RCMB Pilot Training Program

Student Handbook

January 2010

SECTION I PRE-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 student has learned to fly, if they have questions (especially about aerobatics), they ask an instructor. This section of the program is devoted to handling 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.

Common RC questions: 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 pilot command 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 center (neutral) control position. 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 prior to a model's first flight. 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. It is advisable to perform mechanical adjustments to the control linkages such that the plane flies nearly hands off with all trims set in the neutral position. This is a trial and error process that may take several flights. The effort pays off though since trim buttons are easily bumped out of position inadvertently and it can be difficult to estimate the settings if they aren't close to the neutral position.

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 may be impossible to fly. During the new plane's first flight, the instructor will trim your airplane, and advise you on the procedure to mechanically adjust the control linkages 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 most radios sold today.

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 the airplane, making it easier to fly.

Mixing - This feature allows you to have one control automatically invoke another. For example, the radio can be adjusted to automatically give some aileron movement in response to a rudder command (to make for a smoother turn). While this is a nice for feature 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-PPM** versus **FM-PCM vs 2.4Ghz** -Generally speaking, the most reliable radio type is a 2.4Ghz systems, the next style is FM-PCM (stands for frequency modulation - pulse coded modulation). Next in reliability comes FM-PPM (frequency modulation – pulse phase modulation). Finally comes AM (amplitude modulation). Though almost all of these radio styles are highly reliable, we recommend that beginners purchase a 2.4GHz system or an FM-PCM radio.

Trainer system – Commonly referred to as a “buddy box”. 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 that is not set up to accommodate a buddy box.

How many airplanes can fly at a time? -The FCC has allotted 50 frequencies to model aviation. These frequencies are given numbers, ranging from 11 to 60. In theory, this means that fifty planes could be flying at the same time! However, the likelihood of fifty flyers showing up at the same flying field without duplicating frequencies is low. Also, when more than five or six planes are in the air at the same time, it can be quite distracting to the flyers (mid-air collisions, although rare, do happen). For this reason, RCMB normally limits the number of planes that can be in the air at the same time to 6 airplanes. Note that if one flyer turns his transmitter on when another on the same frequency is flying, the pilot of the plane in the air may lose control of the plane. This is why we require frequency control at the field. Instructors: be sure your students understand the rules of frequency control.

NOTE: Flying with a 2.4Ghz radio does not require 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 six once fuel tank. This will allow about a 10-12 minute flight.

What happens if the engine quits? -Most planes designed for beginners will glide quite well. In the hands of an experienced flier, a plane can be safely landed even if the engine quits. Of course the altitude and attitude of the airplane at the time of the engine failure has a lot to do with how difficult it is to safely land the airplane. The higher the plane, the more time the pilot will have to plan the landing. (Landings without power are called dead-stick landings.)

How far away can the airplane fly? -The rule of thumb is if you can see it you have control of it! Generally speaking, your radio will have control of the airplane for distances of more than a mile. The higher the plane, the greater the range.

How fast do they go? - This depends on the style of airplane as well as the size of the engine. Trainers

will fly at speeds of about 20-60 miles per hour, depending on the maneuver. More aerobatic sport planes can reach speeds of well over 90 MPH. Pylon racers designed for speed can go as fast as 150 MPH.

How high can they go? - As high as you can see them. Again, if you can see it, you have control of it! However, flying fields that are located in close proximity to airports usually have some height limitations. Instructors: be sure to relate any rules related to height and position flying.

Is flying an RC airplane like flying a full-scale airplane? - In essence, yes. You'll have the same basic controls a pilot has on a full-scale airplane. However, full scale pilots that have learned to fly RC airplanes say there is quite a difference in actual flying technique. They say an RC airplane responds much faster than a full-scale airplane. They also say that learning to fly RC can be awkward, since there is no feel for the plane's maneuvers. RC flying requires much more hand/eye coordination since you must respond to what you see.

