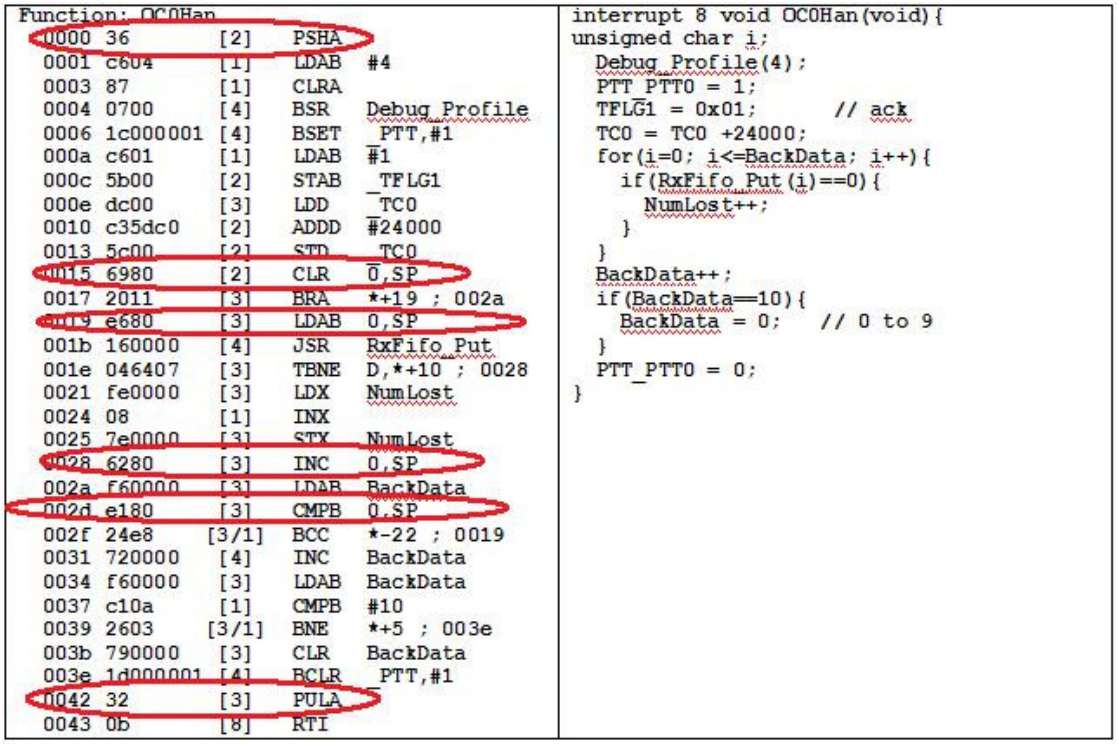

```
Function: OC0Han
0000 36        [2]   PSHA
0001 c604      [1]   LDAB  #4
0003 87        [1]   CLRA
0004 0700      [4]   BSR   Debug_Profile
0006 1c000001  [4]   BSET  _PTT,#1
000a c601      [1]   LDAB  #1
000c 5b00      [2]   STAB  _TFLG1
000e dc00      [3]   LDD   _TC0
0010 c35dc0    [2]   ADDD  #24000
0013 5c00      [2]   STD   _TC0
0015 6980      [2]   CLR   0,SP
0017 2011      [3]   BRA   *+19 ; 002a
0019 e680      [3]   LDAB  0,SP
001b 160000    [4]   JSR   RxFifo_Put
001e 046407    [3]   TBNE  D,*+10 ; 0028
0021 fe0000    [3]   LDX   NumLost
0024 08        [1]   INX
0025 7e0000    [3]   STX   NumLost
0028 6280      [3]   INC   0,SP
002a f60000    [3]   LDAB  BackData
002d e180      [3]   CMPB  0,SP
002f 24e8    [3/1]   BCC   *-22 ; 0019
0031 720000    [4]   INC   BackData
0034 f60000    [3]   LDAB  BackData
0037 c10a      [1]   CMPB  #10
0039 2603    [3/1]   BNE   *+5 ; 003e
003b 790000    [3]   CLR   BackData
003e 1d000001  [4]   BCLR  _PTT,#1
0042 32        [3]   PULA
0043 0b        [8]   RTI
```

```
interrupt 8 void OC0Han(void){
unsigned char i;
  Debug_Profile(4);
  PTT_PTT0 = 1;
  TFLG1 = 0x01;       // ack
  TC0 = TC0 +24000;
  for(i=0; i<=BackData; i++){
    if(RxFifo_Put(i)==0){
      NumLost++;
    }
  }
  BackData++;
  if(BackData==10){
    BackData = 0;    // 0 to 9
  }
  PTT_PTT0 = 0;
}
```

PTT_PTT0=1 takes 4 cycles.

