

Errata Sheet for PIC14C000 Revision A

The PIC14C000 parts you have received conform functionally to the PIC14C000 data sheet (DS40122B), except for the anomalies described below.

USING AN1 AND AN5 AS ANALOG INPUTS

1. Analog inputs AN1 and AN5 can not be used if their level-shift network is disabled. According to Section 9.2 of the PIC14C000 data sheet, (DS40122B), the level-shift network feature can be turned off by setting the LSOFF bit (SLPCON<4>). However, doing so will cause the AN1 and AN5 inputs to go to V_{DD}, rendering them unusable as analog input channels. Therefore, the LSOFF bit must remain cleared. The other functions associated with these pins, such as the current zeroing and filtering switches, operate as specified. The AN1 and AN5 pins can still be used for ADC operations, but a small firmware routine is required to ensure accurate results. This routine can be implemented by following the steps below:

- Ensure the LSOFF bit (SLPCON<4>) is cleared.
- Ensure a good zero-level on AN1 and/or AN5 by setting the ADZERO bit (ADCON0<0>).
- Perform an A/D conversion as normal and keep the count from ADCAPH and ADCAPL in user-defined RAM. This is the representative digital count for the exact level-shift value.
- Enable the signal of interest onto AN1 and/or AN5.
- Perform another A/D conversion and keep the count in ADCAPH and ADCAPL. This is the representative digital count for the sum of the signal of interest and the exact level-shift value
- Subtract the level-shift count from the representative count for the sum.
- This result will be the representative count for the signal of interest alone.

USING THE I²C MODULE IN SMBus MODE

2. The I²C Module in the PIC14C000 can be used with either PORTC<7:6> or PORTD<1:0> to provide the clock and data signal connections. According to Figure 7-16 of the PIC14C000 data sheet (DS40122B), the MISC<bit 3>, SMBus bit, allows user to select the input thresholds of PORTC<7:6> and PORTD<1:0> to either be SMBus-compatible or Schmitt Trigger-compatible.

Although the data sheet says that PORTC<7:6> operates the same way as PORTD<1:0>, in the actual implementation PORTC<7:6> always uses the Schmitt Trigger input thresholds when the I²C module reads through PORTC<7:6>, even if the SMBus mode is selected.

If PORTC<7:6> are read as port inputs, while the SMBus mode is selected, the SMBus voltage levels are used.

Interfacing to an SMBus port can still be implemented using either of the following methods:

- Use the I²C module together with PORTD<1:0>, and set the MISC<3> bit high.
- Use PORTC<7:6> or PORTD<1:0> with the MISC<3> bit set high, and perform the I²C function in firmware.

PIC14C000

Clarifications/Corrections to the Data Sheet:

In the PIC14C000 Preliminary Data Sheet (document DS40122B), the following clarifications and corrections should be noted:

- Parameter number 30, symbol T_{mCL} , characteristics $\overline{MCLR}$ Pulse Width (low), is specified as 100nS min. The correct value is 2uS min.
- Parameter number 34, symbol T_{IOZ} , characteristics I/O High Impedance from $\overline{MCLR}$ Low, is specified as 100nS max. The correct value is 2.1uS max.

NOTES:



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