

A&D's HT-120

Compact Precision Scales

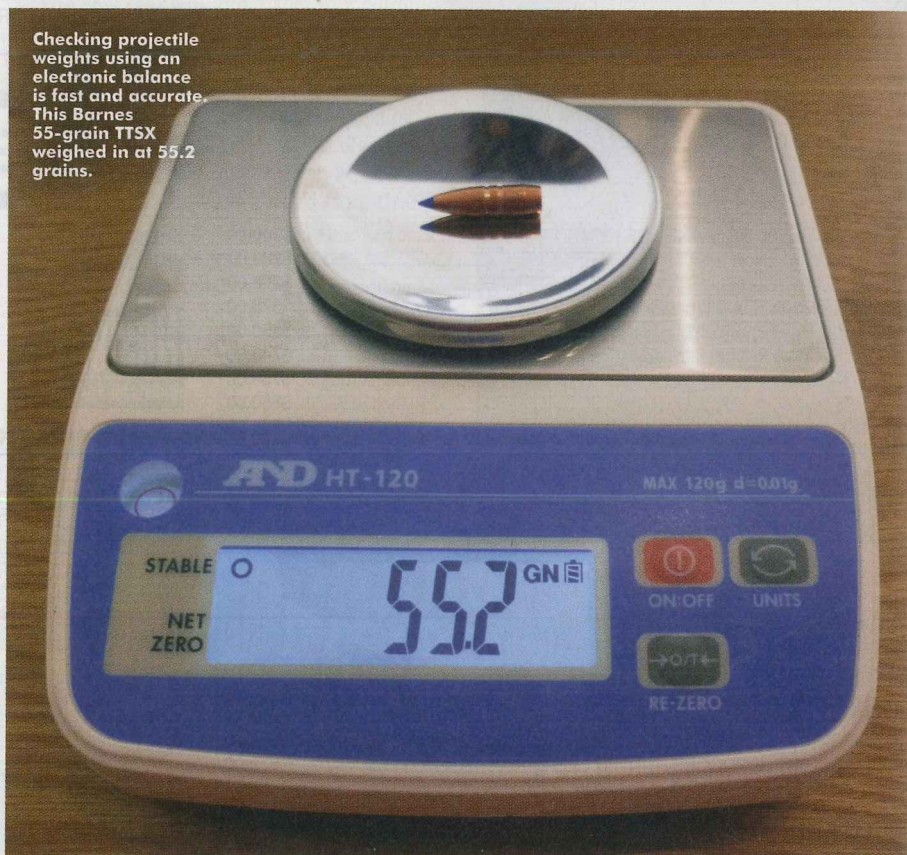
by Con Kapralos

For the dedicated reloader of metallic and shotgun ammunition, a reliable, accurate and precise set of scales is a must. Checking powder charge weights, projectile weights, case weights and many more applications, electronic scales have virtually replaced the older style balances. No more fiddling around with sliding weights, electronic balances make it simple to quickly and accurately weigh any item you may desire.

A&D is one of the market leaders in the design and manufacture of weighing solutions worldwide. Whether scientific, commercial, retail or industrial, A&D scales and balances are built to very high standards and comply with ISO 9000 certification. The company itself started in Adelaide in 1946 as Mercury Scales, developing into A&D Mercury as it joined A&D's worldwide organisation and now A&D Australasia, with the scales, balances, metal detectors and weighing system arm simply called A&D Weighing.

A&D Australasia has realised the need for a compact weighing system for the sporting shooter and has created the HT-120 Compact Precision Scales. These beautifully crafted scales are compact in size, but big on features and performance. I regularly

Checking projectile weights using an electronic balance is fast and accurate. This Barnes 55-grain TTSX weighed in at 55.2 grains.



The carton containing the HT-120 Compact Precision Scales and accessories.

use high-end analytical balances in my employment as a research technician and have to say that the HT-120 scales are built with many features found in very expensive five-decimal place (eg, 0.00001g) analytical balances.

The HT-120 comes supplied with a Perspex storage case and a comprehensive user's manual. The scales themselves measure 136x150x57.5mm, while the carry-case is 106x175x70mm. The carry-case protects the scales while in transit, serves as a storage case and also can be used as a windbreak, as any wind drift on the range line for instance will cause variations in the reading on the display.

The HT-120 operates on four AA alkaline batteries and A&D claims an unparalleled battery life of 500 hours. The scales have an auto-power off function, which is handy in

prolonging battery life, and its inbuilt battery indicator tells you the remaining battery level. This feature makes the HT-120 very versatile for the shooter who wishes to use a set of scales in the field or at the range. An optional AC adapter is also available for use with 240v power.

The scales themselves are finished to a very high standard. The top is finished with a stainless steel protector plate, which protects against any scratches and marks, and the weigh pan is finished from stainless steel, making both the protector plate and weigh pan very easy to clean. The scales have a large LCD display with 15mm character height and a white backlight.

