```
; Source created by Don

; at            : 22.11.03 12:15:39


; Project File    : c:\PROGRA~1\DATEN\TIPTRO~1\TIP_108F.PIC

; Project Version : 1.108.0

; Created         : 27.12.02 11:36:00

; Last change     : 21.11.03 12:38:00

      PROCESSOR 16C74A

      INCLUDE P16C74A.INC

      RADIX DEC


      __IDLOCS H'0100'

      __CONFIG _CP_OFF & _PWRTE_ON & _WDT_ON & _BODEN_ON & _XT_OSC

; Diverses

ZERO   EQU Z   ; ZERO-Flag
CARRY   EQU C  ; CARRY-Flag


; Variable

SYS_WSAV       = 32    ; located in Bank 0
SYS_TMP1       = 33    ; located in Bank 0
S2     = 43    ; located in Bank 0
S3     = 44    ; located in Bank 0
11     = 45    ; located in Bank 0
12     = 46    ; located in Bank 0
S0     = 47    ; located in Bank 0
S4     = 48    ; located in Bank 0
S5     = 49    ; located in Bank 0
S7     = 50    ; located in Bank 0
S6     = 51    ; located in Bank 0
15     = 52    ; located in Bank 0
14     = 53    ; located in Bank 0
```

```
S1      = 54    ; located in Bank 0
S8      = 55    ; located in Bank 0
S9      = 56    ; located in Bank 0
OS1_FD  = 57    ; located in Bank 0
OS2_FD  = 58    ; located in Bank 0
OS3_FD  = 59    ; located in Bank 0
S10     = 60    ; located in Bank 0
OS4_FD  = 61    ; located in Bank 0
RAM     = 62    ; located in Bank 0
SYS_WSAV2       = 160   ; located in Bank 1

        ERRORLEVEL -302 ; disable warning (Bankswitching)
        ERRORLEVEL -306 ; disable warning (Pageswitching)

;*****************************************
;Programmanfang
;*****************************************

        ORG 0

        CLRF STATUS     ; switch to RAM-Bank 0
        MOVLW HIGH SYS_INIT     ; set page
        MOVWF PCLATH
        GOTO SYS_INIT
        RETURN

;*****************************************
; Subroutines
;*****************************************



;*****************************************
;Initialisierung
;*****************************************


SYS_INIT

        MOVLW B'00000000'
        MOVWF INTCON

; Ausgangs-Pegel setzen, bevor die Richtung gesetzt wird

        BCF STATUS,RP0  ; Bank 0
        MOVLW B'00000000'
        MOVWF PORTA
```

```
        MOVLW B'00000000'
        MOVWF PORTB

        MOVLW B'00000000'
        MOVWF PORTC

        MOVLW B'00000000'
        MOVWF PORTD

        MOVLW B'00000000'
        MOVWF PORTE

        MOVLW 15
        BSF STATUS,RP0  ; Bank 1
        MOVWF OPTION_REG

        MOVLW 6 ; all digital
        MOVWF ADCON1

; Richtung setzen

        MOVLW B'11111111'
        MOVWF TRISA

        MOVLW B'11111111'
        MOVWF TRISB

        MOVLW B'11111111'
        MOVWF TRISC

        MOVLW B'11111111'
        MOVWF TRISD

        MOVLW B'00000111'
        MOVWF TRISE

; init vars


; Clear RAM

        MOVLW 32
        MOVWF FSR
CR1
        CLRF INDF
```

```
        INCF FSR,F
        BTFSS FSR,7
        GOTO CR1
        BSF FSR,5
CR2
        CLRF INDF
        INCF FSR,F
        BTFSC FSR,7
        GOTO CR2



;***********************************
;
;******* Haupt-Programm ***********
;***********************************
;

MAIN

        CLRWDT

;*****************************************************
;
; UND - Gatter -> LG1
;*****************************************************
;

LABEL_LG1_1
        BCF STATUS,RP0  ; Bank 0
        BTFSC S2,0
        GOTO LABEL_LG1_FALSE
