always use an anti-static pad when working with sensitive electronic devices



Inspect the EEPROM that needs to be read. There will be a series of numbers to inspect in order to correctly identify and connect the eeprom to the clip. It is advised that users be familiar with the eeprom types and connections. Searches can be done to find the correct data sheets for the eeprom.

This is an example of an eeprom search page. http://www.datasheetcatalog.com/datasheets_pdf/9/3/C/8/93C86.shtml

This example is the 93C86	EEPROM	that was	found	in the	menu
[Choose EEPROM Type]					



Once the correct EEPROM is found in the list, the EEPROM type is illustrated in the image below.

Click OK.



This is a partial example of a 93C86 EEPROM read into the window.

AIRBAG → CAR RADIO → DASHBOARD → DASHBOARD → MCU → 93C, 24C, 95x v2.1 → MCU → MCU → EEPROM → MCU → MCU → MCU → MCU → MCU → MCU → FFPOM → MCU → MCU → MCU → MCU → FFPOM → MCU → MCU → FFPOM → MCU → MCU → MCU → FFPOM → MCU → MOMO →
Image: CAR RADIO Image: CAR RADIO Image: CAR RADIO Image: CAR RADIO Image: DASHBOARD Image: CAR RADIO Image: CAR RADIO Image: CAR RADIO Image: CAR RADIO Image: CAR RADIO
DASHBOARD MIMO Description
IMMD 0
→ EEPROM 0x000 31 80 01 00
0x010 00
• MCU 0x020 8E 30 36 25 23 28 30 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 20 36 22 28 30 36 22 28 30 36 22 28 30 36 22 28 30 36 23 23 88 30
Image: Second
UPDATE 0.004 0.017 16 0.03 35 37 47 50 20 24 1mb00503137 35 Image: Construction of the constructio
0x060 EE 56 4B 52 4D 34 78 EE 56 4B 52 4D 34 78 IFF OKROMANNA 0x070 FF FF FF 01 FF FF FF FF 01 FF FF FF 01 FF FF FF OKROMANNA 0x080 FF FF FF 01 FF FF FF 01 FF FF FF 01 FF FF FF OKROMANNA 0x090 FF 01 FF FF FF FF 01 FF FF FF 01 FF FF FF OKROMANNA 0x090 OFF 01 FF FF FF FF 01 FF FF FF 01 FF FF FF OKROMANNA 0x090 OFF 01 FF FF FF FF 01 FF FF FF FF 01 FF FF FF OKROMANNA 0x090 OFF 01 FF FF FF FF FF 01 FF FF FF FF FF FF FF FF OKROMANNA 0x090 OFF 01 FF FF FF FF FF FF 01 FF FF FF FF FF OKROMANNA 0x090 OFF 01 FF FF FF FF FF 01 FF FF FF FF FF FF FF OKROMANNA 0x090 OFF 01 FF
0x070 FF
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0x0A0 01 FF 01 00 00 01 00 00 00 00 00 00 00 00 00
0×0B0 00 01 00 00 01 00 00 01 00 00 01 00 00
0x0C0 00 01 00 00 00 01 00 00 01 00 00 00 9E 33 6D3m
0x000 F0 35 6F F0 80 BA F0 8F C9 F0 4A 58 78 F0 58 78 .50JXX.XX
0x000 41 06 53 9C // 51 59 1A CA 06 02 48 01 00 54 53 A.S. W(1,,H,15
0110 01 00 12 05 32 01 00 00 07 50 57 54 55 54 50 50
0110 07 06 32 53 56 57 57 58 58 58 58 23 20 20 20 20 20 20 20 20 20 XXXXXXX
0x130 20 20 20 20 20 20 20 20 20 20 20 20 20
0x140 04 75 84 80 FB 80 E0 69 30 01 00 01 00 01 FF 01 .ui0
0×150 FF 70 6F 00 01 FF 05 04 01 00 71 FE 0E FA 68 01poqh.
0x160 00 01 00 01 00 01 00 01 00 048 47 01 FF FF FF FFHG
0x170 01 FF FF FF FF 01 FF FF FF 01 FF FF FF 01

Reading and writing an EEPROM will bring up separate windows. These windows will inform the user of the functions that are being performed. The images below are an example of what the user should see.

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Reading please wait	Writing please wait
65%	27%
Stop	

Sometimes the user will need to write data to the EEPROM from a saved file or a new – edited file to an EEPROM. When the process is complete, the lower image will inform the user that it is verified.



