# Xilinx
# Zynq FPGA
# TI DSP MCU 기반의
# 프로그래밍 및 회로 설계 전문가


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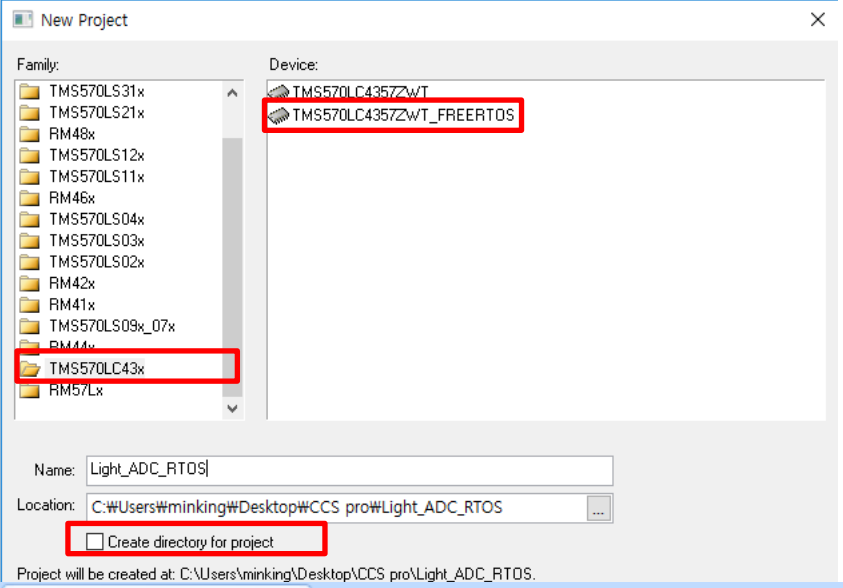