LABEL_LG1_2
        BTFSC S2,1
        GOTO LABEL_LG1_FALSE

LABEL_LG1_TRUE
        BSF S2,4
        GOTO LABEL_LG1_ENDE
LABEL_LG1_FALSE
        BCF STATUS,RP0  ; Bank 0
        BCF S2,4
LABEL_LG1_ENDE
;*****************************************************
;
; UND - Gatter -> LG2
;*****************************************************
;

LABEL_LG2_1
        BTFSC S2,0
        GOTO LABEL_LG2_FALSE
```

```
LABEL_LG2_2
      BTFSS S2,1
      GOTO LABEL_LG2_FALSE

LABEL_LG2_TRUE
      BSF S2,5
      GOTO LABEL_LG2_ENDE
LABEL_LG2_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S2,5
LABEL_LG2_ENDE
;*****************************************************
;
; UND - Gatter -> LG3
;*****************************************************
;

LABEL_LG3_1
      BTFSS S2,0
      GOTO LABEL_LG3_FALSE
LABEL_LG3_2
      BTFSS S2,1
      GOTO LABEL_LG3_FALSE

LABEL_LG3_TRUE
      BSF S2,2
      GOTO LABEL_LG3_ENDE
LABEL_LG3_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S2,2
LABEL_LG3_ENDE
;*****************************************************
;
; UND - Gatter -> LG4
;*****************************************************
;

LABEL_LG4_1
      BTFSS S2,0
      GOTO LABEL_LG4_FALSE
LABEL_LG4_2
      BTFSC S2,1
      GOTO LABEL_LG4_FALSE

LABEL_LG4_TRUE
      BSF S2,3
      GOTO LABEL_LG4_ENDE
LABEL_LG4_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S2,3
```

```
LABEL_LG4_ENDE
;*****************************************************
;
; UND - Gatter -> LG5
;*****************************************************
;

LABEL_LG5_1
      BTFSS S5,1
      GOTO LABEL_LG5_FALSE
LABEL_LG5_2
      BTFSC S3,6
      GOTO LABEL_LG5_FALSE

LABEL_LG5_TRUE
      BSF S3,3
      GOTO LABEL_LG5_ENDE
LABEL_LG5_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S3,3
LABEL_LG5_ENDE
;*****************************************************
;
; Verteiler -> BV1
;*****************************************************
;

      MOVLW 0
      BTFSC S2,3     ; IN0
      IORLW 1
      BTFSC S2,2     ; IN1
      IORLW 2
      BTFSC S2,4     ; IN2
      IORLW 4
      MOVWF 11       ; OUT

;*****************************************************
;
; Verteiler -> BV2
;*****************************************************
;

      MOVLW 0
      BTFSC S2,5     ; IN0
      IORLW 1
      BTFSC S2,5     ; IN1
      IORLW 2
      MOVWF 12       ; OUT

;*****************************************************
;
;AF1
;*****************************************************
;
```

```
      MOVLW 23
      MOVWF S0


;*****************************************************
;
; Verteiler -> BV3
;*****************************************************
;

      BTFSC 15,0
      GOTO LABEL_BV3_0
      BCF S3,1
      GOTO LABEL_BV3_0_END
LABEL_BV3_0
      BSF S3,1
LABEL_BV3_0_END

;*********************************************
;

      BTFSC 15,1
      GOTO LABEL_BV3_1
      BCF S3,2
      GOTO LABEL_BV3_1_END
LABEL_BV3_1
      BSF S3,2
LABEL_BV3_1_END

;*********************************************
;


;*****************************************************
;
; UND - Gatter -> LG6
;*****************************************************
;

LABEL_LG6_1
      BTFSC S3,1
      GOTO LABEL_LG6_FALSE
LABEL_LG6_2
      BTFSS S3,2
      GOTO LABEL_LG6_FALSE

LABEL_LG6_TRUE
      BSF S2,6
      GOTO LABEL_LG6_ENDE
LABEL_LG6_FALSE
