Copyright Notice

The content in this Tutorial / Document has been used for private use only and any other use of the whole or any part of the material (including Adapting, Copying, Issuing Copies, Lending, Public Performance, Broad Casting or making the same available to or via the internet or wireless technology or authorising of the forgoing) is strictly prohibited

If found anyone of the above notice then the consequence will be met with respective person who leaked out & falls under the risk of copyrights respect to this contents

This material content are completely created as Non-Plagiarised or Non-Copied of any document (Except Titles). This material only for the purpose of spreading knowledge & not to disobey copyrights.

Note: The content in this Tutorial / Document has been used for private use only

Address 65: Tire Pressure Labels: 8J0-907-273.1bl

Part No SW: 8J0 907 273 A HW: 8J0 907 273 A

Component: J502_RDK H02 0300

Revision: --H02-D0 Serial number: 12679771137077

Coding: 0860022

Shop #: 06435 000

VCID: 2F381AE0EB1C309F843-807A

Address 72: Door, Rear Right Labels: 8P4-959-802.1bl

Part No SW: 8P4 959 802 E HW: 8P4 959 802 E

Component: Tuer-SG H04 0040

Coding: 0001176

Shop #: 000 1012544

VCID: 42DE4354488EADF77BD-8016

Memory Locations

1A 11 22 31 4A 3C 1B 1A 33

Data

1A 11 22 31 4A	
33 00 00 00	
3C 1B 1A	

Assumption Scenario

Requirements Says:

- There should be no pre-condition for this service to be used
- ALD, Memory Address, Memory size & Data Record to be mentioned as

- ALFD : 12

Memory Address : 4B 3A

Memory Size : 04

Data Record : 02 3D

Introduction

- The Read Memory By Address service is used to Read information present in the ECU at an internal memory location specified by the provided memory address and memory size.
- The data can be identified by memory address and size that may or may not be secured (Security Access (0x27) may or may not be included as prior service)
- This is vehicle manufacturer's choice that the server conditions are met when performing this service.

"Purpose: Read data in the server using Memory Address"

Frame Format of Read Memory by Address

Request Frame:

Service Id

Address & Length Format Id Data

Memory Address

Memory Size

Positive Response Frame:

Service Id

Data

• Negative Response Frame:

Negative Response (7F)

Service Id

NRC Code

Terms !!

Data Record

• This parameter provides the data record associated with the **memory address** that the tester is requesting to write in to the server as **data**.

Address and Length Format Identifier

- The number of bytes used for the Memory Address and Memory Size parameters is defined by Address and Length Format Identifier (low and high nibble)
- It is also possible to have a **fixed** Address and Length Format Identifier within the Memory Address or Memory Size parameter are padded with the value 00 hex in the higher range address locations.
 - Bit 7-4 : length of memory size parameter
 - Bit 3-0 : length of memory address parameter

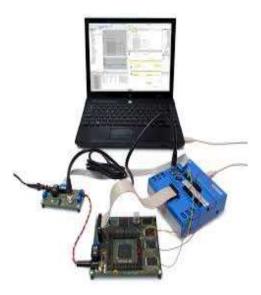
Terms!!

Memory Size

The parameter memory Size in the Write
Memory by Address request message
specifies the number of bytes to be written
starting at the address specified by memory
Address in the server's memory.

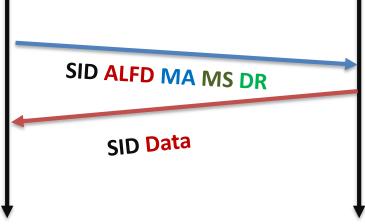
Memory Address

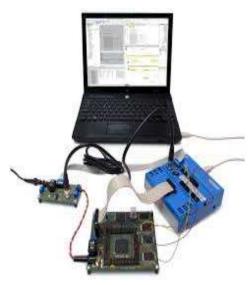
- The parameter Memory address is the starting address of server memory to which data is to be written.
- Its just an address of memory location where the data has to be resides





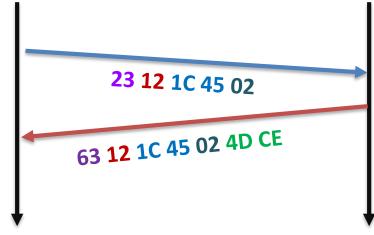












23 - Service ID

12 -

Bit 7-4: length of memory size parameter (1)

Bit 3-0: length of memory address parameter (2)

1C 45 - Memory Address

02 - Memory Size

4D CE - Data

0010 – Higher Nibble **(2)**

0001 – Lower Nibble **(1)**

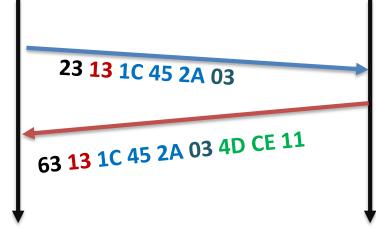
Reading data bytes into server memory for different bytes are possible, for example : 2-byte,

3-byte, and 4-byte addressing formats



Request & Response 3 Bytes





23 - Service ID

13 -

Bit 7-4: length of memory size parameter (1)

Bit 3-0: length of memory address parameter (2)

1C 45 2A - Memory Address

03 - Memory Size

4D CE 11- Data

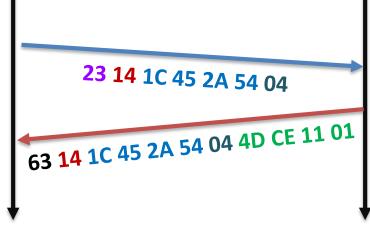
0011 – Higher Nibble **(3)**

0001 – Lower Nibble **(1)**



Request & Response 4 Bytes





23 - Service ID

14 -

Bit 7-4: length of memory size parameter (1)

Bit 3-0: length of memory address parameter (2)

1C 45 2A 54 - Memory Address

04 - Memory Size

4D CE 11 01- Data

0100 – Higher Nibble (4)

0001 – Lower Nibble **(1)**



List of NRCs Supported

- 0x13 Incorrect Message Length
- 0x22 Conditions Not Correct
- 0x31 Request Out of Range
- 0x33 Security Access Denied

(NRC Priority *)

End of the Tutorial!!