BY PAUL TRADELIUS

Audacity Models Pantera P6

This .50-size machine is engineered to last

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Those of you who have been reading my "Rotor Speed" column know I'm a great fan of the Pantera 50. I have been flying it for years and, like most helicopters, it has a feel of its own. This is due to the design parameters for the swashplate, mixers, blade grips, etc. And now the Pantera P6 follows in that tradition of feel, performance and value. Designed with the novice in mind as far as price and durability, it also has the advanced features more experienced pilots want in a helicopter. The P6 is a helicopter you can beat like a rented mule; its side frames are even made of a fiber-reinforced, engineereed-plastic material that's so tough it has been called "super plastic." (This material is also found in some interesting products, and it's why Austrian arms maker Glock pioneered its use for the frame of their superb handguns!)

Although I prefer nitro power, the P6 is also available in an electric version that can get up to 12-minute flights using a 400-550KV motor with an 8- to 12-cell LiPo pack. This makes the P6 ideal for that scale project we all dream of building one day, and the Audacity website has complete instructions on how to install the mechanics in a scale-fuselage, complete with a 4-blade head.

The author shows off the Pantera P6 and Hitec Aurora 9 radio. The test flights were conducted while the sun was out between thunderstorms at the Manatee RC club field in Palmetto, Florida.

SPECIFICATIONS

Model: Pantera P6

Distributor: Audacity Models

Main rotor diameter: 56 in.

Weight: 7 lb., 2 oz.

Power req'd: .50 heli engine

Radio req'd: 7-channel w/ CCPM mixing

Price: $380

HIGHLIGHTS

- Engineered with many advanced features
- A wide power range: .50- to .91-size engines
- A great combination of value and performance

EVEN IN THE WIND, THE PANTERA FEELS ROCK SOLID, TRACKING SMOOTHLY THROUGH ALL MANEUVERS BOTH FORWARDS AND BACKWARD.

IN THE AIR

As I mentioned, the Pantera line of helicopters has a feel all its own. I use the aerobatic setting on the paddles and 8 degrees of cyclic throw, which provides a nice combination of hover stability and aerobatic performance: they make the P6 just feel right.

GENERAL FLIGHT PERFORMANCE

Stability. By reducing the rotor speed and the servo throws, the P6 is tamed down to a stable hover platform that feels rock solid, so it's ideal for novice pilots learning to hover and to perform general flight maneuvers. Initial flight tests were performed on a windy day between thunderstorms, but the P6 was extremely stable and predictable in flight and very easy to control. This was also enhanced by its large, bright and easy to see canopy.

Tracking. Even in the wind, the Pantera feels rock solid, tracking smoothly through all maneuvers both forwards and backward. I tested the holding power of both the tail rotor and the Futaba GY-520 gyro by turning the helicopter sideways to the wind, and it flew as if it were on rails. Many pilots do not care to fly in windy conditions, but the P6 didn't seem to mind the wind at all.

Aerobatics. Turning up the head speed and increasing the servo throws transforms the Pantera P6 into a real "bad boy" that's capable of any maneuver I care to try. And this is where the power of the Thunder Tiger 53H Redhead engine and precise control of the Hitec HS-7945TH digital servos really come into play. The P6 responds well to an increase in power and rotor speed, and the direct servo control makes it respond to my slightest control inputs.

PILOT DEBRIEFING

Using the pro tips and setup instructions provided in the online manual will give you a helicopter that's ready to perform on its first flight. Initial flight testing with a new engine means a rich mixture for the first several flights which will provide lower head speeds for maneuvering as you get used to the handling characteristics of the Pantera P6. Its smooth and stable performance in all flight positions means you will enjoy flying the P6 on its very first test flight. Confidence quickly improves, and after a few tanks of fuel to break in the engine I was ready to lean it out, increase the head speed, and go for any maneuver I cared to try. The Pantera P6 certainly lived up to all my expectations of feel, performance and value.