      BCF STATUS,RP0  ; Bank 0
```

```
      BCF S2,6
LABEL_LG6_ENDE
;*****************************************************
;
; UND - Gatter -> LG7
;*****************************************************
;

LABEL_LG7_1
      BTFSS S3,1
      GOTO LABEL_LG7_FALSE
LABEL_LG7_2
      BTFSC S3,2
      GOTO LABEL_LG7_FALSE

LABEL_LG7_TRUE
      BSF S2,7
      GOTO LABEL_LG7_ENDE
LABEL_LG7_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S2,7
LABEL_LG7_ENDE
;*****************************************************
;
; UND - Gatter -> LG8
;*****************************************************
;

LABEL_LG8_1
      BTFSS S2,6
      GOTO LABEL_LG8_FALSE
LABEL_LG8_2
      BTFSS S3,6
      GOTO LABEL_LG8_FALSE

LABEL_LG8_TRUE
      BSF S3,4
      GOTO LABEL_LG8_ENDE
LABEL_LG8_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S3,4
LABEL_LG8_ENDE
;*****************************************************
;
; UND - Gatter -> LG9
;*****************************************************
;

LABEL_LG9_1
      BTFSS S2,7
      GOTO LABEL_LG9_FALSE
LABEL_LG9_2
```

```
      BTFSS S3,6
      GOTO LABEL_LG9_FALSE

LABEL_LG9_TRUE
      BSF S3,5
      GOTO LABEL_LG9_ENDE
LABEL_LG9_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S3,5
LABEL_LG9_ENDE
;*****************************************************
;
; UND - Gatter -> LG10
;*****************************************************
;

LABEL_LG10_1
      BTFSS S4,1
      GOTO LABEL_LG10_FALSE
LABEL_LG10_2
      BTFSC S3,6
      GOTO LABEL_LG10_FALSE

LABEL_LG10_TRUE
      BSF S4,7
      GOTO LABEL_LG10_ENDE
LABEL_LG10_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S4,7
LABEL_LG10_ENDE
;*****************************************************
;
; UND - Gatter -> LG11
;*****************************************************
;

LABEL_LG11_1
      BTFSS S4,2
      GOTO LABEL_LG11_FALSE
LABEL_LG11_2
      BTFSC S3,6
      GOTO LABEL_LG11_FALSE

LABEL_LG11_TRUE
      BSF S3,7
      GOTO LABEL_LG11_ENDE
LABEL_LG11_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S3,7
LABEL_LG11_ENDE
```

```
;*****************************************************
;
; UND - Gatter -> LG12
;*****************************************************
;

LABEL_LG12_1
      BTFSS S4,3
      GOTO LABEL_LG12_FALSE
LABEL_LG12_2
      BTFSC S3,6
      GOTO LABEL_LG12_FALSE

LABEL_LG12_TRUE
      BSF S4,0
      GOTO LABEL_LG12_ENDE
LABEL_LG12_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S4,0
LABEL_LG12_ENDE
;*****************************************************
;
; ODER - Gatter -> LG13
;*****************************************************
;

LABEL_LG13_1
      BTFSC S4,7
      GOTO LABEL_LG13_TRUE
LABEL_LG13_2
      BTFSC S5,0
      GOTO LABEL_LG13_TRUE

LABEL_LG13_FALSE
      BCF S4,4
      GOTO LABEL_LG13_ENDE
LABEL_LG13_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S4,4
LABEL_LG13_ENDE
;*****************************************************
;
; ODER - Gatter -> LG14
;*****************************************************
;

LABEL_LG14_1
      BTFSC S3,7
      GOTO LABEL_LG14_TRUE
LABEL_LG14_2
      BTFSC S3,4
      GOTO LABEL_LG14_TRUE
```

```
LABEL_LG14_FALSE
      BCF S4,5
      GOTO LABEL_LG14_ENDE
LABEL_LG14_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S4,5
LABEL_LG14_ENDE
;*****************************************************
