AMA Chapter 534,
Medford, Oregon

The Rogue Eagle

May 2001

Spring Fun-Fly is Huge Success

Danny Watson conducted an excellent fun-fly and pot-luck several weekends ago and he volunteered to put on an even better one in the fall. There were 16 pilots, six non-fliers and many spectators. There were beginner, intermediate and advanced pilots and they all competed on an equal basis - there were no handicaps for the less experienced fliers. The pilots participated in five events which tested the skills of the best of them. The day began with a fast-slow event, followed by a dead stick landing, looper, taxi race and spindown. The winners of the fun-fly were: Danny Watson - 1st place, Jay Strickland - 2nd place and Bob Knudsen - 3rd place.
Pilots and non-flyers who entered the fun-fly received a 2001 Spring Fun Fly T-shirt and at the conclusion of the contest participated in a raffle which consisted of several hundred dollars worth of merchandise donated by the local hobby shops. The weather was excellent and a good time was had by all.

Nominations Sought

Due to the recent resignation of a board member at large, nominations will be accepted for a replacement board member at the meeting scheduled for **May 8, at 7:30 PM at the Lions Sight and Hearing Center,** in Medford.

Program at next Meeting

A guest speaker, Mr. Paul Bartley, has been invited to speak at our next meeting concerning his work on the original Spruce Goose, the Howard Hughes creation. He will also speak on other aviation related topics from his long aviation career.

Members, please also bring your “show and tell” projects for the rest of the members to enjoy.

Teaching R/C Flying

By Mike Lynch

II. Before The Flight Instruction

Instructors tend to get the brunt of questions from people just thinking about getting into the hobby. Once someone has begun learning to fly, instructors are bombarded with questions related to all facets of this hobby. Even once a beginner has learned to fly, if they have questions (especially about aerobatics), they ask an instructor. This section of the book is devoted to handle the most common questions and problems a beginner has. Though as an experienced pilot you already know much of what is presented in this section, this presentation should help you with your ability to relate what you know to beginners. Also, much of this section can be simply copied and given to beginners with questions.

In this section, I do mention some brand names and actual models, but keep in mind I do so for the sole purpose of offering comparisons. I am not endorsing nor criticizing any of the products mentioned. There are numerous radios, airplane kits, ARFs, engines, and flying accessories of excellent quality. In fact, you really have to go out of your way to find a poor product in this hobby.

Common RC questions: It has been my experience that most beginners to the hobby tend to have the same set of questions as they enter into the RC airplane hobby. So we'll begin by giving a summary of these questions and supply brief answers.

How does the radio control system work? - As with any kind of radio, a transmitter (held by the flyer) is used to send signals to the receiver (in the airplane). Both are powered by (usually rechargeable) batteries. The radio system can have several channels. Each channel is used to control one airplane function. Servos (one for each channel) are used to cause the actual motion within the airplane to make control surfaces move.

A good beginner's radio configuration has four channels. These channels control ailerons, elevator, rudder, and throttle. Two sticks (like computer game joysticks) on the transmitter give the flier control of these four controls. With the most common radio setup mode, the right stick is used to control aileron (left/right) and elevator (up/down). The left stick is used to control rudder (left/right) and throttle (idle through full throttle). Like a computer game joystick, the aileron, elevator, and rudder sticks are spring loaded. When you let go, these sticks spring back to the middle of the control. The throttle stick stays where you place it, from idle to full throttle.

Keep in mind that radio control systems can have more than four channels. Other controls for these channels include retractable landing gear, flaps, and even smoke systems. For now, you should concentrate on the four basic controls. Leave the fancy stuff for when you have mastered the hobby. Within the airplane, servos receive signals from the radio's receiver whenever either of the transmitter sticks is moved. The servos respond according to the motions of the transmitter sticks and cause the control surfaces of the airplane to move in sync with stick movements (through mechanical linkages).
Instructors: If an interested person at the flying field has questions about radio systems, be sure to show them on your own airplane.

Other radio terminology: Trim controls - It is not possible to perfectly set each servo and control surface. Say for example, the plane tends to climb in a hands-off condition. The elevator trim control will give the flyer the ability to trim in some down elevator without affecting the joystick for the elevator. In essence, trim controls allow the flyer to set the radio so that the plane will fly straight and level with hands off the radio. ALL radios come with trim controls for the four basic channels.