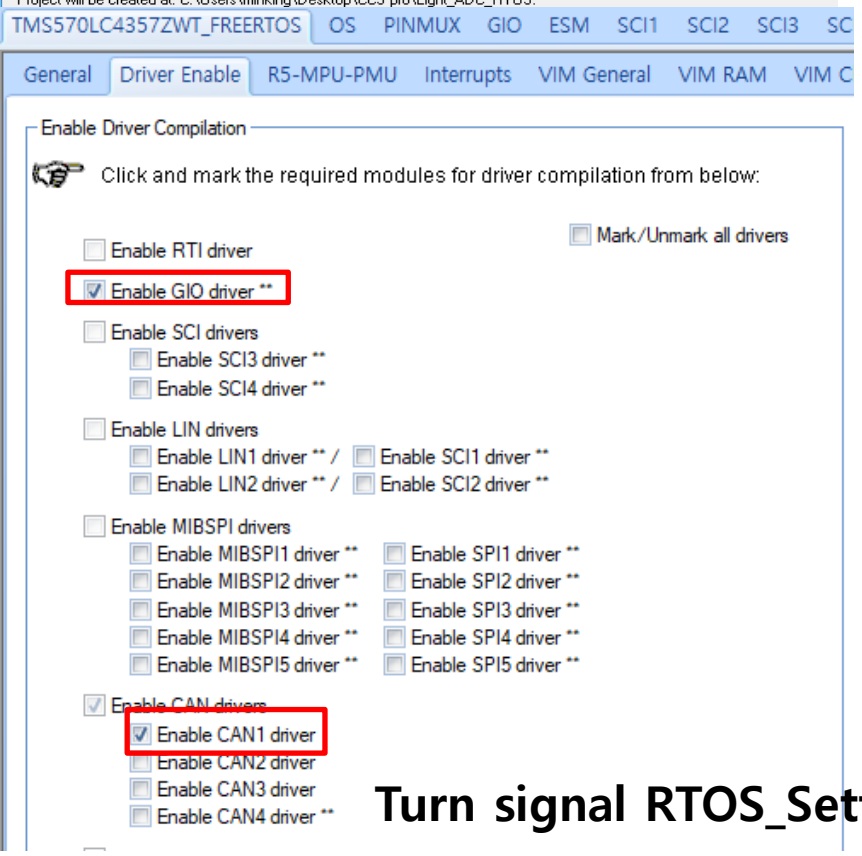
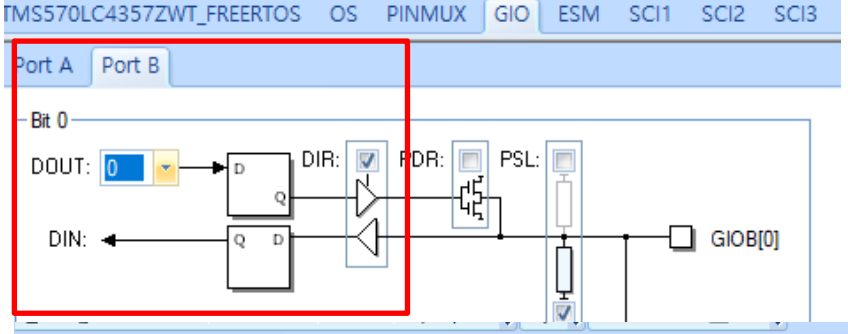
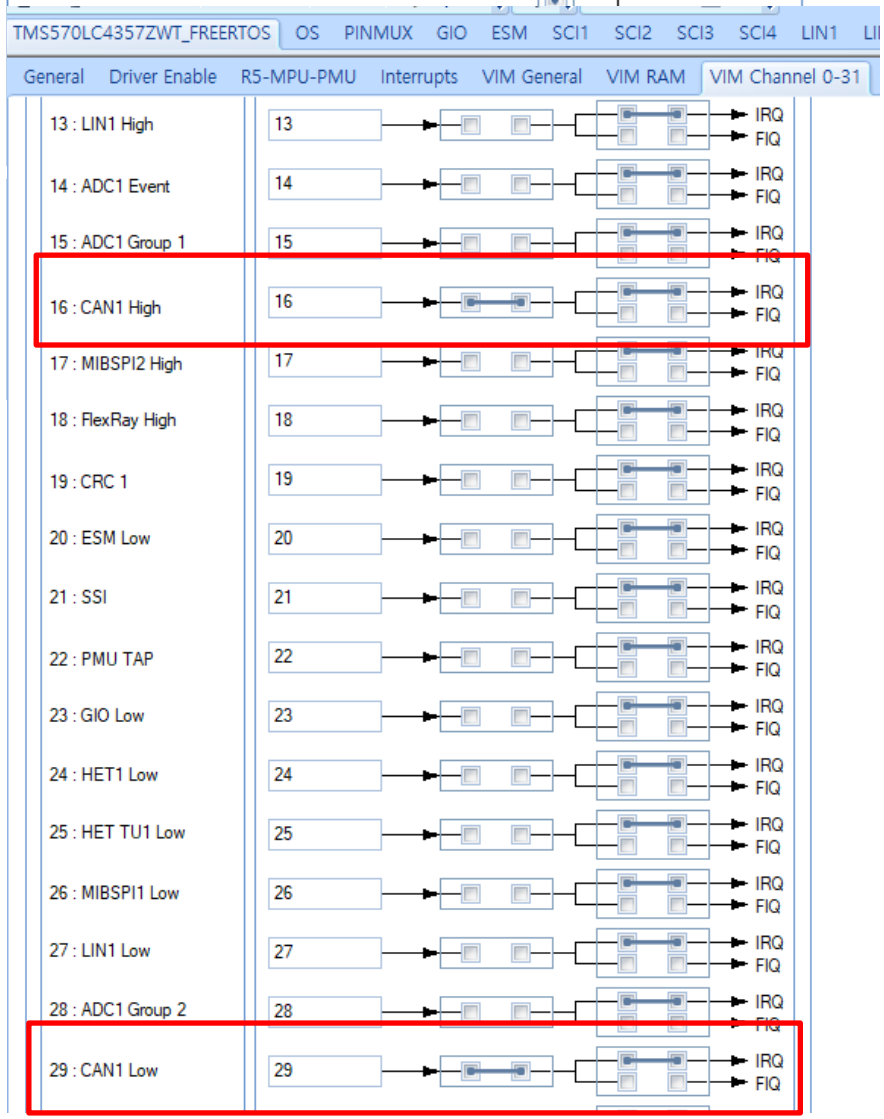


