Glitch Busters

February - March 2014

NEXT MEETING
March 4
7:00 PM
Newark Senior Center

UPCOMING EVENTS

Warbirds Over Delaware 2014
July 9 - 12, 2014

AMA #197 / IMAA #687

FROM THE PRESIDENT

The February General Membership Meeting was held at G-Force on Feb 4 at 7:00 PM, our new start time for this and future sessions. I counted 35 attendees.

For Show and Tell, we were very well supplied. Jim Schlapfer scratch built a very nice high wing electric fun plane from whatever he had lying around in his shop. As usual, it looked very good and should fly well. It was all wood and covered with heat shrink materials.

Next up was Chip Crain with a good looking ARF foamy, a B-25 complete with lights and retracts. I believe it came from Banana Hobbies and like Jim's, had not had its first flight. Skip tried to show us the retracts in action but the project needs a little more programming. Can't wait to see that fly too.

A guest but regular at G-Force named Von discussed his Blade 500 heli. He was very high on it and has many flights and talked about its great value when compared to similarly equipped helis.

I was last and probably spent too much time going through my Blade 350 QX quad. I bought it so I could take video and stills and after adding a gimbal and my GoPro Hero 2, the quest became a reality. If you are interested in getting into something like this, I would recommend this quad

especially with the discount from John.

I brought the club up to speed regarding the work of our Board as we tackle the lack of grass issue and abundance of crab grass facing our upcoming flying year. We are meeting again the fourth Tuesday of the month to see if we can construct an action plan. The main issues are cost and a lack of a water source. We will report more of this at next months meeting and in the next newsletter.

There were two raffle items and thanks to so many participants, we raffled off both and still had some money left over for the club treasury. The items raffled were the very well done E-flite Electric Field Box and a pro-grade soldering station. Two new items for next month!

The March Meeting will be back at the Newark Senior Center and will begin at 7:00PM

Finally, you can support our hobby by attending (and enjoying) the trade shows that one day will probably disappear. The Annual WRAMS Show is Feb 21-23 just two hours up the road right near the MetLife (Giants) Stadium in NJ. I encourage you to get a car pool together and see what is going on in your hobby. Bring some money too for these shows attract exhibitors who only sell direct only.

Have a great and warm month.
Mark

FROM THE EDITOR'S DESK

This has been one hack of a winter so far. Cold and snow over and over again. As I sit here the snow is mostly gone and the temperature is a balmy 47 degrees. The forecast for tomorrow is another possible 4 - 8 inches of snow.

Well I suggested we have a Snow Fly this winter, and no one was interested. I suppose that means that the field has been pretty empty this past month. Well if anyone is interested we should have a few more chances to get a Snow Fly going. The snow shows no sign of letting up any time soon.

Judging by the turn out, the Freeze Fly was a big success. Lots of people came with airplanes, but the weather got colder faster than most planned, and few planes actually got airborne. That wasn't so bad. People seemed to really enjoy visiting with one another in the warm pavilion.

ESTES PROTO X - by Scott McClurg

As much fun as you can have for $39.99. That's the Estes Proto X. All packed into a heli less than two inches on a side!

Roger and I were lucky enough to each receive one for Christmas. After popping a couple AAA batteries into the transmitter and a 30 minute charge, I had mine in the air. It was the first time I'd flown a quad. This one has a gyro, but it doesn't have GPS, so it's not able to hover hands-off. That said, with just a few minutes practice, I had it in a nice hover in a 5' x 5' space. Since this was the same room we opend our packages in, you could hardly call the space clear of clutter. Still, I had little problem flying it safely within the space.

The Proto X comes RTF. It uses the Hobsan 2.4 ghz protocol, so it won't pair with Spektrum or Futaba compatible radios. And at first glance, well, the radio looks like a joke. It's as small as the display on most radios and seems like it's designed for a child's hands. And maybe it was, but after trying it, I fell in love with it. It may not have dual rates or expo, but the heli doesn't need it. Flying indoors, you'll

only need about 50% collective (throttle) to hover when fully charged and probably won't need more than 75% at any point. It only needs small movements to control pitch, roll and yaw. And the radio's sensitivity and resistance on the sticks is just right to make this easy. If you have a Hobsan radio lying around - or pick one up on eBay, you can bind to that. It has the advantage of dual rates, that' may allow you to roll the Proto X - if you have REALLY tall ceilings or fly outside - because in the video I saw, it has a tendency to, well, plummet for a while after completing the maneauver.