;
; ODER - Gatter -> LG15
;*****************************************************
;

LABEL_LG15_1
      BTFSC S4,0
      GOTO LABEL_LG15_TRUE
LABEL_LG15_2
      BTFSC S3,5
      GOTO LABEL_LG15_TRUE

LABEL_LG15_FALSE
      BCF S4,6
      GOTO LABEL_LG15_ENDE
LABEL_LG15_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S4,6
LABEL_LG15_ENDE
;*****************************************************
;
; UND - Gatter -> LG16
;*****************************************************
;

LABEL_LG16_1
      BTFSS S3,0
      GOTO LABEL_LG16_FALSE
LABEL_LG16_2
      BTFSS S3,6
      GOTO LABEL_LG16_FALSE

LABEL_LG16_TRUE
      BSF S5,0
      GOTO LABEL_LG16_ENDE
LABEL_LG16_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S5,0
LABEL_LG16_ENDE
;*****************************************************
;
; UND - Gatter -> LG17
```

```
;*************************************************
;

LABEL_LG17_1
      BTFSC S5,6
      GOTO LABEL_LG17_FALSE
LABEL_LG17_2
      BTFSC S5,5
      GOTO LABEL_LG17_FALSE
LABEL_LG17_3
      BTFSS S5,2
      GOTO LABEL_LG17_FALSE

LABEL_LG17_TRUE
      BSF S5,4
      GOTO LABEL_LG17_ENDE
LABEL_LG17_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S5,4
LABEL_LG17_ENDE
;*************************************************
;
; UND - Gatter -> LG18
;*************************************************
;

LABEL_LG18_1
      BTFSS S5,4
      GOTO LABEL_LG18_FALSE
LABEL_LG18_2
      BTFSS S5,3
      GOTO LABEL_LG18_FALSE

LABEL_LG18_TRUE
      BSF S3,6
      GOTO LABEL_LG18_ENDE
LABEL_LG18_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S3,6
LABEL_LG18_ENDE
;*************************************************
;
; UND - Gatter -> LG19
;*************************************************
;

LABEL_LG19_1
      BTFSC S3,1
      GOTO LABEL_LG19_FALSE
LABEL_LG19_2
      BTFSC S3,2
```

```
        GOTO LABEL_LG19_FALSE

LABEL_LG19_TRUE
        BSF S3,0
        GOTO LABEL_LG19_ENDE
LABEL_LG19_FALSE
        BCF STATUS,RP0  ; Bank 0
        BCF S3,0
LABEL_LG19_ENDE
;*****************************************************
;
; UND - Gatter -> LG20
;*****************************************************
;

LABEL_LG20_1
        BTFSS S9,2
        GOTO LABEL_LG20_FALSE
LABEL_LG20_2
        BTFSC S6,3
        GOTO LABEL_LG20_FALSE
LABEL_LG20_3
        BTFSS S8,0
        GOTO LABEL_LG20_FALSE
LABEL_LG20_4
        BTFSS S3,6
        GOTO LABEL_LG20_FALSE

LABEL_LG20_TRUE
        BSF S7,4
        GOTO LABEL_LG20_ENDE
LABEL_LG20_FALSE
        BCF STATUS,RP0  ; Bank 0
        BCF S7,4
LABEL_LG20_ENDE
;*****************************************************
;
; Vergleich -> IF1
;*****************************************************
;

        MOVLW 1
        SUBWF S0,W      ; F - W -> W

LABEL_IF1_CHECK
        BCF STATUS,RP0  ; Bank 0
        BTFSS STATUS,ZERO       ; Test auf -> =
        GOTO LABEL_IF1_FALSE

LABEL_IF1_TRUE
```

```
      BSF S6,7
      GOTO LABEL_IF1_EXIT

LABEL_IF1_FALSE
      BCF S6,7

LABEL_IF1_EXIT
;*****************************************************
;
; UND - Gatter -> LG21
;*****************************************************
;

LABEL_LG21_1
      BTFSS S9,1
      GOTO LABEL_LG21_FALSE
LABEL_LG21_2
      BTFSC S6,7
      GOTO LABEL_LG21_FALSE
LABEL_LG21_3
      BTFSS S8,0
      GOTO LABEL_LG21_FALSE
LABEL_LG21_4
      BTFSS S3,6
