The CONVERT routine used previously does not always take the same amount of time to convert a number to packed BCD. The bigger the number the more time it takes. A simpler method would be to represent each digit in BCD format. Then there is no need to convert a binary value into BCD format.

This program uses a timed delay loop. Each update of the time takes an average of 30 cycles. So the remaining time is 1–0.03=0.97 secs. Each loop in the delay takes 4ms so 243x4ms=972ms. This will gain 2ms in every second giving an accuracy of 99.8%