For those who haven't flown a quad before, maintaining orientation is a challenge. This is partly because they often look pretty much the same from any angle, but it's more than that. For me, at least, it was like learning to fly all over again. Having flown fixed wings for years helped, but there was still a learning curve.

The Proto X has super bright LEDs that make it easy to tell which way it's pointed - blue in the front and red in the back. Just think brake lights and you'll never forget which is which. Keep the heli within about 15 feet indoors and you should have no problem seeing them. Further than that and they become hard to see.

Control of the Proto X isn't always consistent. It's usually pretty good, but sometimes the trim will be way off. Other times, it'll be in a hover and suddenly decide to decrease throttle and it'll drop. Maybe it's interference. Maybe the gryo is confused. I don't know, but it behaves itself the vast majority of the time and for $40, what do you want?

That brings us to the next good point - durability. If I had to guess, I've probably got 50 flights in with mine. In that time, I've had lots of stellar crashes and the worst thing that's happened is one of the props popped off. They're pressure fit. So, I just had to pop it back on. 5 seconds later, I was back in the air.

For me, the Proto X has been tons of fun and it's also been really useful. You see, I was also lucky enough to receive a Blade 350 QX for Christmas and I've been using the Proto X as a trainer. I've flown the 350 QX a few times and it was pretty easy in training mode - where you don't have to worry about orientation. In this mode, no mater which way it's pointed, pull the right stck back and the heli comes towards you. In stability mode, it flies like a normal quad. If you lose oriantation, you'll probably crash.

Also, while in training mode, the 350 QX uses GPS to allow it to hover hands off without drifting - even in wind. But in Stability mode, it's all on you. The two times I've flow it were in 10-15 mph winds and I didn't fare so well. Fortunately, the 350 QX did. After my second flight, I decided I wasn't flying the 350 QX in stability mode until I'd mastered maintaining orientation with the Proto X. The Proto X is much more crash-resistent, can be flown indoors, and only costs $40 to replace if everything goes pear-shaped.

The only down side of the Proto X is that flights are about 3 minutes, charging takes about 30, and it doesn;t have a swapable battery. But again, for $40, what do you want?

MY TRANSMITTER TALKS TO ME - by Roger McClurg

I had to wait for three months, but I finally got my FrSky Taranis transmitter just before Christmas. As far as I know I'm the second or possibly the third member of the Delaware RC Club to own a Taranis. I don't know about them, but I love my Taranis. I expect to migrate from my Spektrum DSM/DSM2 equipped airplanes over to FrSky in time.

So who is FrSky and what is a Taranis? FrSky is a brand that produced transmitters, transmitter modules, and receivers for quite a few years. Their bullet proof frequency hopping protocol was in production when Spektrum was still claiming DSM was just what everyone needed. The Taranis is their long awaited entry into the greater than 9 channel transmitter market. The Taranis natively supports 16 channels, but with an add-on module it can go up to 32.

It also has:

- 32 broadcast channels, 64 virtual channels
- 12 switches, 2 knobs, 2 sliders, 32 virtual switches, and 32 custom functions
- Full Telemetry (RSSI - Received Signal Strength Indication built in)
- Available sensors: Voltage, Current, GPS, and High-Precision Variometer (Fuel, Airspeed, and RPM coming soon)
- Audio Output (this radio will talk to you, beep for alarms, even play background music if you like)
- RSSI alarms (warns you of reception problems before it becomes an accident)
- 60 model memories (unlimited with supplied SD card)
- USB and SD card slot for unlimited memory, and firmware future proofing
- Quad bearing gimbals that are silky smooth
- State-of-the-art open source software
- Super low latency for ultra quick response (9ms)

- Large backlit display
- Real-time data logging
- Receiver lock (program locked to aircraft)
- JR Style module bay for additional RF modules
- Processor: STM32 ARM Cortex M3 32-bit 60MHz

The list of features goes on an on. It is an amazing radio. It even comes with it's own aluminum carrying case all for only $175.