UNIQUE FEATURES

The fiber-reinforced side frames have many design features that could easily go unnoticed. These include 40-percent larger than standard bearings, which are more durable to withstand the power of larger engines and extreme 3D flying. The P6 has three main shaft bearings and two tail-rotor bearings, each of which is housed in a bearing block that can be easily removed for maintenance and repairs without splitting the side frames. The clutch is larger than we see in other helicopters this size, the better to harness the power of a .91-size engine, while the side frames are designed for easy engine removal. There are two throttle

GEAR USED

Radio: Hitec Aurora 9 w/ HS-7945TH servos (hitecrcd.com), Futaba GY520 gyro (futaba-rc.com) and Hobbico LiFeSource 2300mAh battery (hobbico.com)

Engine: Thunder Tiger 53H Redhead (ttamerica.com) w/ Audacity Pro Muffler V2

Fuel: Byron's Rotor Rage Master's Blend 30% (byronfuels.com)

Rotor blades: Audacity 600mm carbon

The CCPM swashplate has direct servo control to give the P6 a "locked in" feel, and I really like the molded flybar cradle and the gyro mounting plate. Note the tiny Futaba GY-520 gyro and the white mark used to note the master blade grip.

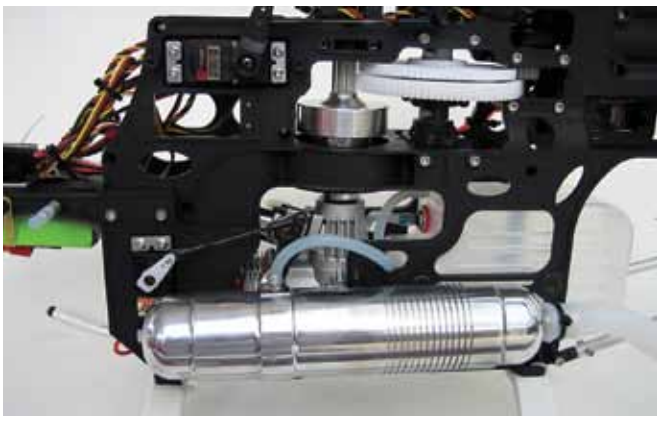
ROTOR HEAD SPEED

A basic understanding of aerodynamics will help you become a better pilot and master of your machine. The heli's rotor blades are the equivalent of airplane wings, and they rely on their rotation to achieve the necessary lift for flight. The rotor speed or head speed is therefore critical for good performance. For practical purposes, the higher the head speed, the more responsive and sensitive a heli becomes. Novice pilots should use a tachometer, preferably an optical tach, to set the head speed to the manufacturer's recommendation. The tach should be sued to set the hovering and idle-up rpm. As you become more experienced, you will find that you have your own preference for head speeds to suit your flying style.

servo positions as well as room for a mixture servo, giving a total of eight servo mounting locations in all. The cyclic servos have direct control of the swashplate, with each having servo output shaft stabilizers. The dual-tapered, collet clutch hub mounting system ensures perfect fan hub alignment every time. Delron main and tail rotor gears are used for extended wear and crash resistance, with a dedicated gyro mounting plate behind the main shaft and a large soft-mounted fuel tank that's easy to see in flight. Also included is a unique air filter to protect that precious engine from all the little particles we have to deal with at the flying field. All this sits on top of lightweight, composite struts. The head is pretty much standard for a Pantera, using a 4mm flybar vs. the standard 3mm flybar seen on other .50-size helicopters, a formed one-piece flybar cradle and paddles with two mounting locations (one for normal forward flight and aerobatics and the other for extreme 3D flying). As for the tail section, it has a lightweight, smooth-running, belt-driven tail rotor. Triple-bearing tail-rotor grips and an improved pitch slider with metal pins are used for long wear and slop-free performance. And, as you can see in the photos, the large and brightly colored canopy makes the Pantera P6 easy to see in flight because if you can't see it, you can't control it. The instruction manual is online and includes the latest updates.

CONCLUSION

The first thing I noticed about the Pantera P6 was the well-designed side frames. Direct servo control of the swashplate eliminates slop in the control system, while rugged design features and fiber-reinforced material make it ideal for both the novice and expert pilot. With a .50-size engine, you'll enjoy mild flight characteristics and save on fuel, but add up to a .91 for wild 3D flying and all-out performance.



With the Hobbico LiFeSource battery mounted below the tray, the Hitec Optima 9 receiver has plenty of room on the front of the Pantera P6. Note the heat sinks on the Hitec HS-7945TH servo and the beautiful Audacity ProMuffler V2.

See the text for all the design features built into the fiber-reinforced side frames. Here I'm pointing to a tab used to secure the servo wires. Note the molded servo mount, the gyro mounting tray and the Delrin gears.