THE R/C FLYER

Volume 24, Issue 5 May 2000

Next Meeting - May 11, 2000 at 7:00pm - Clear Lake Park Bldg.

The Presidents Corner

By: Preston Hunt.

Well, this may very well be my last newsletter to act as sole editor. Mike Laible has agreed to help out. It's been a challenge and a sense of accomplishment along with a lot of work putting theses issues out for the past year and a half. We still need someone to take over as full time editor because I know Mike's plate is full and the newsletter does take time. I will continue to assist with the newsletter in the form of articles and e-publishing if needed. I plan on writing articles about helicopters each month with hopefully some good info, links & website of the month. I challenge the fixed wingers to counter with articles along that side of the hobby. I would like to thank all of those who have contributed articles in the past and especially those who contributed this month. With that, let's move on and make this one heck of an exit newsletter.✈

POST CRASH ANALYSIS

By: Brain Morris

I have had my share of mysterious crashes. But, until my last one, I have never been able to find an equipment problem that I could blame it on. One year, out of frustration, I threw a receiver away because it had been installed in two planes that had crashed for no apparent reason. I had ruled out pilot error or "dumb-thumbs" because the planes had exhibited uncontrolled (no action by the pilot) flight maneuvers. The receiver may not have been bad, but based on recent events I believe that electrical problems were the cause.

The RF environment at the JSC field has always been a concern of mine. So much so that it was one of my reasons to do some of my flying at Holland Park in Texas City. This winter I made a brief and disastrous flight at the park. A couple of days before, at home, a radio check of Old Paint showed all servos jittering when any of the controls were manipulated. I thought it might have been due to the proximity of the transmitter to the plane, but it hadn't occurred to this extent before. I moved the transmitter farther away -- no help. The control throws were OK though and I eventually forgot about it. At the field I did a range check by myself, and it appeared good at 40 or so paces. I have a rubber ducky antenna, which you can't stow, so it really doesn't mean much if the range check is successful.

Immediately after takeoff I realized that the plane was not responding properly. It had a mind of its own and it was all I could do to keep it level. After one time around, I gave up trimming attempts and decided to bring it home. But, it refused to turn onto the base leg and shortly thereafter rolled over and dived in a beautiful, fuel-conserving, tree pruning, finish of the flight.

After Don Fisher helped me in carrying the plane's remains back from the woods we did a range check. This time, I walked a little farther than on preflight, and lost all control. We checked the batteries at the charge connection and they were OK. I then hooked the battery pack directly to the receiver and I suddenly had a good system. I walked to the fence line, which is at least 200 ft away, and the plane responded well. When I returned the hookup to the normal configuration, through the switch harness it checked out fine. A dirty/corroded connector at the receiver must have caused the problem. This plane had been built in 1990, and the switch harness-to-receiver wiring was never disturbed. Only the battery pack had been exchanged. Also, the plane had been rebuilt and repainted on several occasions without removing the switch harness or receiver. It was an accident waiting to happen.

After trying tuner cleaner and discarding it because it left an oily feel to everything, I cleaned all the connectors with a toothbrush and 91% isopropyl alcohol. I connected and disconnected them several times while wet. Then, I decide to change the switch harness altogether.

That week, I noticed that my daily 30 minute charge of the flight batteries on my Kadet was not keeping the pack at full charge anymore. It turned out that my battery pack was marked "1991". Another accident about to happen. I would have sworn that I replaced all of my packs in 1996.

A spring-cleaning of your equipment for this flying year might save you a lot of grief. The following episode has caused me a lot of grief, so I thought I would alert others in the JSCRCC of the need for a "real" range check when strange things are happening.

THEN COMES THE REAL REASON.

Throw out my article on the crash. The plane went down again, in the same fashion, as though it had gone out of range. It rolled over and flew upside down for quite some time. The controls were of no use.

I need more testing to find the problem. May be the rubber ducky antenna, may be vibration sensitive receiver, may be that I have to throw everything in the dumpster and start over. That is what my flying buddies are telling me to do.