I was attracted to the Taranis not only because of it's excellent radio characteristics, but because it allows me to assign any slider, knob, switch or gimbal to any and all the output channels I want. I tell the radio how I want it to operate. I am not limited by how someone else wanted the radio operated. For example, my JR 9303 assigns channels 1-4 to Rudder, Elevator, Throttle, and Aileron. If I want a second aileron, it is assigned to the Aux1/Flap channel. It gets tougher when I want to use a specific switch for a bomb drop, or other non-standard function. Most transmitters are programmed to allow switches to be used only with specific channels. If you are already using those channels for something else (like a second aileron or flap), you are out of luck. On the Taranis, there is no such limitation.

I equipped my electric powered Fox sailplane with a FrSky 8 channel receiver and a High-Precision Variometer. I assigned a switch to be a throttle lock when in the down position, In the up position a nice lady warns me the throttle is armed and to be mindful of the propeller. The up position also arms data logging, but it doesn't start until the throttle moves up by 5%. I use another switch for vario functions. In the center position, the radio is quiet. The down position turns on vario tones. In the up position, every 10 seconds the nice lady tells me my current altitude and rate of climb or descent. I put volume control in the left slider. I want to use to use the ailerons as flaperons, but don't know how much “flap” travel I need, nor how much elevator compensation will be needed. So. I assigned one of the knobs to the flaperon function. When turned left, the ailerons move down. Turn right and they move up.

Not wanting the ailerons to move too far, I programmed the knob to be a percentage of aileron travel. I also programmed the nice lady to tell me how much the “flaps” are deflected each time I move the knob. I did the same thing for elevator on the other knob. Once I know how much deflection I want, I can assign flaperon to a switch which will apply the appropriate elevator compensation at the same time. I can also make the surfaces move at the speed that works best for the setting.

The programming for my sailplane is quite simple. It is impressive what some people have done with their Taranis'. One fellow programmed the throttle to kick in for a couple seconds after he applies full rudder in a hammer head turn. The function is on a switch, so the throttle only kicks in when he wants it too. Another person had a problem with the

airplane pitching toward the canopy when in knife edge, so he programmed the correct amount of elevator compensation on a switch. Another person uses the vario to cut the throttle after reaching a certain altitude. The throttle resets in 20 seconds after the throttle stick is lowered to zero.

The Taranis has lots of little fun features. I changed the startup screen to one with a P-51 on it. I also added a number of custom sounds for various functions. You can add an image to the profile of each model you have in the transmitter. Lots of images have been created and posted on the forums, and more are posted each day. If you can't find what you need, just ask. Lots of people are happy to create an image for you. You can even program the transmitter to speak the name of your model when you select it.

Taranis has computer based software called Companion9x (Windows, Linux, and Mac) that can be used to program the radio, upload and download programming to the radio, and even burn new firmware to the radio. The latter is a big advantage of the Taranis. Fixes to problems in the radio's software and new features are constantly be issued. These updates can be downloaded to the Taranis via USB with the press of a button. If you don't like the new software, not a problem. You can always load the version you last used back into the transmitter. It is really quite something. Companion9x also has a nice setup wizard that will program the basic functions for a whole range of model types. From there you can customize to your hearts content or just download the settings to the radio and go fly.

The Taranis is impressive, but it isn't for everyone. With the complete flexibility of the Taranis, comes the need to do a bit of learning before you can use it. There are no defaults and the thinking on the Taranis is backwards from traditional radios. On a traditional radio, the thinking is “What channel do I have to plug my rudder servo into?” On the Taranis, the thinking is “What function do I want to assign to sthe witch, slider, gimbal, etc.?” Then, “What output channel do I want to assign it to?” It takes a bit of getting used to, but it soon becomes the natural way of thinking. There are quite a number of videos available to walk you through the basic and advanced programming functions of the Taranis. How Tos are available on a number of forums and of course there is always the manual (on the SD card).

The demand for Taranis radios is very high. When they become available, they usually sell out in a day or two. Aloft Hobbies uses a waiting list and sells radios to people when their name comes up on the list. Most other stores are first come first served. I've seen radios sold within an hour of being posted to RC Groups for more than the seller originally paid.
The beauty of the Taranis is that it costs less than what you might expect to pay for one foamie. Where else can you get a deal like that? So, if you are in the market for a new transmitter or just want something new to play with, why not give the Taranis a try?

2014 FREEZE FLY


POLO SPORT


SKROTE

We'd like to thank G-Force Hobbies for their generous support of our club:

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