```
     _PWMDTY67                                C2       2       2       0   .abs_section_c2
     _SCI0BD                                  C8       2       2       0   .abs_section_c8
     _SCI1BD                                  D0       2       2       0   .abs_section_d0
     _ATD1CTL23                              122       2       2       0   .abs_section_122
     _ATD1CTL45                              124       2       2       0   .abs_section_124
     _ATD1DR0                                130       2       2       0   .abs_section_130
     _ATD1DR1                                132       2       2       0   .abs_section_132
     _ATD1DR2                                134       2       2       0   .abs_section_134
     _ATD1DR3                                136       2       2       0   .abs_section_136
     _ATD1DR4                                138       2       2       0   .abs_section_138
     _ATD1DR5                                13A       2       2       0   .abs_section_13a
     _ATD1DR6                                13C       2       2       0   .abs_section_13c
     _ATD1DR7                                13E       2       2       0   .abs_section_13e
     _CAN0RXTSR                              16E       2       2       0   .abs_section_16e
     _CAN0TXTSR                              17E       2       2       0   .abs_section_17e
     _CAN1RXTSR                              1AE       2       2       0   .abs_section_1ae
     _CAN1TXTSR                              1BE       2       2       0   .abs_section_1be
     _CAN2RXTSR                              1EE       2       2       0   .abs_section_1ee
     _CAN2TXTSR                              1FE       2       2       0   .abs_section_1fe
     _CAN3RXTSR                              22E       2       2       0   .abs_section_22e
     _CAN3TXTSR                              23E       2       2       0   .abs_section_23e
     _CAN4RXTSR                              2AE       2       2       0   .abs_section_2ae
     _CAN4TXTSR                              2BE       2       2       0   .abs_section_2be
MODULE:                 -- Lab2g.c.o --
- PROCEDURES:
     OC0_Init                               C045      2F      47       1   .text
     Debug_Profile                          C074      21      33       5   .text
     main                                   C095      61      97       1   .text
     OC0Han                                 C0F6      4F      79       1   .text
- VARIABLES:
     Debug_n                                 900       2       2       3   .bss
     _Vector_8                              FFEE       2       2       0   .abs_section_ffee
     BackData                                922       1       1       3   .common
     NumLost                                 923       2       2       3   .common
     BackPeriod                              925       2       2       4   .common
     NumInterrupts                           927       4       4       6   .common
     ForeData                                92B       1       1       4   .common
     ForeExpected                            92C       1       1       4   .common
     Errors                                  92D       2       2       2   .common
     timeBuf                                 92F      C8     200       1   .common
     placeBuf                                9F7      C8     200       1   .common
MODULE:                 -- Start12.c.o --
- PROCEDURES:
     Init                                   C000      29      41       1   .init
     _Startup                               C029      12      18       0   .init
- VARIABLES:
     _startupData                           C03B       6       6       3   .startData
- LABELS:
     __SEG_END_SSTACK                        900       0       0       1
MODULE:                 -- rtshc12.c.o (ansisi.lib) --
- PROCEDURES:
     _BDIVMODU                              C1C0       A      10       1   RUNTIME
     _LINC                                  C1CA       5       5       1   RUNTIME
- VARIABLES:
MODULE:                 -- PLL.c.o --
- PROCEDURES:
     PLL_Init                               C145      15      21       1   .text
- VARIABLES:
MODULE:                 -- FIFO.C.o --
- PROCEDURES:
     Fifo_Init                              C15A      18      24       1   .text
     Fifo_Put                               C172      28      40       1   .text
     Fifo_Get                               C19A      26      38       1   .text
- VARIABLES:
     Fifo                                    902      20      32       2   .bss
     PutI                                    ABF       2       2       6   .common
     GetI                                    AC1       2       2       7   .common

********************************************************************************
MODULE STATISTIC
  Name                                  Data   Code  Const
--------------------------------------------------------------------------------
  mc9s12dp512.c.o                        590      0      0
  Lab2g.c.o                              415    256      2
  Start12.c.o                              0     59      0
  rtshc12.c.o (ansisi.lib)                 0     15      0
  PLL.c.o                                  0     21      0
  FIFO.C.o                                36    102      0
```

```
Function: Fifo_Get
  0000 3b           [2]     PSHD
   63:    if(PutI == GetI ){
  0001 fc0000       [3]     LDD   PutI
  0004 bc0000       [3]     CPD   GetI
  0007 2603         [3/1]   BNE   *+5 ;abs = 000c
   64:      return(FIFOFAIL); // Empty if PutI=GetI
  0009 c7           [1]     CLRB
  000a 2017         [3]     BRA   *+25 ;abs = 0023
   65:    }
   66:    *datapt = Fifo[GetI&(FIFOSIZE-1)];
  000c f60000       [3]     LDAB  GetI:1
  000f c41f         [1]     ANDB  #31
  0011 ce0000       [2]     LDX   #Fifo
  0014 a6e5         [3]     LDAA  B,X
  0016 ee80         [3]     LDX   0,SP
  0018 6a00         [2]     STAA  0,X
   67:    GetI++;  // Success, update
  001a fe0000       [3]     LDX   GetI
  001d 08           [1]     INX
  001e 7e0000       [3]     STX   GetI
   68:    return(FIFOSUCCESS);
  0021 c601         [1]     LDAB  #1
  0023 87           [1]     CLRA
   69:  }
  0024 30           [3]     PULX
  0025 3d           [5]     RTS




   91:      while(Fifo_Get(&ForeData)==FIFOFAIL){
  0022 cc0000       [2]     LDD   #ForeData
  0025 160000       [4]     JSR   Fifo_Get
  0028 0454f7       [3]     TBEQ  D,*-6 ;abs = 0022


50 cycles per call
50/24*10^6 = 2.08333333 us per call
```