The next image is of a different EEPROM that was read on-board. The 95080 was chosen and read into the window. Remember to [Choose EEPROM Type]

Select		95010		×)				
93C ROTATED 95x 24C 24LC/24W/C ×24C	=	95020 95040 95080 95P08 95P08	=	A0				
M35 Sxxx RAxx		95320 95640 95128		Delay 1				
☐ Read/Verify								
Ok Cancel								

Once the correct EEPROM is found in the list, the EEPROM type is illustrated in the image below.

Click OK.

This next image will give the user the choices of editing and or saving the file that was read from an EEPROM. The user can open a saved file and get the same results and write to an EEPROM.

CARPROG v02.75 - [C:\Documents at CARPROG	nd Settings\	0wner\	Desktop	o\Bin file	s\A8\A8	4E0 90) <mark>6 018</mark>	ME7.1	1\PIN	chang	ged_	d_Audi A8_0261 208 203_ 4E0 906 018 Me 7.11.bin] 🖶 🐇
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n 😂 DASHBOARD	· · · ·			-Otta.	. Olio.	14	1 0.	Abta.				
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	0×000	30 30	30.3	0 30 D	A FE O	1 93	33 31	31	30 30	33	5A	500003110037
- 000 A3 CAN 2004- 00 0	0×010	05 01	01 0	0 92 B	3 OE 6	0 00	00 5A	8E	00 D2	8B	FC	
(III) A3 VD0 03096 u0 1	0×020	05 01	01 0	0 92 B	3 OE 6	0 00	00 5A	8E	00 D2	8A	FC	`Z
	0×030	04 01	D2 0	4 D8 F	D 30 B	5 B1	FA 61	00	00 00	37	FA	•0a7.
	0×040	04 01	D2 0	4 D8 F	D 30 B	5 B1	FA 61	00	00 00	36	FA	40a6.
- A8 CAN 2003- V0.9	0×050	07 02	4C 0	2 BB 0	1 00 0	0 2A	04 18	0C	07 00	8F	FE	· ··L·····*·····
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🗄 📁 Ford	0x0C0	05 07	00 0	0 10 5	7 41 5	5 5A	5A 00	04	00 00	34	FE	WAUZZ4.
🗄 💭 INFINITI	0×0D0	5A 34	45 3	8 34 4	E 30 3	1 34	32 31	31	41 00	FC I	FC	Z4E84N014211A
H 💭 MERCEDES	0×0E0	5A 34	45 3	8 34 4	E 30 3	1 34	32 31	31	41 00	FC I	FC	Z4E84N014211A
THE NISSAN	0×0F0	55 58	33 5	A 30 4	3 4E 3	3 32	37 33	34	37 00	BC	FC	UX3Z0CN327347
	0×100	55 58	33 5	A 30 4	3 4E 3	3 32	37 33	34	37 00	BCI	FC D	. UX3ZUCN3Z/347
	0×120		- FO A	3 EE 9 4 45 3	5 00 0 8 34 4	0 00 F 30	31 34	32	34 34 31 31	38	ED	74F84N0142118
	0x130	01 01	00 0	0 00 0	0 00 0	0 00	00 00	00		EB I	FF	
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E SAAB	0×150	01 07	00 0	0 00 0	0 00 0	0 00	00 00	00	00 00	E3	FF	
	0×160	00 00	00 0	0 00 0	0 00 0	0 00	00 00	00	00 00	EA I	FF	·
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🖻 🦘 EEPROM	0x100		34 4	5 30 3	9 31 3	0 30	31 38	20	20 20	48	FD) 4E0910018
	0×1D0	58 45	30 3	9 30 0	0 00 0	0 00	00 00	00	00 00	AD I	FE	XE090
🗉 🦘 MCU	0×1E0	01 02	0 A 0	A 54 A	E 27 C	2 00	04 04	00	00 00	D8	FD	ΣΤ.'
🕂 ڬ ECU	0×1F0	01 02	0A 0	A 54 A	E 27 C	2 00	04 04	00	00 00	D8	FD)T.'
Device sn:												

Follow this advice to gain practice and save future mistakes.

- 1. Inspect the EEPROM clearly
- 2. Find the correct EEPROM data sheet
- 3. Read the EEPROM using the correct EEPROM type
- 4. Save the EEPROM data to a folder and file name
- 5. Save all edited EEPROM tests with new file names
- 6. Practice using older or new EEPROMS
- 7. If required, use a perfectly clean power supply to all controllers and the CarPog device.
- 8. Update the CarProg weekly
- 9. Remember that static electricity will harm electronic devices