      GOTO LABEL_LG21_FALSE

LABEL_LG21_TRUE
      BSF S5,7
      GOTO LABEL_LG21_ENDE
LABEL_LG21_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S5,7
LABEL_LG21_ENDE
;*****************************************************
;
; Multiplexer -> MX1
;*****************************************************
;

      CLRF SYS_TMP1
      MOVFW S1
      BTFSS STATUS,ZERO
      GOTO LABEL_MX1_CHECKCONTROL1

      MOVFW S0
      MOVWF 15
      GOTO LABEL_MX1_END

LABEL_MX1_CHECKCONTROL1
      INCF SYS_TMP1,F
```

```
      MOVFW S1
      SUBWF SYS_TMP1,W
      BTFSS STATUS,ZERO
      GOTO LABEL_MX1_CHECKCONTROL2

      MOVLW 14
      MOVWF 15
      GOTO LABEL_MX1_END

LABEL_MX1_CHECKCONTROL2

LABEL_MX1_END

;*****************************************************
; Verteiler -> BV4
;*****************************************************

      MOVLW 0
      BCF STATUS,RP0  ; Bank 0
      BTFSC S6,5      ; IN0
      IORLW 1
      BTFSC S6,6      ; IN1
      IORLW 2
      BTFSC S7,5      ; IN2
      IORLW 4
      MOVWF 14        ; OUT

;*****************************************************
; Vergleich -> IF2
;*****************************************************

      MOVLW 2
      SUBWF S0,W      ; F - W -> W

LABEL_IF2_CHECK
      BCF STATUS,RP0  ; Bank 0
      BTFSS STATUS,ZERO       ; Test auf -> =
      GOTO LABEL_IF2_FALSE

LABEL_IF2_TRUE
      BSF S6,0
      GOTO LABEL_IF2_EXIT

LABEL_IF2_FALSE
      BCF S6,0
```

```
LABEL_IF2_EXIT
;*****************************************************
;
; Vergleich -> IF3
;*****************************************************
;

      MOVLW 3
      SUBWF S0,W      ; F - W -> W

LABEL_IF3_CHECK
      BCF STATUS,RP0  ; Bank 0
      BTFSS STATUS,ZERO       ; Test auf -> =
      GOTO LABEL_IF3_FALSE

LABEL_IF3_TRUE
      BSF S6,1
      GOTO LABEL_IF3_EXIT

LABEL_IF3_FALSE
      BCF S6,1

LABEL_IF3_EXIT
;*****************************************************
;
; Vergleich -> IF4
;*****************************************************
;

      MOVLW 4
      SUBWF S0,W      ; F - W -> W

LABEL_IF4_CHECK
      BCF STATUS,RP0  ; Bank 0
      BTFSS STATUS,ZERO       ; Test auf -> =
      GOTO LABEL_IF4_FALSE

LABEL_IF4_TRUE
      BSF S6,3
      GOTO LABEL_IF4_EXIT

LABEL_IF4_FALSE
      BCF S6,3

LABEL_IF4_EXIT
;*****************************************************
;
; UND - Gatter -> LG22
;*****************************************************
;

LABEL_LG22_1
```

```
      BTFSS S5,7
      GOTO LABEL_LG22_FALSE
LABEL_LG22_2
      BTFSS S6,0
      GOTO LABEL_LG22_FALSE

LABEL_LG22_TRUE
      BSF S6,4
      GOTO LABEL_LG22_ENDE
LABEL_LG22_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S6,4
LABEL_LG22_ENDE
;*****************************************************
;
; UND - Gatter -> LG23
;*****************************************************
;

LABEL_LG23_1
      BTFSS S5,7
      GOTO LABEL_LG23_FALSE
LABEL_LG23_2
      BTFSS S6,1
      GOTO LABEL_LG23_FALSE

LABEL_LG23_TRUE
      BSF S6,2
      GOTO LABEL_LG23_ENDE
LABEL_LG23_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S6,2
LABEL_LG23_ENDE
;*****************************************************
;
; UND - Gatter -> LG24
;*****************************************************
;

LABEL_LG24_1
      BTFSS S5,7
      GOTO LABEL_LG24_FALSE
LABEL_LG24_2
      BTFSS S6,3
