

Debug - Relaydrv.c - Code Composer Studio (Licensed)

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Debug X G2231r [Debug] - TI MSP430 USB1/MSP430 [Project Debug Session]

Device

Thread [main] (Suspended)

0 Timer_A1() at Relaydrv.c:450 0xF82A

1 <symbol is not available> 0x0018

TI MSP430 USB1/MSP430 (6:45:33 PM)

TI MSP430 USB1/MSP430: CIO (6:45:33 PM)

Registers (1) X

Name	Value
Special_Function	
ADC10	
System_Clock	
Flash	
Port_1_2	
Timer_A2	
TAIV	0x0002
TACTL	
TACCTL0	
TACCTL1	0x0090
TAR	0x0009
TACCR0	0x00C8
TACCR1	0x0000
USI	

Relaydrv.c X G2231r.map

```
444     CCR0 = 200; // Add Offset to CCR0
445 }
446
447 // Timer_A2 Interrupt Vector (TAIV) handler
448 #pragma vector=TIMERA1_VECTOR
449 @ interrupt void Timer_A1(void)
450 {
451     switch( TAIV )
452     {
453         case 2: CCR1 += 1000; // Add Offset to CCR1
454             break;
455         case 10: P1OUT ^= 0x01; // Timer_A3 overflow
456             break;
457     }
458 }
```

Disassembly (Timer_A1) X Memory (1)

Enter location here

Address	OpCode	Comment
0xF82A:	120F	PUSH R15
0xF82C:	3C07	JMP (C\$L3)
0xF82E:	50B2 03E8 0174	ADD.W #0x03e8,&Timer_A2_TACCR1
0xF834:	3C0A	JMP (C\$L4)
0xF836:	E3D2 0021	XOR.B #1,&Port_1_2_P1OUT
0xF83A:	3C07	JMP (C\$L4)
0xF83C:	421F 012E	MOV.W &Timer_A2_TAIV,R15
0xF840:	832F	DEC.D.W R15
0xF842:	27F5	JEQ (C\$L1)
0xF844:	823F	SUB.W #8,R15
0xF846:	27F7	JEQ (C\$L2)
0xF848:	3C00	JMP (C\$L4)
0xF84A:	413F	POP.W R15
0xF84C:	1300	RETF

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Debug X TI MSP430 USB1/MSP430 [Project Debug Session]

Device

- Thread [main] (Suspended)
 - 0 Timer_A1() at Relaydrv.c:451 0xF82c
 - 1 <symbol is not available> 0x0018
- TI MSP430 USB1/MSP430 (6:45:33 PM)
- TI MSP430 USB1/MSP430: CIO (6:45:33 PM)

Local (1) Watch (1) Registers (1) X

Name	Value
Special_Function	
ADC10	
System_Clock	
Flash	
Port_1_2	
Timer_A2	
TAIV	0x000A
TACTL	0x0222
TACCTL0	0x0090
TACCTL1	0x0090
TAR	0x000C
TACCR0	0x00C8
TACCR1	0x0000
USI	

Relaydrv.c X G2231r.map

```

444     CCR0 = 200;           // Add Offset to CCR0
445 }
446
447 // Timer_A2 Interrupt Vector (TAIV) handler
448 #pragma vector=TIMERA1_VECTOR
449 __interrupt void Timer_A1(void)
450 {
451     switch( TAIV )
452     {
453         case 2: CCR1 += 1000;           // Add Offset to CCR1
454             break;
455         case 10: P1OUT ^= 0x01;        // Timer_A3 overflow
456             break;
457     }
458 }
459
460
461
462

```

Disassembly (Timer_A1) X Memory (1)

Enter location here
Timer_A1:
0xF82A: 120F PUSH R15
0xF82C: 3C07 JMP (C\$L3)
C\$L1:
0xF82E: 50B2 03E8 0174 ADD.W #0x03e8,&Timer_A2_TACCR1
0xF834: 3C0A JMP (C\$L4)
C\$L2:
0xF836: E3D2 0021 XOR.B #1,&Port_1_2_P1OUT
0xF83A: 3C07 JMP (C\$L4)
C\$L3:
0xF83C: 421F 012E MOV.W &Timer_A2_TAIV,R15
0xF840: B32F DECD.W R15
0xF842: 27F5 JEQ (C\$L1)
0xF844: B23F SUB.W #8,R15
0xF846: 27F7 JEQ (C\$L2)
0xF848: 3C00 JMP (C\$L4)
C\$L4:
0xF84A: 413F POP.W R15
0xF84C: 1300 RETT