Is it hard to learn to fly? - This is a tough question to answer. Everyone has a different aptitude level for learning RC. This much is certain. RC flying is hard enough to learn that you will not want to try to learn by yourself. You are not likely to meet anyone who learned by themselves that did not go through several airplanes (or at least several crashes) in the process! Fixing airplanes is not nearly as much fun as flying. If you want to learn to fly with the least amount of problems and expense, join the club and work with one of our instructors. He'll flight test and trim your plane, take off and land for you, give you pointers, and stand close by, ready to take control if you get into trouble in the air. While we can't promise that your plane will never crash, you will have a much better chance of keeping your plane in one piece with an instructor than without one.

How long does it take to learn to fly? - Like the previous question, this is tough to answer. It depends upon the student's aptitude. It also depends on how often you practice. The more often you practice the shorter the time it will take to master. You know the saying, "If you don't use it, you lose it!" It truly applies to RC flying. If you only fly once a month, it may take quite a long time. You'll be struggling to remember what was learned in the last session. Some people solo (fly by themselves for an entire flight) in as little as two weeks of practice (every day for several flights). Others may take the whole flying season to learn to fly. Yet others may take more than one flying season. With a good instructor, even the learning stage is fun and rewarding. So this period should seem to go quite quickly, regardless of how long it takes.

What is the best size for learning? - Generally speaking, the smaller the airplane, the less expensive it will be. Unfortunately, the smaller the airplane, the less stable it is and the worse it handles in the wind. Here are the approximate engine sizes as well as the approximate wingspan and weight of several standard classes of RC airplane.

Engine	**Wingspan**	**Weight**
.049 (1/2-A)	35-40"	1-2 lbs
.20	40-45"	2-3lbs
.40	50-55"	4-5 lbs
.60	60-65"	6-8 lbs
.90	70-75"	9-10 lbs
.120	80-85"	10-12 lbs

Keep in mind that all size RC airplanes perform nicely on calm days. We recommend starting with an airplane large enough to handle our typical wind conditions. This means a .40 or .60 size airframe.
What's the hardest part of flying? – Take Off and Landing. Your instructor will first teach you how to keep the plane in the air, making simple turns. Then you'll progress to flying figure eight patterns. Once

you can keep the plane in the air by yourself without any problems, you'll learn to land. Finally, once you have mastered all other phases of flying, you'll learn how to taxi and take off.

How much wind can there be? - Experienced flyers can fly (sport planes) in winds well over 20 MPH. However, the more wind, the harder (and scarier) it is to fly. Beginners won't want to fly in winds much over 8-10 MPH until they have mastered the first step of learning how to fly. Crosswinds may be particularly difficult for the beginner and your instructor may ask you to wait for a better day.

What about flight simulators? – The flight simulator software available today is very realistic and an excellent investment for beginners. The student can log many times the number of flight hours on the simulator than is possible at the field in a given period of time. This investment is virtually guaranteed to rapidly improve your hand/eye coordination and accelerate your learning curve. The use of this tool may shave weeks or months off of the time it would ordinarily take to achieve solo certification.

There are members in our club that have learned to fly mostly using the Real Flight simulator. This is not a complete replacement for an instructor but after spending a day with an instructor the simulator can be used for a lot of practice. This is a very effective combination where the instructor time is used to lean maneuvers and the simulator to practice them every day.

What makes a good trainer plane? - Here are some qualities that contribute to making a good trainer plane:

High wing design - You'll notice that all trainer recommendations we give are high wing airplanes. This is the most stable design (even for full-scale airplanes). Since the body of the fuselage is below the wing, the plane will have a natural tendency to right itself after a turn.

Flat bottom or semi-symmetrical wing - Flat bottom wings are best for stability, which is helpful when learning. However, planes with flat bottom wings are not very maneuverable. Once you do learn to fly, you will eventually want to learn how to do some aerobatics. Flat bottom wing designs perform poorly when it comes to aerobatics. Semi-symmetrical wings have a slight curvature to the bottom of the wing. They are not quite as stable as flat bottom wings, but they do allow moderate aerobatics.