      GOTO LABEL_LG24_FALSE

LABEL_LG24_TRUE
      BSF S7,1
      GOTO LABEL_LG24_ENDE
LABEL_LG24_FALSE
```

```
      BCF STATUS,RP0  ; Bank 0
      BCF S7,1
LABEL_LG24_ENDE
;*****************************************************
;
; ODER - Gatter -> LG25
;*****************************************************
;

LABEL_LG25_1
      BTFSC S7,3
      GOTO LABEL_LG25_TRUE
LABEL_LG25_2
      BTFSC S8,4
      GOTO LABEL_LG25_TRUE

LABEL_LG25_FALSE
      BCF S6,5
      GOTO LABEL_LG25_ENDE
LABEL_LG25_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S6,5
LABEL_LG25_ENDE
;*****************************************************
;
; ODER - Gatter -> LG26
;*****************************************************
;

LABEL_LG26_1
      BTFSC S7,6
      GOTO LABEL_LG26_TRUE
LABEL_LG26_2
      BTFSC S7,3
      GOTO LABEL_LG26_TRUE

LABEL_LG26_FALSE
      BCF S6,6
      GOTO LABEL_LG26_ENDE
LABEL_LG26_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S6,6
LABEL_LG26_ENDE
;*****************************************************
;
; Vergleich -> IF5
;*****************************************************
;

      BSF S7,0
```

```
;*****************************************************
;
; Verteiler -> BV5
;*****************************************************
;

      MOVLW 0
      BTFSC S8,2     ; IN0
      IORLW 1
      MOVWF S1       ; OUT

;*****************************************************
;
; ODER - Gatter -> LG27
;*****************************************************
;

LABEL_LG27_1
      BTFSC S7,1
      GOTO LABEL_LG27_TRUE
LABEL_LG27_2
      BTFSC S7,2
      GOTO LABEL_LG27_TRUE

LABEL_LG27_FALSE
      BCF S8,7
      GOTO LABEL_LG27_ENDE
LABEL_LG27_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S8,7
LABEL_LG27_ENDE
;*****************************************************
;
; UND - Gatter -> LG28
;*****************************************************
;

LABEL_LG28_1
      BTFSS S7,4
      GOTO LABEL_LG28_FALSE
LABEL_LG28_2
      BTFSS S6,1
      GOTO LABEL_LG28_FALSE

LABEL_LG28_TRUE
      BSF S8,1
      GOTO LABEL_LG28_ENDE
LABEL_LG28_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S8,1
LABEL_LG28_ENDE
;*****************************************************
;
```

```
; UND - Gatter -> LG29
;*****************************************************
;

LABEL_LG29_1
      BTFSS S7,4
      GOTO LABEL_LG29_FALSE
LABEL_LG29_2
      BTFSS S6,0
      GOTO LABEL_LG29_FALSE

LABEL_LG29_TRUE
      BSF S7,2
      GOTO LABEL_LG29_ENDE
LABEL_LG29_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S7,2
LABEL_LG29_ENDE
;*****************************************************
;
; UND - Gatter -> LG30
;*****************************************************
;

LABEL_LG30_1
      BTFSS S7,4
      GOTO LABEL_LG30_FALSE
LABEL_LG30_2
      BTFSS S6,7
      GOTO LABEL_LG30_FALSE

LABEL_LG30_TRUE
      BSF S7,7
      GOTO LABEL_LG30_ENDE
LABEL_LG30_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S7,7
LABEL_LG30_ENDE
;*****************************************************
;
; ODER - Gatter -> LG31
;*****************************************************
;

LABEL_LG31_1
      BTFSC S7,7
      GOTO LABEL_LG31_TRUE
LABEL_LG31_2
      BTFSC S6,2
      GOTO LABEL_LG31_TRUE
```

```
LABEL_LG31_FALSE
      BCF S8,5
      GOTO LABEL_LG31_ENDE
LABEL_LG31_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S8,5