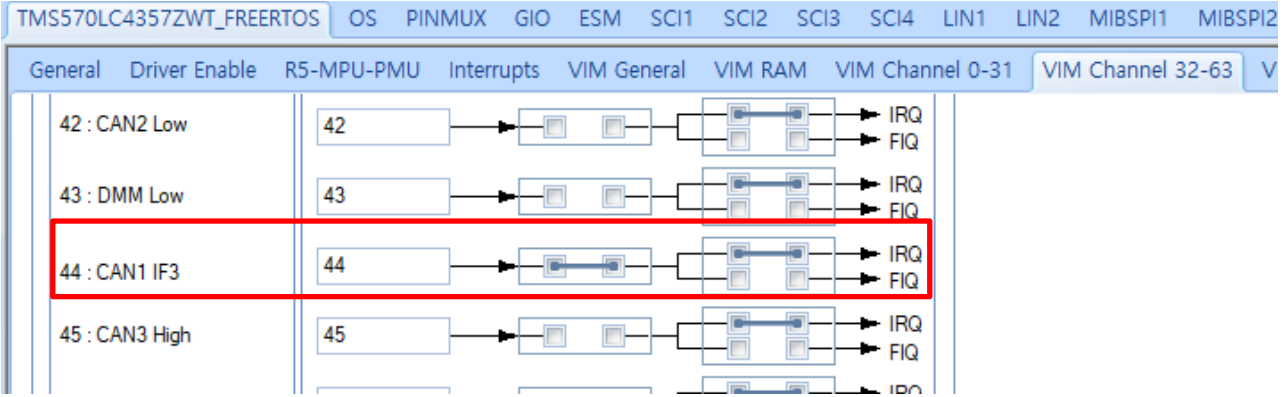



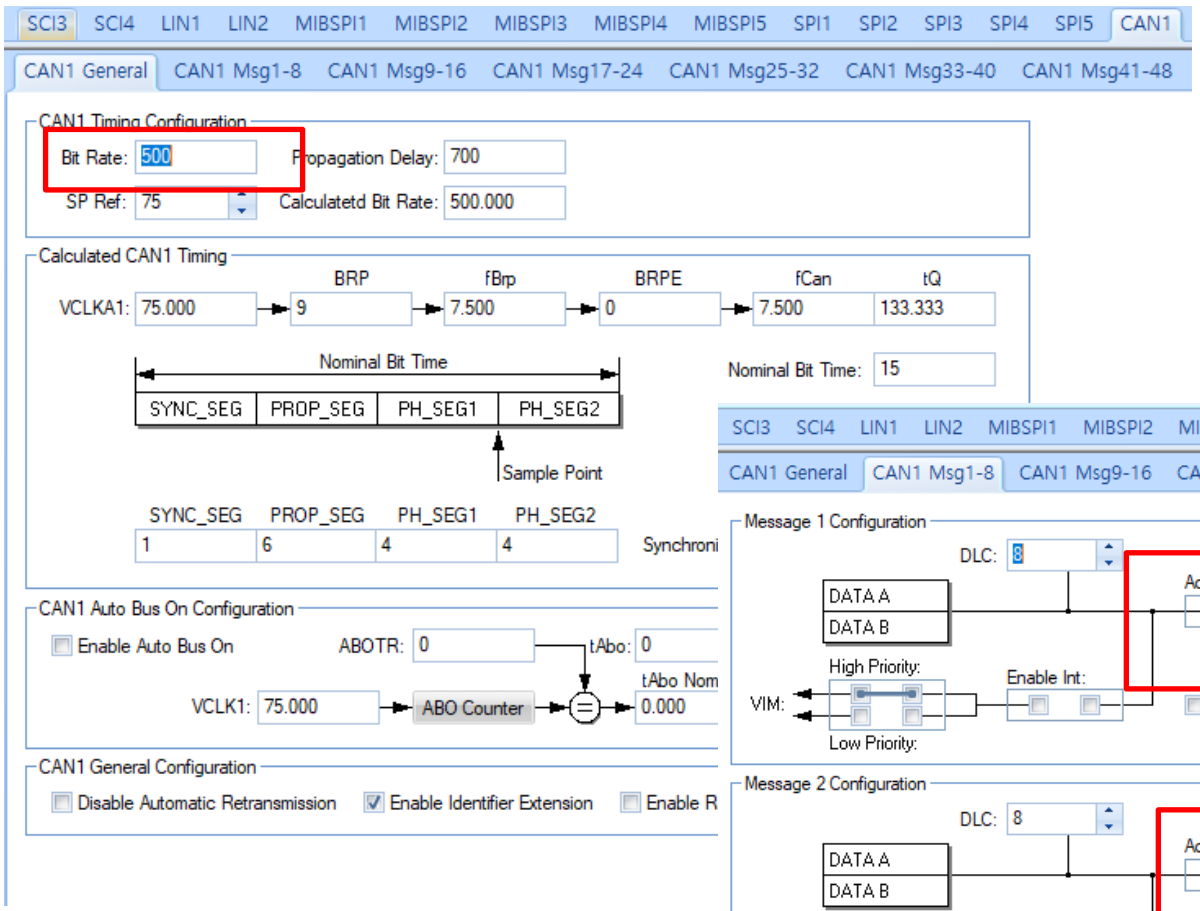



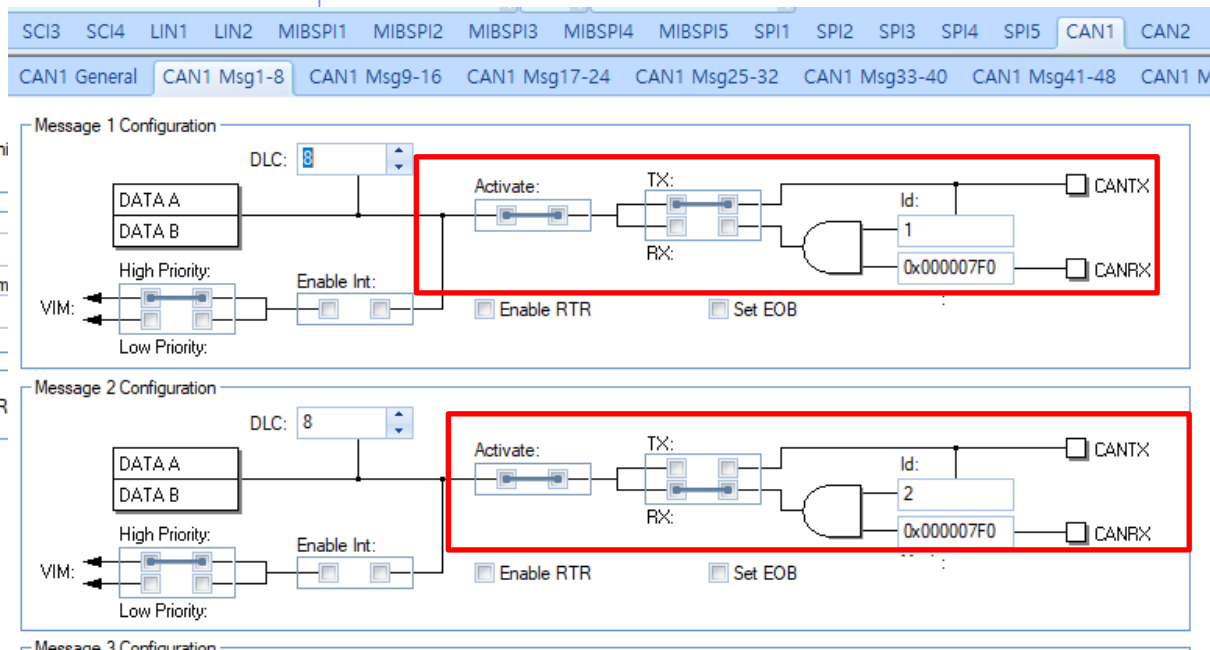




**Turn signal RTOS_Setting**

# Turn signal RTOS_Setting



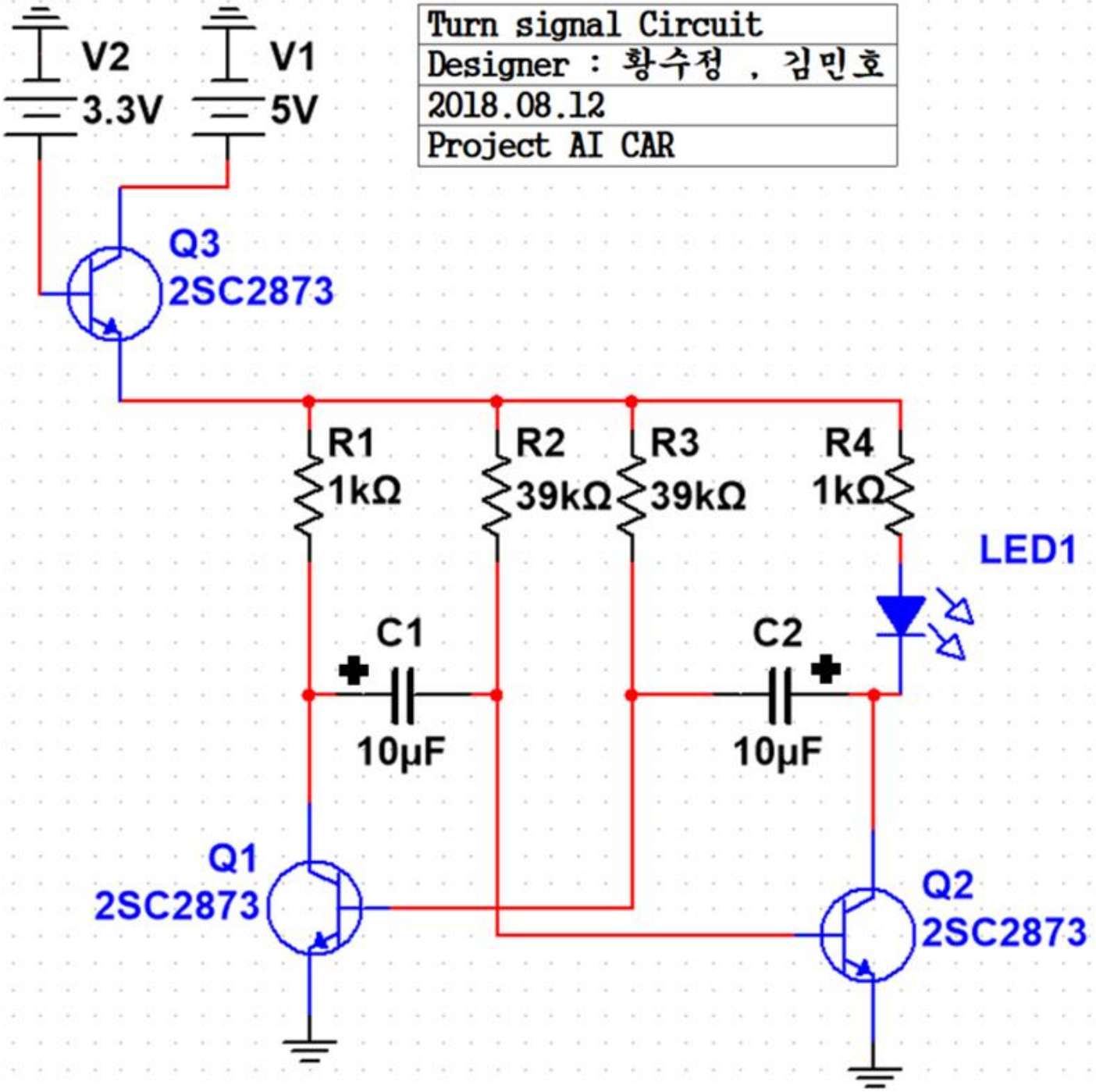



```c
#include <HL_can.h>
#include <HL_gio.h>
#include <HL_reg_can.h>
#include <HL_reg_gio.h>
#include <stdio.h>
#include <FreeRTOS.h>
#include <FreeRTOSConfig.h>
#include <HL_hal_stdtypes.h>
#include <os_mpu_wrappers.h>
#include <os_projdefs.h>
#include <os_semphr.h>
#include <os_task.h>
#include <string.h>

char num;
xTaskHandle xTask1Handle;
QueueHandle_t mutex;
void vTask1(void* pvParameters);

void delay(int num)
{
    int a;
    for (a = 0; a < num; a++)
        ;
}
int main()
{

    gioInit();
    canInit();
    delay(10000);
    char num = 0;
    //vSemaphoreCreateBinary(mutex)
    if (xTaskCreate(vTask1, "Task1", configMINIMAL_STACK_SIZE*8, NULL,
1,&xTask1Handle) != pdTRUE)
    {
        while (1)
            ;
    }

    vTaskStartScheduler();
    while (1)
        ;
    return 0;

}
```

```c
void vTask1(void *pbParameters)
{
        while (1)
        {

            canTransmit(canREG1, canMESSAGE_BOX1, &num);
            vTaskDelay(500);

            canIsRxMessageArrived(canREG1, canMESSAGE_BOX2);
            vTaskDelay(500);
            canGetData(canREG1, canMESSAGE_BOX2, &num);

            switch(num)
            {
                case 7:
                gioSetBit(gioPORTB, 0, 1);
                vTaskDelay(500);
                break;


                default:
                gioSetBit(gioPORTB, 0, 0);
                vTaskDelay(500);
                break;
            }
        }
}
```

