



RC REPORT

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Blade Torrent 110 FPV

The Blade division of Horizon Hobby certainly has embraced the FPV drone phenomenon, bringing to market a number of models, many of them in the sub 250mm size. For years we've all used the expression, don't judge book by its cover, but to apply this to the product at hand, don't judge an FPV Drone by its size; Blade's latest, the Torrent 110 FPV is formidable.

The Torrent is offered in two packages: a Bind-N-Fly Basic and Plug-N-Play. The BNF version is targeted at those with a Spektrum protocol transmitter, and for those who prefer to fly with their own brand of radio controlled system there is the PNP version which requires the user to supply a receiver along with a transmitter. I believe this is a smart move for the dealers as what is quickly becoming the most popular control system for FPV racers is (unfortunately for dealers) an import unit.

With either version a minimum of six channels will be needed to fully control the Torrent. For the review drone the new DX6e transmitter was chosen. If for some reason dealers have not experienced this transmitter you're missing out on a great item as the transmitter is affordable, very comfortable to hold and has an incredible amount of programming features. The instruction manual that comes with the Torrent is extremely concise and explains step by step how to program any of the recommended Spektrum transmitters to the platform.

Along with the instruction manual Blade includes some additional two-side tape, motor screws, vibration dampener mounts and a couple of zip-ties with the Torrent. That said the add-on sale potential is huge, regardless if the end user chooses the BNF or the PNP package. This



It may be small, but don't be fooled by the size. The Blade Torrent 110 FPV is well mannered and a delight to fly on a 2S flight battery, but step up to a 3S flight pack and wow, the machine is nothing short of ballistic.

Don't judge an FPV drone by its size.

450mAh 50C (EFLB4503SJ50).

The motors putting the go to the Torrent are four Blade Thrust 7600kV brushless inrunners, each spinning a ducted three-bladed rotor.

For strength all of that goodness is mounted to a ridged carbon fiber frame. The choice of battery will depend entirely upon the end user's adrenaline needs. As usual the batteries were charged while manual was read and the DX6e transmitter was programmed. To help manage the Torrent there are three flight

modes and per the manual, all of the modes were assigned to three-position switch-B. Position-0 is a basic flight mode and is mostly for newer pilots. In this position the Torrent is limited to a 60 degree bank and when the right stick is released the drone will self-level. Position-1 is for the more experienced pilot and in most cases will be the position where most of the flying is done. In position-1 there is no bank limit, but the platform will still self-level at low throttle levels. Then there is switch position-3. This is for advanced pilots or what I'm now calling the "it's all on you mode."

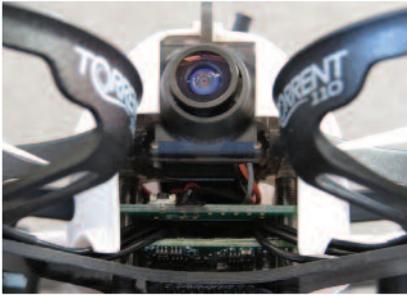


The FPV camera is mounted to the top of the chassis and is covered by a lightweight molded body. Actually there is nothing that is part of the platform that is not needed for flight. This includes landing gear, as the machine simply rests on the flight battery when preparing to takeoff or when landing.

includes batteries and battery chargers as well as the needed transmitter and receiver if the PNP is chosen.

To power the Torrent the pilot can use either a 2S or 3S LiPo battery, the supplied suggested batteries are a 2S 800mAh 30C (EFLB8003SJ30) or a 3S





From the front it quickly becomes obvious the Torrent 110 is all business. The 150mw FPV transmitter/camera is mounted to the carbon fiber chassis and is easily programmable via a pushbutton located on top and just below the camera is the control board.

To accommodate the racing circuit the 150mw FPV transmitter channel is easily programmable with a push button on the top of the Torrent. Referring to the manual, a group of blue LEDs assist the user in setting the desired video channel. Looking for the easiest solution until more familiar with the platform, the default channel on the FPV transmitter was selected and the monitor was set to auto-scan.

