

When the Torbal scale manufacturers added a feature to enhance the accuracy of their DRX 500 series of prescription scales they did not envision how much the feature could both enhance the accuracy and speed up their scale network systems. The feature is called Advanced Pill counting Accuracy (APA). This new feature eliminates the need for manually counting pills after the first average piece weight (APW) is established for that pill. The concept is simple but in order to understand it one has to have a basic knowledge of what is involved in counting pills by their weight.

In order to count pills by weight we must first establish the average piece weight of the pills being counted, by weighing a sample number of pills. Once we have this average piece weight (APW) we can continue to pour pills until we have the desired quantity. An example, if our sample size is 30 pills and the scale weighs them at 3.030 grams, then each pill has an average weight of 0.101 grams. Once this is done the scale goes into the counting mode, starting with a count of 30 and continuing on as required. This scale can count as fast as the user can pour. If the user had continued on to a count of 60, we would expect that the scale measured a weight of approximately 6.060 g and divided that weight by the average weight of 0.101 g to arrive at the count of 60.

The process of establishing a first time average piece weight required the user to count out the sample quantity of pills manually. This has to be performed only once, however, we recommend that the data base of the stored average piece weights be updated periodically to be sure that a current value of average piece weight is being used. This updating is to correct for any changes in piece weight over time. Our mythical sample pills may have a piece weight of 0.101 g, but a dosage weight of only 0.050 g. The dosage weight is tightly controlled by the FDA, and the most common way to do this is to control the total pill weight. However, the weight of the additives can vary slightly from production lot to production lot, but only by very small amounts.

If a pill has previously had its APW established and saved in the system database, we can use the APA feature to speed up the process of establishing a new current APW. The feature uses the existing APW to count out a small sample of anywhere from 10 to 15 pills. The user simply watches the display and pauses in the desired range and allows the stability indicator to appear. At that time the scale replaces the old APW with the new one. The user then continues the pill counting to a second level, anywhere between 20 and 30 pills, and pauses and waits for the stability indicator to appear, and, once again the APW is updated based upon a larger sample. The user can then resume counting to finish the script, say at a count of 60, all done with the revised APW.