



ON TEST: CHRONO TEST

GOING WITH THE PRO

RRP
£179.00

Phill Price tests the simply remarkable Skan Pro 1 Series 3 Diamond chrono

A key part of my work involves assessing the performance of airguns and pellets and the primary tool for this is a chronograph. Described simply, they are machines that have two light sensors and when a pellet flies past the first one it starts a clock and as it passes the second one, that stops the clock. The distance between the two sensors is known and a calculation will tell you how fast the pellet was going. That's a massively simplified description, but it covers the basics.

The problem I've always faced with the chronographs I've owned is

light. Most are designed to be used outdoors and of course the light varies from a bright sunny day to dark and cloudy and I've often found

know many other people have faced the same problem.

Which is why I'm happy to be testing the Skan Pro 1 Series 3

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chronos to be very frustrating, working perfectly one minute and playing up the next. I've experimented with supplying light to the sensors but this has always failed and I

Diamond chrono. It has a reputation beyond reproach, it's used by many airgun manufacturers and Police forces because it's totally reliable, and although it has many clever features, above all else it has been shown to be accurate day in and day out.

WHY A CHRONO?
First and foremost, it will help you remain on the right side of the law. Second, it's the only reliable way to monitor your airgun's performance. Third - just get a good one, OK?

Part of this success is because the sensors are built into a 'shoot tube' and have their own infra-red light source so can be used indoors 24/7 whatever the weather, and that for me is a huge advantage. Light sensors are delicate things and can be affected in many ways, not all of which are positive. Obviously, if your chrono gave you an incorrect reading, you could break the law as it relates to the maximum power you're allowed to have in an unlicensed air rifle.

Unlike some chronos, the Skan is designed to be used on a test bench for measuring muzzle energy only. Please don't be tempted to place it down range to measure residual energy; that's not what it was designed for.

This is a precision instrument designed to work in controlled conditions, not out in the elements. On that same subject, it's wise to keep it clean and dry as moisture collecting inside the casing could cause harm, and if your workshop is often full of dust, either



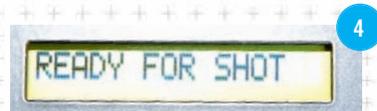
1
One the unit is powered up, the LCD on the front reminds you that the muzzle of your rifle need to be 10 inches away from the opening of the shoot tube. If you press any key it runs a self-check and if the number that reads out is between 447 and 450.99 you can be sure that it is correctly calibrated.



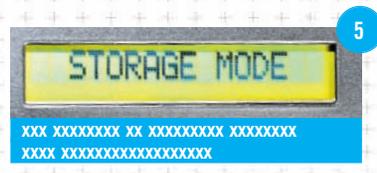
2
Then you press 'YES/ENTER' and the screen reads 'continuous' mode or by pressing the 'up' arrow you can enter the storage options



3
Pressing 'YES/ENTER' again displays the weight of the pellet you want the machine to base its energy calculations on. Press the up or down arrow to select the weight you need.



4
Press 'YES/ENTER' again and the screen will read 'READY FOR SHOT'.



5
xxx xxxxxxxx xx xxxxxxxx xxxxxxxx
xxxx xxxxxxxxxxxxxxxxxxxx



6
As you carefully shoot through the centre of the shoot tube, the screen will read out two numbers. The first is the velocity in feet per second and the second is the rifle's output energy in foot pounds.



7
As you fire another shot the new data automatically displayed. If you don't shoot correctly through both sensors the screen will read 'MISS MISS MISS'.



The Skan unit is neat, clean and simple to use.

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cover up the unit, or store it somewhere that's warm and dry.

A unique feature of the Skan is that it has a self-test mechanism in the software that calibrates the machine at the touch of a button, and as if that wasn't clever enough, this test effectively runs a diagnostic on every single component in the machine at the same time, so you can be absolutely certain that the readings you're getting are correct. And they have proven themselves to be durable, too, with some early models

BACKSTOP!

Always make sure you've constructed a proper backstop behind your chrono, and be certain to check it before every use. Repeated shots from a sub-12 ft.lbs. airgun can wear away almost any backstop material so be aware!

The ideal way to use the Skan is to build a safe and reliable backstop behind your bench and then make up a set of V blocks to hold the muzzle at the precise centre of the shoot tube, which is not only safer, but makes testing quick and easy. Some people have wondered why the chrono has a rubber bezel around the opening. The reason is that the rubber is a special material that will allow a pellet to bury into it, thereby preventing a ricochet coming back at you.

"THE LIST OF CLEVER FUNCTIONS AND MEMORIES IS TOO LONG TO LIST HERE"

still in regular use for over 20 years. It's been suggested that at £179 that they're quite expensive but if it was the last chrono you ever bought, I think that would make it quite cheap really.

The list of clever functions and memories is too long to list here but highlights include five memories and an automatic calculator for muzzle energy. These are genuinely useful tools for any shooter or club.

Another unique feature of the Skan is that the sensors are set at 45 degrees to horizontal, and there are a number of reasons for this. The first is to encourage the shooter to hold the gun perfectly level for best accuracy. If you shoot through the screens at an angle you effectively increase the distance between them which will cause inaccurate readings which could be as much as 0.5 ft.lbs. wrong and if that put your gun over the limit it could be disastrous. The second benefit of the angled sensors is that any dust getting inside is inclined to slide to the bottom and not obscure the reading. On the subject of dirt and dust, like any precision instrument, the Skan needs to be kept clean. If the screens do become dirty, cleaning should be done carefully with some soft tissue. Don't ever be tempted to use solvents as they will damage the screens.

