

MILD OR WILD,
THIS HELI DOES IT ALL



SOLID TAILROTOR CONTROL

Hitec's new light and compact heading-hold HG-5000 gyro has all the features you would want and is the perfect match for any electric helicopter. It can be used with any transmitter and receiver as well as with high-speed or standard analog servos. It is optimized for Hitec's super-fast HSG-5083MG servo. This is the fastest Hitec servo ever made at 0.07sec/60 degrees. The gyro has remote gain and a built-in temperature sensor for drift removal.

Programming the gyro is very easy using the menu button and rudder stick. The data is displayed through eight LEDs. In the normal operating mode it displays the mode (heading-lock or normal mode) and the gain. You can program the servo type (Hitec's HSG-5083MG, general fast digital servo or general mini servo), rotation rate, gyro gain, gyro operating direction, and servo limit. This is a very capable gyro and servo combination that will let you get the most out of your heli. It costs \$180.



Aileron and pitch servos are front-mounted vertically with the elevator in a traditional horizontal fashion aft of the main shaft. The anti-rotation bracket is mounted forward of the main shaft. The servo brackets and anti-rotation bracket are made of high-quality aluminum and the provided mounting hardware makes installing the servos quick work. The airframe is a rigid and lightweight aluminum frame with assembly nuts pre-attached. Head components and tail fins are made of quality composite material.

UNIQUE FEATURES

The Bell-Hiller head has a unique adjustable ratio for different types of flying whether you are a beginner or into advanced 3D. There are several mounting holes on the seesaw and control linkage to increase or decrease cyclic response. You can set up the Dragonus II for beginners, FC3 and advanced 3D. The frame assembles in two parts, an upper and lower deck. The lower portion carries the rudder servo, battery pack, ESC, receiver and skids. The upper portion carries the collective servos, main shaft/head assembly, motor and gearing. Instead of fumbling with very small mounting nuts, all that was required was to hold the frame parts in place and insert the required screws. The bearings for the main shaft fit very snugly into the carriers. It takes some patience to get them fully seated, but once they're in you can bet they aren't



The unique rotor head has an adjustable Bell-Hiller mixing ratio for three different settings. The mildest setting is good for general hovering and flying while the most responsive setting is for radical 3D.

going to slip on you. The auto rotation gear is assembled with the one-way bearing inserted into an aluminum mounting plate that is then assembled onto the main gear with the belt drive gear. Operation is very smooth and assembly onto the main shaft is straightforward. The motor is installed forward of the main gear to the supplied aluminum mount. RCer includes a set of pinion gears (13T, 14T, 15T) to use depending on your motor requirements.

RCer International Co., Ltd. DRAGONUS II



In the past year or so there has been a flurry of 450-size helicopters coming on the market. One of them is the RCer Dragonus II, and with its unique head design and canopy it's not one to be missed. The first thing you notice when pulling the kit out of the box is the canopy. The design is futuristic and without the standard canopy window. The manual is small but easily legible and has good engineering drawings in each step. The assemble process has three main parts: the head assembly, the tail boom assembly and the frame assembly. Once those are completed, the entire helicopter is assembled.

SPECIFICATIONS

- MODEL** Dragonus II
- MANUFACTURER** RCer International Co., Ltd
- DISTRIBUTOR** Hobby Lobby
- MAIN ROTOR DIAMETER** 28.5 in.
- WEIGHT** 27.5 oz.
- MOTOR INCL'D** brushless 300W
- RADIO REQ'D** 6-channel w/CCPM mixing
- PRICE** \$158

SCOREBOARD

- 👉 Easy to build
- 👉 Extremely smooth and quiet
- 👉 Outstanding agility





The tail rotor operates very smoothly and is very powerful. The included composite tail rotor blades work very well.

I was impressed by the tail assembly, especially the fins. The tail case is fairly standard and similar to other 450-size helis. The tail slider is surprisingly smooth and it appeared that RCer did it right the first time. Many 450-size helis have been plagued with sticky tail sliders, but RCer has one of the best I've seen out of the box. The tail boom is aluminum and has the standard holes and slots on either end. What I liked about the horizontal fin was the assembly; RCer uses a larger mounting surface for the bottom bracket for a more secure boom support mount. The fins are also made of a flexible composite that will take even the worst of hits. The belt drive gear is mounted on top of the main gear and the belt passes a set of guide pulleys before entering and exiting the boom. I was impressed with how smoothly the tail and belt operated after assembly. There are a few places to mount the gyro, but just behind the main shaft there is a protected area for the gyro to sit nicely.

CONCLUSION

With the stickers in place and the canopy mounted, the Dragonus II is an impressive 450-size heli. On the ground or in the air, it's bound to get attention from either its looks or its impressive 3D qualities. Expect more helis from RCer in the future. I was lucky enough to meet the designer of the Dragonus heli at the Chicago iHobby show in October and I was able to get a close look at a Dragonus 500 prototype. Needless to say, I am leaving a spot open in my hangar for that one! ☺

See the Source Guide for manufacturers' contact information.

IN THE AIR



PITCH CURVES (DEG.)	LOW	MID	HIGH
Normal	-5	4	9
Idle-up 1	-5	0	10
Idle-up 2	-10	0	10
Throttle hold	-5	4	11

I set up the Dragonus II with the Bell-Hiller mixing ratio for the most responsive of the three settings. Included with the Dragonus II kit is a set of wood blades covered in shrink wrap and composite tail blades much like the T-Rex. The wood blades have a strip of carbon fiber for added stiffness. I recommend that the included wood blades be used for hovering and basic forward flight. I spooled up the mains and this is one smooth, quiet heli. You can tell a lot by how an electric heli sounds and the RCer Dragonus II was practically silent aside from the motor whirring. Controls are smooth and responsive. I spent the first flight hovering and getting a feel of the heli. The blade tracking was perfect and it only needed a few clicks of down trim.

HOVER Despite the model being set at the most responsive setting and the gusty winds, it was very manageable. Experienced pilots will want to use this setting while beginners should use the less responsive setting for more stability and slightly slower response.

FORWARD FLIGHT The model is very predictable in either fast or slow forward flight with little or no pitch-up in level flight or dives. Much like a model airplane, it goes where you point it.

AEROBATICS Even with the included wood blades the Dragonus II's cyclic response is very quick and precise. Loops and rolls can be very tight and flips are also very fast. There is plenty of collective travel for any type of aerobatics and the included brushless motor does an outstanding job of keeping the head speed steady throughout the collective range. The new Hitec gyro was also up to the task of keeping the tail under control. I found that the futuristic-looking canopy helped me keep orientated and made it easier to keep track of it in flight. I am sure that with a good set of fiberglass or carbon blades this heli is as capable as any 450-class model on the market today.

PILOT DEBRIEFING The Dragonus II represents an outstanding value in the electric 3D helicopter market. It can be set up for easy and docile flight or outrageous freestyle aerobatics. Hobby Lobby stocks all the spare parts and many upgrades at a very reasonable price; an important consideration when purchasing a mini helicopter. In short: this heli rocks!

GEAR USED

MOTOR brushless 300W+ outrunner (3050 Kv) included

RADIO Hitec Eclipse 7, Hitec Electron 6 receiver, HG-5000 gyro & 4 HS-65 HB servos; Jeti SPIN 33A brushless speed control

BATTERY Polyquest 20C 11.1V 2150mAh

ROTOR BLADES wood (included)

—Klaus Ronge