Now to the all-important part of any aerial evaluation, how does it fly? Setting the motor arm switch—switch-H per the manual—to off and throttle stick to minimum. The platform was powered by connecting the flight battery. Bind mode was entered by pressing the bind button, which is located on the bottom of the flight control board and the transmitter was turned on while at the same time pressing its bind button. Within a few seconds, there were some happy beeps coming from the Torrent's flight control board and the LEDs were glowing solid orange. Once the Torrent and the DX6e were properly bound, the flight battery was unplugged and the transmitter powered down. Both were then re-powered to verify the bind was good.

I can't even begin to think about how many times we've said this, but people still refuse to listen, often coming back to your stores angry because their quad or heli doesn't fly as advertised. To get the proper response out of the Torrent, all of the platform's stabilizers and accelerators need to be level, and upon applying power, the platform must remain still for about 15 seconds. Unlike many machines, the Torrent does not have landing gear as it rests on the flight battery. For best results, the pilot may need to hold it level during initialization so it won't tip to the side. Note: Using the flight battery as the "landing gear" won't discourage the experienced pilot in the least, but for the newbie he may want to construct a battery protector out of a



rectangle piece of rigid plastic. This will help protect the battery (and therefore the platform) from damage especially if he flies off blacktop, or pavement, should he have a harder than expected landing, or go skidding across the surface.

Initially the Torrent was flown without FPV to get a better feel for its characteristics without any distractions. When using the 2S battery the machine is very easy to fly, requiring no more than 1/2 throttle to bring it to a comfortable flying height. From this position it was time to try a few basic figure-eights and a couple of high-speed passes. Control was superb, but like all high-performance drones, both hands need to be involved for the smoothest possible flights.

Unlike many counterparts, by incorporating a full-size programmable transmitter, the end user can fine-tune the Torrent to match his flying style by adding exponential throw. As mentioned early in the review, the Torrent will self-level when operated in basic mode—switch position-0—if the control sticks are allowed to center, but the pilot must still fly

the machine. As experience was gained it was time to switch over from the 2S to the 3S flight battery. I don't know what else to say, but wow. Using the 3S flight pack the Torrent was nothing short of ballistic. The run time is shorter, but what a run, this little drone is screaming fast!

With all of the preliminaries out of the way, the Torrent was again made ready for flight. This time around the FPV monitor was turned on and set to auto scan. Within moments there was a great picture on the screen. The Torrent has a camera angle adjustment and can be set to the pilot's liking. For my style of flying the angle of the camera was adjusted until equal amounts of background and horizon were visible on the monitor. I was very pleased with the Torrent's display; the viewing angle is plenty wide enough yet with very little fish-eye distortion.

While flying with the monitor, the 2S battery was used to keep the platform under control. Let me be the first to say that although becoming active in drone racing, I am nowhere close to Drone League Racing caliber like the pilots that buzzed around the NRHSA show floor. That takes skill and practice, and I mean lots of practice.

That said operating the Torrent on a 2S battery is a great stepping stone for the up and coming pilot. As he gets more comfortable he can then switch to the 3S pack, which will really up the game and tune the pilot for all out racing.

Although the Torrent is on the small side, don't be fooled. It's just as comfortable being flown inside as it is outdoors. Its weight and power are more than enough for any venue where the pilot is comfortable and just as many where he is not and must take the time to learn. Make sure you have enough of these machines on hand as they will literally fly off the shelf.

Like all Blade products, the Torrent 110 FVP is available exclusively through Horizon Hobby. **HM**

Available either as a Bind-N-Fly Basic, or Plug-N-Play for those who prefer to use alternate radio equipment, the review model is the BNF version and is controlled by the Spektrum DX6e, an incredibly versatile transmitter with more than enough features to fly the Torrent 110.



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The FPV camera offers a very clear picture and as mentioned the lens is adjustable to the user's preference, which in this reviewer's case is a 50/50 balance between background and the horizon.