However, you must always wear eye protection for this type of testing no matter how clever the design of the equipment is.

Although it can read up to 4000fps, don't think you can test rimfire or centrefire rifles through it. It was designed as a dedicated airgun chrono and will certainly be damaged by powder burning rifles. You can test high-power air rifles through it, however, but the instructions make it clear that the muzzle must be no closer than 12" from the shoot tube. For non FAC rifles the correct distance is 10". The huge blast of extra air that FAC rifles emit can cause bad readings.

To see how the Skan compared to my old chrono, I ran every rifle and even one pistol I had on hand to see if the readings I got threw up any surprises. I started with my faithful old Air Arms S410 in .177 to see how it performed and running at 798 fps with the AirArms Field pellet, it was too close to the legal limit for my tastes so I had it factory adjusted back to 11.2 ft.lbs. Next I put my FAC Daystate MK4iS in .22 through which I believed was producing around 33 ft.lbs and I found that it wasn't quite as powerful as I'd thought. At 945 fps with Air Arms field, it makes 31.7ft.lbs. Lastly, I fired a CO2 powered BB pistol through it just for fun and was



Part of the secret of the success of the Skan chrono is the position of the sensors and their light sources.

surprised to see that with a new CO2 bulb in it that it produced 308 fps with a 5.5grain BB, which equals 1.1 ft.lbs. which is plenty for a fun gun.

The thing that struck me most about these tests was that, although there were no surprises, I was impressed at just how easy it had been and that I'd tested three guns in the time it would normally take to test one. This is because the Skan reads every shot, first time every time. There's no need to wait for the right light conditions and no frustration with errors and duff readings. So was I impressed? Yes I was. Do I want one? Yes I do. So now all I need to do is get the editor

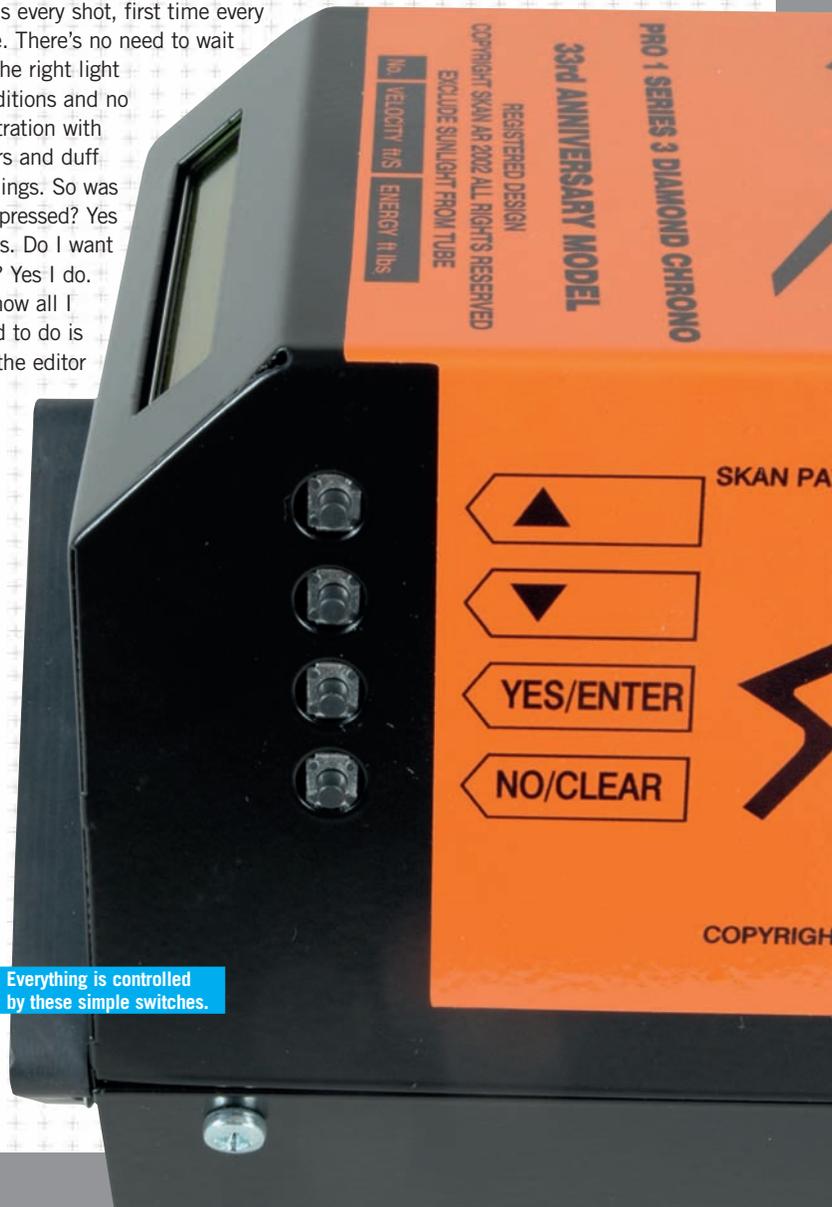
to sign one off against my expenses and my job would become a whole lot easier and more accurate in the process! ■

CONTACTS AND PRICE

Web: skanar.co.uk

Tel: 01787 227567

Price: £179.00



Everything is controlled by these simple switches.