LABEL_LG31_ENDE
;*****************************************************
;
; Vergleich -> IF6
;*****************************************************
;

      BCF S8,0



;*****************************************************
;
; UND - Gatter -> LG32
;*****************************************************
;

LABEL_LG32_1
      BTFSS S9,7
      GOTO LABEL_LG32_FALSE
LABEL_LG32_2
      BTFSC S6,3
      GOTO LABEL_LG32_FALSE

LABEL_LG32_TRUE
      BSF S7,5
      GOTO LABEL_LG32_ENDE
LABEL_LG32_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S7,5
LABEL_LG32_ENDE
;*****************************************************
;
; UND - Gatter -> LG33
;*****************************************************
;

LABEL_LG33_1
      BTFSC S6,7
      GOTO LABEL_LG33_FALSE
LABEL_LG33_2
      BTFSS S8,3
      GOTO LABEL_LG33_FALSE

LABEL_LG33_TRUE
      BSF S8,4
      GOTO LABEL_LG33_ENDE
```

```
LABEL_LG33_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S8,4
LABEL_LG33_ENDE
;*****************************************************
;
; UND - Gatter -> LG34
;*****************************************************
;

LABEL_LG34_1
      BTFSS S8,6
      GOTO LABEL_LG34_FALSE
LABEL_LG34_2
      BTFSC S6,0
      GOTO LABEL_LG34_FALSE

LABEL_LG34_TRUE
      BSF S7,6
      GOTO LABEL_LG34_ENDE
LABEL_LG34_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S7,6
LABEL_LG34_ENDE
;*****************************************************
;
; UND - Gatter -> LG35
;*****************************************************
;

LABEL_LG35_1
      BTFSS S9,0
      GOTO LABEL_LG35_FALSE
LABEL_LG35_2
      BTFSC S6,1
      GOTO LABEL_LG35_FALSE

LABEL_LG35_TRUE
      BSF S7,3
      GOTO LABEL_LG35_ENDE
LABEL_LG35_FALSE
      BCF STATUS,RP0  ; Bank 0
      BCF S7,3
LABEL_LG35_ENDE
;*****************************************************
;
; One Shot -> OS1
;*****************************************************
;


      BTFSS S9,4
```

```
      GOTO LABEL_OS1_1
      BTFSC OS1_FD,0
      GOTO LABEL_OS1_1
      BSF OS1_FD,0
      BSF S9,1
      GOTO LABEL_OS1_2
LABEL_OS1_1
      BCF STATUS,RP0  ; Bank 0
      BCF S9,1
      BTFSC S9,4
      GOTO LABEL_OS1_2
      BCF OS1_FD,0
LABEL_OS1_2
;*****************************************************
; One Shot -> OS2
;*****************************************************


      BCF STATUS,RP0  ; Bank 0
      BTFSS S9,3
      GOTO LABEL_OS2_1
      BTFSC OS2_FD,0
      GOTO LABEL_OS2_1
      BSF OS2_FD,0
      BSF S9,2
      GOTO LABEL_OS2_2
LABEL_OS2_1
      BCF STATUS,RP0  ; Bank 0
      BCF S9,2
      BTFSC S9,3
      GOTO LABEL_OS2_2
      BCF OS2_FD,0
LABEL_OS2_2
;*****************************************************
; UND - Gatter -> LG36
;*****************************************************

LABEL_LG36_1
      BCF STATUS,RP0  ; Bank 0
      BTFSS S3,6
      GOTO LABEL_LG36_FALSE
LABEL_LG36_2
      BTFSS S7,0
      GOTO LABEL_LG36_FALSE

LABEL_LG36_TRUE
```

```
        BSF S8,2
        GOTO LABEL_LG36_ENDE
LABEL_LG36_FALSE
        BCF STATUS,RP0  ; Bank 0
        BCF S8,2
LABEL_LG36_ENDE
;*****************************************************
;
; RS-FLIP-FLOP -> RS1
;*****************************************************
;

        BTFSC S9,6
        GOTO LABEL_RS1_RESET
        BTFSS S6,4
        GOTO LABEL_RS1_ENDE
