

Tracking Counter Rollover via software

Application Note #182, 8/14/2002

The following code will track the rollover or rollunder of a 16bit +-32K counter. It is assumed this code is run at least once per < 5000 (approx) counts of the counter.

```
long ctr_mostSignificantWord = 0L;
long ctr = 0L;
Boolean aboutToRollover = FALSE;
Boolean aboutToRoll_under = FALSE;

// -----
// Look For Rollover

if (ctr > 25000 And ctr <= 32767) {
    aboutToRollover = TRUE;
}
else if (ctr < -25000 And ctr >= -32768 And aboutToRollover) {
    aboutToRollover = FALSE;
    ctr_mostSignificantWord += 1;
}
else {
    aboutToRollover = FALSE;
}

// -----
// Look For Rollunder

if (ctr < -25000 And ctr >= -32768) {
    aboutToRoll_under = TRUE;
}
else if (ctr > 25000 And ctr <= 32767 And aboutToRoll_under) {
    aboutToRoll_under = FALSE;
    ctr_mostSignificantWord -= 1;
}
else {
    aboutToRoll_under = FALSE;
}
```