

FIELD TEST SEEING STARS

Phil Hooper delivers his long-term verdict on the Weihrauch HW45 Black Star, revisiting its history, vital statistics and performance

Amazingly, the standard Weihrauch HW45 has been around for 37 years, but still remains the benchmark by which other spring pistols are judged. The Black Star version that I'm talking about here emerged rather later.

But we may never have been blessed with this impressive pistol from the Weihrauch stable in the first place. Its origins are a tribute to the foresight of the late Dr Robert Beeman, an American airgun hero. As the major importer of European airguns into the United States from the 1970s, Beeman played a very significant role in raising the profile of adult airguns in the United States.

With Beeman's company having imported Weihrauch air rifles for some time, he was able to persuade Weihrauch to produce a more powerful model than the HW35 to his own specification. Hence the Beeman R1, or as we know it more commonly the HW80 full-power air rifle was born in 1980 with a highly successful subsequent sales record for both companies.

Later, Dr Beeman put a proposal and design concept to Weihrauch for the development of a 'magnum' spring air pistol visually similar to the 1911 Colt 45 semi-automatic.

Beeman even produced a life-sized model in plaster of Paris to support his request. After a couple of hiccups, a suitable prototype was produced and the Beeman P1 was ultimately put into production for export to the States. Simultaneously, in 1985 it was launched into the European market as the HW45. As well as the design aesthetics, Beeman also influenced mechanical aspects including the use of the dummy hammer as the barrel retention catch.

Although it had a very different external appearance, the HW45 utilised the same mechanical principles that were pioneered on Webley air pistols in the 1920s, this being a barrel-over-cylinder arrangement with the piston travelling rearwards on firing.

Even the cylinder swept volume

was almost the same as the Webley Mk1 and Senior pistols (and later Premier and Tempest models), but the design was further refined to

provide a low cocking effort and two power levels, with the upper setting providing almost 40% greater muzzle energy than the Webley pistols delivered.

It will have been careful optimisation of key parameters such as cylinder bore and stroke, mainspring strength, piston mass and transfer port dimensions, coupled with a low-friction piston seal that facilitated this level of superior efficiency.

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KEY SPECS

MAKER: Weihrauch Sport (weihrauch.co.uk)
MODEL: HW45 Black Star
RRP: £360
TYPE: Spring-powered, single-shot
ACTION: Over-lever, two-power settings
LENGTH: 11in
BARREL LENGTH: 6.7in
WEIGHT: 2.6lb
TRIGGER: Two-stage adjustable
MUZZLE ENERGY: 5.75 ft-lb
CALIBRE: .177 (on test), .20 and .22



Those tin can 'exit wounds' hint at the potency of the HW45 Black Star



This combination promises lots of fun



The grips are ambidextrous, and while it would no doubt add to the cost, Phil would have liked to have seen handed grips

Fast forward to 2007 and the HW45 Silver Star was announced, with its semi-anatomical grip providing better handling and a much less 'top-heavy' appearance. Differing cosmetically, the Black Star and Bronze Star followed some years later.

THE EXTERNAL SURFACES OF THE STEEL PARTS ARE NICELY POLISHED AND BLUED

In this review I take a close look at the HW Black Star and have to admit to being a fan of this gun. The pistol described is mine, and this may be viewed as a 'long-term test' as I have owned it since 2018 and enjoyed firing several thousand pellets through it.

CONSTRUCTION

The HW45 barrel, cylinder and cocking linkage are made of steel. The barrel housing and the entire frame are precision die-castings in aluminium alloy. The external surfaces of the steel parts are nicely polished and blued, while the alloy parts are black anodised with the exception of the trigger, barrel release catch and safety lever, all of which have a satin chrome appearance.

The grips are made from laminated wood and suitable for average-sized hands, whether the shooter is left- or right-handed. Although the commercial reasons for this are understandable, I would rather that they had instead

provided a better-defined anatomical format with a pronounced thumb shelf for the right-handed

user, along with a southpaw version available as an alternative.

Nevertheless, the grips are a great improvement over those on the standard HW45 and are aesthetically pleasing to boot. The sights are classic post front and square notch rear, but enhanced by having red and yellow fibre optic inserts, which I find helpful.

The rear sight is click-adjustable for both elevation and windage. The forward portion of the top of the barrel housing has dovetail grooves that would enable a scope or red dot sight to be fitted. In that event, a recoil arrestor is likely to be needed and, because of the direction of recoil, this would be installed forward of the mount.



The fibre optic inserts on the precision open sights work well



This pistol offers two power settings, and here the action has been cocked to the low-power setting...