April 19, 2000

I have recently had three crashes with what looks like electrical continuity or transmitter signal range problems. All on the same plane and with the same transmitter. I changed my switch harness and cleaned all connectors just before the last crash. The flight went fine through the first 180 degrees of my circular route; it passed by me, then rolled over on its back and flew gracefully away, upside down, on a path that eventually intercepted the ground. All the while I couldn't change the flight path. My range check before that flight was fine, but it means nothing to do a 100 ft range check with an antenna that you can't stow. I have been using rubber ducky antennas for several years, on two separate transmitters, for year's things were fine, but now?? I will try a long distance check tomorrow, comparing the ducky with a conventional antenna.

April 20, 2000

I took the channel 38 transmitter and receiver to a park, and with the help of Bill McCombs, did some testing of the signal range.

CONFIGURATION #1: The channel 38, Airtronics transmitter and receiver that had been installed in the plane during all three crashes. The receiver was mounted on a dowel rod with the antenna fully extended and held vertically. The transmitter was equipped with the rubber ducky antenna that was installed during the three crashes. Configuration #1 Test Result: Servo jitter began at 250 feet. Servo went hard over and quit responding to commands at 400 feet.

CONFIGURATION #2: Same as #1 but with conventional antenna. Configuration #2 Test Result: Same as configuration #1. Some, but not significant, improvement in range.

CONFIGURATION #3: Same as #2 except with an RCD receiver (not the receiver that was involved in the crashes). Configuration #3 Test Result: Same as configuration #1.

CONFIGURATION #4: An Airtronics channel 14 transmitter and receiver. Transmitter equipped with a conventional antenna. Receiver installed in a Senior Kadet sitting on the ground. Configuration #4 Test Result: No jitter and good response. Maximum distance tested was 700 feet. This was about as far as I would normally fly.

CONCLUSION: For whatever reason, the transmitter signal is not strong enough. The receiver is OK. The transmitter will not be used again.✈

Editors Note: Even though Brian found a different problem that was causing his crashes, the points he makes in the first part of his article are good solid issues to check.

FUN FLY STATUS

By: Michael Laible

The April Fun Fly was a huge success with a total of 12 pilots. In addition, we had a dozen or so spectators. The weather was perfect and the flying was even better. With the 12 pilots it took about 2-1/2 hours to complete. All-in-all everyone had a great time. We did have a couple of casualties, but I hope the pilots are in full recovery.

The events for the April Fun Fly were,

1. Alarm Clock Pylon Race,
2. Climb and Glide with Spot Landing
3. Blind Flight.

The alarm clock pylon was won by Spencer B., the Climb and Glide by Mike Laible, and the Blind flight by Rob Bartel. The overall winners were Mike Laible 1st, Rob Bartel 2nd , and a run off bwteen Ki Siv, John Boyle, and James Hornsby with James Hornsby winning and taking 3rd place.

The May 13th events will be as follows: 1)Climb and Glide with Spot Landing, 2)Blind Flight 3)Dice Roll

Remember, Gift certificate awards at every event.

See Ya!!✈

What a site! (photo by Brian Morris)

April 17,2000 JSCRCC Meeting

Old
The minutes from last month where approved. The club patch has now been selected for the new club name. Mike Laible is working on prices for shirts, hats, ect... for the new club name and patch. The club will be sending in the IMAA chapter application and fee. Mike Laible held discussion of the up coming fly-in.

Visitors:
Blake Brown
Ben Benluk

New:
21 people attended the April 17,2000 meeting. Discussion for scheduling a big bird fly-in event on October 28,2000. Preston Hunt is asking around for someone to take over the newsletter until September. If your interested please let him know asap.

Models:
Ray Randolph shows his scratch built fun-fly airplane. Ray still hasn't named it. It's a rugged looking and looks like it could take a pretty good beating. It's controlled by a computer radio and powered by a Webra . 32. The Winddrift Glider was shown by Ben Benluk. It's powered by a Cox engine and has a 3 channel setup.

Model of the Month Winner: The model of the month goes to Mr. Randolph, congratulations Ray.