Another feature is a spirit level and adjustable feet for making sure balance is perfectly level. This is critical in ensuring your balance operates correctly. High-end

A&D's HT-120

laboratory scales also use spirit level technology, which is so critical when you are weighing amounts in the milligram level and lower.

Operation and weighing specifications of the HT-120 are certainly impressive. Ten weighing units are offered (gram, carat, momme, ounce, troy ounce, pennyweight, grain, tola, tael and Newton), making the HT-120 adaptable for many uses, such is the range of weighing units. For the reloader, the 'grain' will be our primary unit of choice. A 'UNITS' button on the front display makes it easy to change weighing units, while turning the unit on or off is as simple as pressing the designated button on the front display.

Another feature on the HT-120 is its tare function. By simply pressing the 'TARE' button, any weight on the weighing pan is automatically offset. This would be welcomed if you are weighing powder charges using a powder pan and only wish to know that weight of the powder, not the pan. This feature is found on all analytical and commercial scales.

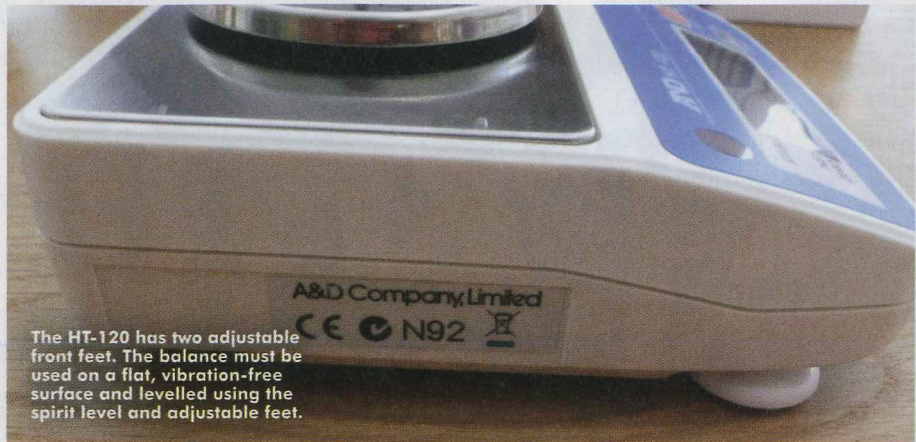
The HT-120 has a weighing capacity of



The LED display was clear and easy to read. The operation buttons are also well designed and positive in operation.



The carry-case can be used as a windbreak out in the field. Wind drifts will affect the stability of the measurement.



The HT-120 has two adjustable front feet. The balance must be used on a flat, vibration-free surface and levelled using the spirit level and adjustable feet.

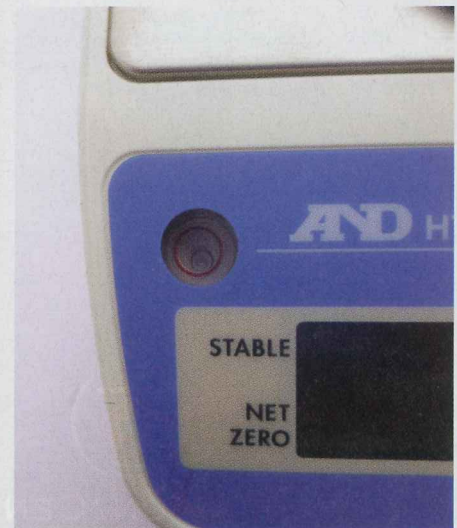
120g (and equivalent in the other weighing units) and has high resolution of 0.01g with excellent repeatability of 0.01g (standard deviation). For a scale of this size, this is excellent performance indeed.

A 20g check weight is available as an optional extra, and the manufacturer recommends that before each weighing session, the scales be 'zeroed' (or 'tared' to read 0.00g) and then the check weight placed on the weighing pan. The read-out should be 20.00g, with an acceptable deviation of two standard deviations or 0.02g. Always be cautious when handling the check weight - fingers are oily and will affect the check weight. So use a set of plastic tweezers to handle the check weight and when finished, store the check weight in a small zip-lock plastic bag or container.

The HT-120 is a precision instrument and it is imperative that it is used on a bench

or table that is vibration free, as any such interferences will give errant readings and can also put the scales out of calibration. In the event that the check weight isn't reading what it should, calibration check weights are available for purchase from the manufacturer for around \$15 and these are an excellent investment. Calibration is simple to carry out following the instructions set out in the user's manual. I would recommend that owners of the HT-120 purchase a set of two or three calibration weights and calibrate the unit every six months for optimal performance.

The HT-120 Compact Precision scale is very well designed and will be well received by reloaders who need a reliable, accurate and easy-to-use compact set of electronic scales. It retails for around \$180. For more information, contact A&D Australasia on 08 8301 8100 or visit www.andweighing.com.au ●



When the scales are set up on a flat, level and vibration-free surface, the small bubble should be within the red ring of the spirit level. If it isn't, adjusting the two front legs on the scales will bring the bubble back into the red ring, which means the scales are now perfectly level and ready to use.