By the way, this is another reason that beginners should seek help. It is highly unlikely that a new airplane will behave perfectly with regard to trim settings. A plane that is not trimmed properly can be very difficult to fly (even for an experienced flier). For a beginner, it will be impossible to fly. During your new plane's first flight, the instructor will trim your airplane, causing the centered or neutral position of each channel to be centrally positioned.

Servo reversing - It is sometimes inconvenient (if not impossible) to mount the servos in a way to properly control the control surface. In many cases, the servo will come out backwards (left aileron comes out to be right aileron, for example). The feature servo reversing allows you to mount the servos in the most convenient manner, and if one or another comes out backwards, the servo reversing switch for that servo (in the transmitter) can be turned on. Servo reversing is a standard feature on almost all radios sold today.

Continued on next page

Dual rates - Though not included on every radio, this feature allows you to change the responsiveness of your airplane's control surfaces (usually this feature only applies to ailerons and elevator). On high rates, your servos will move full travel and the plane will be quite responsive. On low rates, your servos may only move about 40-60 percent of their total travels. This is a nice feature for beginners, since you can reduce the responsiveness of your airplane, making it easier to fly.

Mixing - This feature allows you to have one control automatically invoke another. For example, as you give left aileron, the radio can be adjusted to automatically give some right rudder (to make for a smoother turn). While this is a nice feature for experienced flyers, it doesn't help beginners learn to fly. Don't go out of your way to find a radio with this feature for your first radio.

Radio styles - AM versus FM versus PCM - Generally speaking, the most reliable (and most expensive) radio style is PCM (stands for pulse coded modulation). Next in reliability and price comes FM (frequency modulation). Finally comes AM (amplitude modulation). Though almost all of these radio styles are highly reliable, we recommend that beginners purchase an FM radio.

Trainer system - This feature allows the safest manner of flight instruction. We devote an entire discussion later in this set of questions to the trainer system. Please refer to this information. For now, just remember a beginner should not buy a radio without the trainer system!

How many airplanes can fly at a time? - The FCC has allotted over 40 frequencies to model aviation. These frequencies are given numbers, ranging from about 16 to 58. In theory, this means that over forty planes could be flying at the same time! However, the likelihood of forty flyers showing up at the same flying field without duplicating frequencies is low. Also, when more than six or seven planes are in the air at the same time, it can be quite distracting to the flyers (mid-air collisions do happen). **For this reason, Blue Max R/C Club limits the number of planes that can be in the air at the same time to 4 airplanes**. Note that if one flyer turns their transmitter on when another on the same frequency is flying, the pilot of the plane in the air will loose control of the plane. This is why most clubs use some form of frequency control. **Instructors:** be sure your students understand the rules of your frequency control.

How long can they fly? - Depending on the size of the engine and the size of the fuel tank, the range of flight time can be from about 10 minutes to well over 20 minutes. One common recommendation for a .40 sized engine is about a ten ounce fuel tank. This will allow about a 10-12 minute flight with plenty of reserve.

Next Month: What happens if the engine quits?

2001 Club Officers And Coordinators

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Air Show CD:
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2001 Events

April 7 – Spring Fun Fly Potluck
May 5-6 – Agate Float Fly
OMPRA Racing - May 12
May 19 – Builders Contest
May 20 – Ashland, OR EAA
June 2 – Lee Renauld
June 23 – Military Fly In
July 7-8 – Big Bird Fly In
August – Hawthorne Kids Day
August 11-12 – Airshow
September 8 – Fun Fly Potluck
October 13-14 – Agate Float Fly

Rogue Eagles R/C Club,
P.O. Box 8332
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Notice! Notice! Notice!

In order to streamline and reduce club expenses distributing the monthly newsletter, the Board of Directors asks that you comple the following questionnaire and bring it to the next meeting at **07:30 PM, May 8, at the Lions Sight and Hearing Center, 228 N Holly, Medford, Oregon**. If you can not attend, please e-mail the Editor (wkbruck@gateway.net) to inform him of your choices. **IF YOU SUBMITTED THIS QUESTIONNAIRE BEFORE, DO NOT SUBMIT IT AGAIN!**

1) **Would you prefer to see the newsletter in living color on the club web site**? Circle **Yes**, or **No.**

2) If 'Yes' please give your name and e-mail address:_____