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Debug X TI MSP430 USB1/MSP430 [Project Debug Session]

Device

- Thread [main] (Suspended)
 - 0 Timer_A1() at Relaydrv.c:451 0xf83c
 - 1 <symbol is not available> 0x0018
- TI MSP430 USB1/MSP430 (6:45:33 PM)
- TI MSP430 USB1/MSP430: CIO (6:45:33 PM)

Local (1) Watch (1) Registers (1) X

Name	Value
Special_Function	
ADC10	
System_Clock	
Flash	
Port_1_2	
Timer_A2	
TAIV	0x0000
TACTL	0x0222
TACCTL0	0x0090
TACCTL1	0x0090
TAR	0x000E
TACCR0	0x00C8
TACCR1	0x0000
USI	

Relaydrv.c X G2231r.map

```

444     CCR0 = 200;           // Add Offset to CCR0
445 }
446
447 // Timer_A2 Interrupt Vector (TAIV) handler
448 #pragma vector=TIMERA1_VECTOR
449 __interrupt void Timer_A1(void)
450 {
451     switch( TAIV )
452     {
453         case 2: CCR1 += 1000;           // Add Offset to CCR1
454             break;
455         case 10: P1OUT ^= 0x01;        // Timer_A3 overflow
456             break;
457     }
458 }
459
460
461
462

```

Disassembly (Timer_A1) X Memory (1)

Enter location here			
Timer_A1:			
0xF82A:	120F	PUSH	R15
0xF82C:	3C07	JMP	(C\$L3)
C\$L1:			
0xF82E:	50B2 03E8 0174	ADD.W	#0x03e8,&Timer_A2_TACCR1
0xF834:	3C0A	JMP	(C\$L4)
C\$L2:			
0xF836:	E3D2 0021	XOR.B	#1,&Port_1_2_P1OUT
0xF83A:	3C07	JMP	(C\$L4)
C\$L3:			
0xF83C:	421F 012E	MOV.W	&Timer_A2_TAIV,R15
0xF840:	832F	DEC.D.W	R15
0xF842:	27F5	JEQ	(C\$L1)
0xF844:	823F	SUB.W	#8,R15
0xF846:	27F7	JEQ	(C\$L2)
0xF848:	3C00	JMP	(C\$L4)
C\$L4:			
0xF84A:	413F	POP.W	R15
0xF84C:	1300	RETF	

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```

#include <msp430g2231.h>
void main(void)
{
    WDTCTL = WDTPW + WDTHOLD;           // Stop WDT
    P1SEL |= 0x06;                     // P1.1 - P1.2 option select
    P1DIR |= 0x07;                     // P1.0 - P1.2 outputs
    CCTLO = OUTMOD_4 + CCIE;          // CCR0 toggle, interrupt enabled
    CCTL1 = OUTMOD_4 + CCIE;          // CCR1 toggle, interrupt enabled
    TACTL = TASSEL_2 + MC_2 + TAIE;   // SMCLK, Contmode, int enabled

    _BIS_SR(LPM0_bits + GIE);         // Enter LPM0 w/ interrupt
}

// Timer A0 interrupt service routine
#pragma vector=TIMER0_A0_VECTOR
__interrupt void Timer_A0 (void)
{
    CCR0 = 200;                      // Add Offset to CCR0
}

// Timer_A2 Interrupt Vector (TAIV) handler
#pragma vector=TIMER0_A1_VECTOR
__interrupt void Timer_A1(void)
{
    switch( TAIV )
    {
        case 2: CCR1 += 1000;          // Add Offset to CCR1
        break;
        case 10: P1OUT ^= 0x01;        // Timer_A3 overflow
        break;
    }
}

```

****note:****

just put those lines at the bottom of my closed code, so the line numbers are big.

at line 451 source or at address 0xF82C, TAIV change from 0x0002 to 0x000A and to 0x0000 after executing three consecutive assembly step into
PUSH R15

JMP (Label)

MOV.W &TAIV,R15

i think this is a bug, don't you?