# Turn signal RTOS_CODE


Turn signal Circuit
Designer : 황수정 , 김민호
2018.08.12
Project AI CAR
V2
3.3V
V1
5V
Q3
2SC2873
R1
1kΩ
R2
39kΩ
R3
39kΩ
R4
1kΩ
LED1
C1
10μF
C2
10μF
Q1
2SC2873
Q2
2SC2873

USB2CAN UI

NTREX ㈜엔티렉스

# USB2CAN UI

Version 1.10 (2016. 9. 20)

UI Config.

**USB(VCP) Devices**

NTREX USB2CAN(FIFO) [NT2CP6K3]

Search | Connect | Disconnect

**CAN Configuration**

Bitrate: 500K bps

Filter Identification: 1 (Hexa)

Filter Mask: 7F0 (Hexa) Set

**CAN Messages**

| Time | ID(Hex) | Flags | Data(Hex) |
|---|---|---|---|
| 232420.923788 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232419.422876 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232417.924010 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232416.424285 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232414.923123 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232413.424372 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232411.924435 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232410.424458 | 1 | Ext | 07 00 00 00 00 00 00 00 (8) |
| 232409.227034 | 1 | Self Ext | 07 (1) |
| 232408.924490 | 1 | Ext | 00 00 00 00 00 00 00 00 (8) |
| 232407.424620 | 1 | Ext | 00 00 00 00 00 00 00 00 (8) |
| 232405.925808 | 1 | Ext | 00 00 00 00 00 00 00 00 (8) |

☑ Receive CAN Message — Clear

**Transmit Message**

| | | | | | | |
|---|---|---|---|---|---|---|
| ID(Hexa) | 1 | ☑ Ext | ☐ RTR | Data(Hexa) | 7 | Send |
| ID(Hexa) | 2 | ☑ Ext | ☐ RTR | Data(Hexa) | 2 | Send |
| ID(Hexa) | 2 | ☐ Ext | ☐ RTR | Data(Hexa) | | Send |