The Dave Hoffman Report:
Impressively Dave the tax man makes it the April meeting. The club now as of April 17,2000 has $5085. Excellent report.✈

SIG Being Formed

A R/C electric special interest group is being formed right after tonight's (May 11th) regular JSC RCC meeting. Anyone interested is invited to stay to discuss what we should do next. As we need to be out of the park by 10:00pm the meeting will be brief but will include some interesting data and a demonstration of 2 types of battery chargers. The only requirement for being a member of the ELECTRIC SIG is to have fun.

Don White will host the first meeting and can be reached at donwhite@hotmail.com✈

BoomStrike's World

A monthly rotory rambling By Preston Hunt

It seems that more and more people are getting interested in the world of rotory flight and there are some good reasons. I think one of the biggest impacts on this is price. Never has been cheaper to try this side of the hobby than now. With machines starting off at under $200.00 for kits to just under $300.00 for ARF's, it's understandable why we see more people thinking about helicopters. Helicopters are now in the price range of sport flyers.

Let's take a look at just what is needed to start flying helicopters.

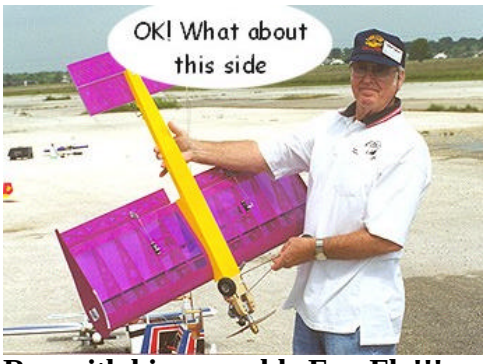
1. You will need a helicopter. This can be any make you like but keep repair cost in mind when choosing your first helicopter. A 30-size machine is far cheaper to repair than a 60 size.
2. Helicopter engine if one did not come with your heli as would with most ARF's. Heli engines are

different than airplane engines. We will get into this later.

3. Gyro. (Used to help stabilize the tail rotor) Again any type/brand you want but consider a few things. There are still some older mechanical type gyros out there that will work just fine but draw more current than the newer peizo gyros. You can also get a peizo Heading Hold gyro now for under $100.00.
4. Helicopter Radio. You will need a radio that has helicopter-mixing capabilities. Most newer computer radios have airplane and heli modes so you can fly both. Skimping here could cost you more in the long run. You should really look at a 8 channel radio. Not because of the number of channels but because of the number of pitch/throttle curves and mixes. You'll need them later.
5. Training gear. A MUST FOR BEGINERS unless you have an unlimited supply of cash. You can buy heli training gear or build it yourself. The easiest to build is simply two 3/8" X 3' wooden dowels crossed to form an X and 4 woolfell balls affixed on the ends, rubber banded under the landing gear.
6. Method of fueling and starting. You can typically use your airplane fueling system to fuel up your heli. Starting depends on the heli. Some will require a hex start shaft, which can be purchased for around $20.00 or less.
7. Help. Now that you have this mass of rotating machinery, what's next? Seek help from someone who fly's heli's. Preferably one that can check your machine out and test hover it.
8. A desire to have fun.

BoomStrike's definition of a fixed wing flyer: *Someone we have not assimilated to the dark side yet.*✈
SITE OF THE MONTH. Helibuf's World:
http://www.smartlink.net/~helibuf/helibuf.html

Saturday April 29th at the Field



Ray with his revesable Fun Fly!!!
(photos by Brian Morris)

President	Preston Hunt	281-339-3535
Vice-President	Clay Bare	281-488-2992
Treasure	Dave Hoffman	281-476-5206
Secretary	Kellan Goertemiller	281-538-2876

Instructors

Don Fisher	281-474-4942(H)	281-483-2157(W)
Mike Laible	281-474-1255(H)	281-336-4718(W)
James Lemon	281-557-1602(H)	281-280-1267(W)
Mike Goza (Heli & Fixed)	281-554-4016(H)	281-483-4695(W)
David Hoffman	281-476-5206(H)	281-479-1945(W)
Preston Hunt	281-339-2525(H)	713-359-5702(W)
Steve Rhodes	409-948-2881(H)	
Clay Bare	281-488-2992(H)	

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Preston Hunt

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