        BSF S8,3        ; Ausgang setzen
        GOTO LABEL_RS1_ENDE
LABEL_RS1_RESET
        BCF STATUS,RP0  ; Bank 0
        BCF S8,3        ; Ausgang zurücksetzen
LABEL_RS1_ENDE

;*****************************************************
;
; Vergleich -> IF7
;*****************************************************
;

        BCF STATUS,RP0  ; Bank 0
        MOVFW S0
        SUBLW 14        ; K - W -> W

LABEL_IF7_CHECK
        BCF STATUS,RP0  ; Bank 0
        BTFSS STATUS,ZERO       ; Test auf -> =
        GOTO LABEL_IF7_FALSE

LABEL_IF7_TRUE
        BSF S9,5
        GOTO LABEL_IF7_EXIT

LABEL_IF7_FALSE
        BCF S9,5

LABEL_IF7_EXIT
;*****************************************************
;
; One Shot -> OS3
;*****************************************************
;
```

```
      BTFSS S10,0
      GOTO LABEL_OS3_1
      BTFSC OS3_FD,0
      GOTO LABEL_OS3_1
      BSF OS3_FD,0
      BSF S9,6
      GOTO LABEL_OS3_2
LABEL_OS3_1
      BCF STATUS,RP0  ; Bank 0
      BCF S9,6
      BTFSC S10,0
      GOTO LABEL_OS3_2
      BCF OS3_FD,0
LABEL_OS3_2
;*****************************************************
;
; RS-FLIP-FLOP -> RS2
;*****************************************************
;

      BCF STATUS,RP0  ; Bank 0
      BTFSC S9,6
      GOTO LABEL_RS2_RESET
      BTFSS S8,1
      GOTO LABEL_RS2_ENDE
      BSF S9,7        ; Ausgang setzen
      GOTO LABEL_RS2_ENDE
LABEL_RS2_RESET
      BCF STATUS,RP0  ; Bank 0
      BCF S9,7        ; Ausgang zurücksetzen
LABEL_RS2_ENDE

;*****************************************************
;
; RS-FLIP-FLOP -> RS3
;*****************************************************
;

      BCF STATUS,RP0  ; Bank 0
      BTFSC S9,6
      GOTO LABEL_RS3_RESET
      BTFSS S8,5
      GOTO LABEL_RS3_ENDE
      BSF S8,6        ; Ausgang setzen
      GOTO LABEL_RS3_ENDE
LABEL_RS3_RESET
      BCF STATUS,RP0  ; Bank 0
      BCF S8,6        ; Ausgang zurücksetzen
LABEL_RS3_ENDE
```

```
;*****************************************************
;
; RS-FLIP-FLOP -> RS4
;*****************************************************
;

      BCF STATUS,RP0  ; Bank 0
      BTFSC S9,6
      GOTO LABEL_RS4_RESET
      BTFSS S8,7
      GOTO LABEL_RS4_ENDE
      BSF S9,0        ; Ausgang setzen
      GOTO LABEL_RS4_ENDE
LABEL_RS4_RESET
      BCF STATUS,RP0  ; Bank 0
      BCF S9,0        ; Ausgang zurücksetzen
LABEL_RS4_ENDE

;*****************************************************
;
; ODER - Gatter -> LG37
;*****************************************************
;

LABEL_LG37_1
      BCF STATUS,RP0  ; Bank 0
      BTFSC S9,5
      GOTO LABEL_LG37_TRUE
LABEL_LG37_2
      BTFSC S10,1
      GOTO LABEL_LG37_TRUE
LABEL_LG37_3
      BTFSS S3,6
      GOTO LABEL_LG37_TRUE

LABEL_LG37_FALSE
      BCF S10,0
      GOTO LABEL_LG37_ENDE
LABEL_LG37_TRUE
      BCF STATUS,RP0  ; Bank 0
      BSF S10,0
LABEL_LG37_ENDE
;*****************************************************
;
; One Shot -> OS4
;*****************************************************
;


      BTFSS S10,2
      GOTO LABEL_OS4_1
```

```
      BTFSC OS4_FD,0
      GOTO LABEL_OS4_1
      BSF OS4_FD,0
      BSF S10,1
      GOTO LABEL_OS4_2
LABEL_OS4_1
      BCF STATUS,RP0  ; Bank 0
      BCF S10,1
      BTFSC S10,2
      GOTO LABEL_OS4_2
      BCF OS4_FD,0
LABEL_OS4_2
;*****************************************
;

      GOTO MAIN


      END
```