```
ISR (TIMER0_COMPA_vect)
{
        static uint8_t iButtonChanged = 0, iCounter0 = 0, iCounter1 = 0, iCounter2 = 0;

        iMilliseconds++;        //counts the time in milliseconds
        iCountToNextSignal++;   //counts the time till the next signal is activated and the time a signal is activated
                                (default: the LED is lit for 1000 ms)

        //Bit = 1, if Buttonstatus changed compared to the last known debounced status, 0 if the button status hasn´t
        //changed
        iButtonChanged = (~PINB & BUTTON_MASK) ^ iLastKnownButtonStatus;


        //3-Bit Counter von 7 bis 0, kommt er wieder bei 7 an, wird der button status gewechselt, also der
        //tastendruck/loslassen akzeptiert
        iCounter0 = ~(iCounter0 & iButtonChanged);
        iCounter1 = iCounter0 ^ (iCounter1 & iButtonChanged);
        iCounter2 = (((iCounter0 & iCounter1) | iCounter2) & ~(iCounter0 & iCounter1 & iCounter2)) | ~iButtonChanged;

        //wenn 0, status wird nicht geändert, wenn 1 status wird geändert!
        iButtonChanged &= (iCounter0 & iCounter1 & iCounter2);
        iLastKnownButtonStatus ^= iButtonChanged;

        if(iButtonPushed |= iLastKnownButtonStatus & iButtonChanged)
        {
                if (iButtonPushed & (1 << 2))
                {
                        i_Button1_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
                if (iButtonPushed & (1 << 3))
                {
                        i_Button2_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
                if (iButtonPushed & (1 << 4))
                {
                        i_Button3_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
        }

        if(iButtonReleased |= ~iLastKnownButtonStatus & iButtonChanged)
        {
                if (iButtonReleased & (1 << 2))
                {
                        i_Button1_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
                if (iButtonReleased & (1 << 3))
                {
                        i_Button2_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
                if (iButtonReleased & (1 << 4))
                {
                        i_Button3_Changed_Time = iMilliseconds - DEBOUNCE_TIME;
                }
        }

        if (iCountToNextSignal >= iNextSignal)
        {
                *iUsedPort |= (1 << iPIN);              //turn LED on
                iSignal_On_Off_Time = iMilliseconds;    //save current time
                iFlags |= ((1 << 3) | (1 << 1));        //Send Time + Get iNextSignal
                iCountToNextSignal = 0;                 //set signal activation time counter back to zero
        }
}
```