Product requirements for training

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| Version | 1.0 |

History

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| --- | --- | --- |
| **Version** | **Author** | **Changes** |
| 1.0 | Pierre IBRAHIM | Initial Version |
|  |  |  |

Reference documents

|  |  |  |
| --- | --- | --- |
| **Reference** | **Document Name** | **Version** |
| [AD1] | Train\_001\_DID\_001 |  |
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# Overview of the product:

This product addressed here is an infotainment system of a vehicle.

This system required is as follows:

# Infotainment functionality

Func\_Req\_001: onoff button has a dual functionality depending on button duration

Func\_Req\_002: if the onoff button is pressed for a SHORT duration tshort then the signal tshort\_onoff and signal mute is updated according to previous state

Func\_Req\_003: if the onoff button is pressed for a LONG duration tlong then the signal tlong\_onoff and signal onoff\_state is updated according to previous state

Func\_Req\_004; the mute signals is defined into two states either functional or non functional, the current state is defined from last saved state from user.

Func\_Req\_005: the onoff\_state is defined into two states either functional or non functional, the current state is defined from last saved state from user.

Func\_Req\_006: user current states are saved by changing ign-on signal from on to off.

Func\_Req\_007: the parameters of the duration of push can be configured by diagnostic services

Func\_Req\_008: if a button is stuck then the corresponding signal will be set no non functional.

Func\_Req\_009: if on any case the input signals are considered lost then the system shall take the initial values

Func\_Req\_010: If the system has a corrupted eeprom then all configuration parameters used in the system shall be the degraded values

Func\_Req\_011: the system shall have a backlight mechanism depending on the input signal (DAY\_NIGHT\_STATUS)

Func\_Req\_012: If Day Night Status = Day then the backlight will have a PWM with duty Cycle = Day\_DC

Func\_Req\_013: If Day Night Status = Night then the backlight will have a PWM with duty Cycle = Night\_DC

Func\_Req\_014: the parameters of the Duty Cycle in day and night can be configured by diagnostic services

Func\_Req\_015: the configuration parameters are only effective after a system restart.

# Diagnostics:

Diag\_Req\_001: Diagnostic service RDBI 22Hex is implemented in product according to UDS standard

Diag\_Req\_002: Diagnostic service WDBI 2EHex is implemented in product according to UDS standard

Diag\_Req\_003; A DID 0203 is implemented in the product

Diag\_Req\_004: DID 0203 RDBI shall be accessable in all diagnostic sessions.

Diag\_Req\_005: DID 0203 WDBI is accessabile only in extended session

Diag\_Req\_006: DID 0x0203 can not be written without the correct security access

Diag\_Req\_007: DID 0x0203 can not be written if format is incorrect

Diag\_Req\_008: DID 0x0203 can configure the tshort and tlong Duration of the system

Diag\_Req\_009; A DID 0204 is implemented in the product

Diag\_Req\_010: DID 0204 RDBI shall be accessable in all diagnostic sessions.

Diag\_Req\_011: DID 0204 WDBI is accessabile only in extended session

Diag\_Req\_012: DID 0x0204 can not be written without the correct security access

Diag\_Req\_013: DID 0x0204 can not be written if format is incorrect

Diag\_Req\_014: DID 0x0204 can configure the Day\_DC and Night\_DC Values of the system

Diag\_Req\_015: Diagnostic service IOCBI 2FHex is implemented in product according to UDS standard

Diag\_Req\_016; A IOCBI DID 0205 is implemented in the product

Diag\_Req\_017: DID 0205 IOCBI is accessible only in extended session

Diag\_Req\_018: DID 0205 IOCBI can control the Duty Cycle of the Backlight of the system

# Diagnostic trouble codes:

DTC\_Req\_001: the onoff button is considered as stuck button if press detection is more than 60 seconds

DTC\_Req\_002: the on off button is considered as not stuck after being stuck if the button is relased for 2 seconds

DTC\_Req\_003: DTC code B91212 is raised once the button is considered stuck

DTC\_Req\_004: a dtc code B91214 is raised in case the mail frame (info\_sys\_input) is lost for 200 ms

DTC\_Req\_004: a dtc B91214 is considered as not lost once first frame is returned