...while here it's been cocked to the high-power setting, with Phil getting up to 5.75 ft-lb from the test gun

The trigger blade is reasonably wide and grooved. It also houses two small Allen screws enabling adjustment of the first-stage pull length and the crispness of the second-stage release respectively. A hole through the bottom of the grip and up through the grip frame enables the long limb of the supplied Allen key to engage with the trigger weight adjustment screw. I reduced this second-stage release weight to a little under 2lb. It is very consistent and for a pistol that makes no pretence at being a formal target model, the trigger is excellent.

The HW45 has a dry-fire capability so that releasing the barrel catch and closing the barrel again sets the trigger. This is useful for practice, but also helpful when adjusting the trigger as it can be an iterative process to achieve the exact characteristics desired. The safety catch is manual and can be operated from either side of the grip frame.

It is a larger pistol than the Colt firearm that it imitates, but for the performance capability offered, not that big. When compared with 'powerhouse' pistols of the past such as the BSA Scorpion of the 1970s and '80s, which was 16in long and weighed 3.4lb, the HW45 is relatively compact and not excessively heavy as

a consequence of the lightweight alloy used in its construction.

The left side of the action frame identifies the pistol model in white ink, and the calibre is printed on the muzzle end of the barrel shroud. The right-hand side of the frame carries the serial number, close to the muzzle end. Further back on the frame is the warning to read the owner's manual before use, Weihrauch's address and the 'F' within a pentagon to signify that the muzzle energy (ME) is less than 7.5j.

It's interesting to ponder on this latter information and recognise that in Germany, unless possessing a permit equivalent to our Firearm Certificate, this is also the maximum ME permissible in any new air rifle. So there are German enthusiasts using full-sized adult air rifles that produce no greater ME than this pistol. And the HW45 does offer performance right up to the 7.5j level, combined with an excellent accuracy potential. I use the term 'potential' advisedly, as mastering the HW45 does take some practice, but it is well worth the effort.

OPERATION & PERFORMANCE

As mentioned, the HW45 offers two power levels. After releasing the barrel catch, the barrel and shroud assembly may be swung open to the first or on to the second detent position. Effort to reach the low power condition is modest, and progressing to the full power position is also physically undemanding due to simple, clever geometry.

My pistol reviewed here is .177 calibre and when new produced good muzzle energies, with exceptional consistency at each of the two power settings using H&N FTT pellets with a 4.50mm head diameter.

Following considerable use the ME has remained similar, but I am now experimenting using JSB Exact pellets (4.50mm head) which seem a better, less tight fit and therefore easier to seat in the breech. I intend to do some extended accuracy testing to see whether the accuracy achieved with FTT pellets is equalled with the Exacts.

In terms of accuracy with H&N FTT pellets, my evaluation is based solely on using the HW45 with open sights as this is my preference, although limiting my accuracy capability.



The trigger is fully adjustable with the Allen key that's provided in the box

From a seated position, with the pistol unrested, on a good day I can hit a half-sized bean can every time at 30 yards and would expect to be able to put most of my shots into a 2.5in group. From what I understand from others, then in more skilful hands and with a scope fitted, the HW45 appears capable of better than 1.5in groups at this distance while offering fairly impressive accuracy all the way out to 40 yards.

Interestingly, the muzzle end of the barrel stops 1.7in short of the end of the barrel shroud. I suspect that this has been optimised so that even in the lower power mode, the pellet has left the barrel before the piston head reaches the end of the cylinder so that the effect of recoil on accuracy is minimised.

Alternatively, it may simply be that the barrel length is sufficient in all three calibres to extract maximum performance and accuracy. Either way, it appears to be an efficient arrangement. The fact that at short to medium range the pistol shoots lower on the high-power setting than on the low-power setting is initially a little disconcerting, but is simply a consequence of the recoil characteristics. The piston itself travels backwards so that recoil is

forwards and more pronounced on the high power setting.

MAINTENANCE

During the five years I have owned my HW45, repair and maintenance requirements have been minimal. One breech seal needed replacement (a spare was in the box) and the rear sight fibre optic insert broke, but was easily fixed. I have oiled the pivot points and added a smear of moly grease to the cocking link slots in the cylinder, but that's it. Other than that, the 45 has been totally reliable, as expected. It did diesel when new, and intermittently over the first 1,000 shots or so, but settled down. There is now the very occasional wisp of smoke, suggesting light dieseling, but with no effect on accuracy.

SUMMARY

To sum up, it is powerful and accurate and has an 'alive' feeling in contrast to recoilless alternatives that can feel somewhat devoid of 'soul'. However, if you are seeking recoilless accuracy, but find the appearance and heft of the HW45 appealing, and don't mind a lower power level, you could always go for the HW75 single-stroke pneumatic. Personally, I'll stick with my rather challenging but characterful HW45 Black Star! ●



A manual safety catch and an excellent trigger are standout features on the HW45

THE AIRGUN SHOOTER VERDICT

"The Weihrauch HW45 is a high-quality product that performs well out of the box once its characteristics have been mastered, and is both reliable and durable"