Rugged design - It's almost a guarantee that your first plane will get knocked around quite a bit. You'll want to be sure that it can take some minor bumps and bruises. But be careful here! When a plane is designed to be rugged, it usually sacrifices some of its flying characteristics. There are a number of planes on the market that claim to be almost indestructible, and they almost are, but they sacrifice good flying characteristics to be able to make this claim.

Planes that make good trainers and that we have successfully taught people to fly with:

SIG Kadet LT 40 (ARF and Kit)
Thunder Tiger Trainer 40 (ARF) and Tiger Trainer 60 (ARF)
Hobbico Superstar 40 (ARF) and Superstar 60 (ARF)
Avistar (ARF)
SIG Kadet 60, 91 four stroke *
Hangar 9 Solo Series (ARF)
Hangar 9 Easy Fly .40 (VRTF)
Great Planes Trainer 40 (PT-40 Kit)
* recommended

All these planes are very stable, don't tip stall, can fly very slowly, respond uniformly to controls, and have fairly light wing loading.

Should I build a plane from a kit or buy an ARF (almost ready to fly)? - This is totally up to you. If you enjoy working with your hands, by all means, build your own airplane. You can save a little money (but not much) and you'll have the satisfaction of flying something you built yourself. Also, you'll have the plans to the airplane in case you have to do some repairs after a crash.

On the other hand, if you don't enjoy building, or you wish to get in the air as quickly as possible, there are several excellent flying ARF airplanes on the market. Keep in mind that, even with an ARF, there is still some work to do. While the wing halves, fuselage, and tail section are complete, you do have to final assemble, mount the engine, and install the radio. Most ARFs come with excellent instructions (since they assume beginners are purchasing them), and you can be in the air in about 10-12 hours of building time. The VRTF (virtually ready to fly) designs can be assembled in as little as two hours with no special tools.

Plane and engine size - 40 size trainers offer the best compromise in stable flight and economy. If cost is not a concern, 60 size trainers tend to be substantially more stable than 40 size trainers (especially in higher winds). Difference in total price between a 40 vs 60-size setup is typically less than $100.

When it comes to engines, you should buy a product with a proven track record of reliability and ease of use. Talk to experienced flyers at your field to get recommendations. OS, Magnum, and Saito engines are among the most common name brand engines at our field. All have excellent reputations and most of our experienced pilots will be very familiar with the initial setup and operation.

As far as power, select an engine that is in the middle or top end of the recommended range for the airframe. As a general rule, it is best to err slightly on the overpowered side. As you begin taking off, a good strong engine makes the procedure much easier. If your plane barely has the power to get off the ground, taking off can be quite a challenge. This extra power is also very handy when practicing approaches and for gaining altitude fast. Additionally, once you have learned to fly, a good strong engine will be needed for your next (sport) airplane.

How much do they cost? -This is also a tough question to answer based on the size of the airplane and how many extras you want to buy. For a .40-sized airplane, here are some basic guidelines for costs. Note that this configuration assumes that you wish to keep the cost down

ARF (almost ready to fly) plane: $110.00
.40 sized engine (medium class): $80.00
4 Channel FM radio (with cord): $150.00
Flight box accessories (fuel, etc.): $60.00

Approximate startup cost: $400.00

While this may sound expensive, this is a one-time cost. Your radio, engine, and flight box can be used over and over for other airplanes. Don’t forget that you need to join the AMA and our club to participate in the training program.

What is the trainer system? (IMPORTANT!!) - Imagine you've just built your airplane and you bring it out to the field for the first time. You get together with an instructor and he test flies your airplane and trims it out. Now it is going to be your turn. Your instructor takes off again and gets the plane up to a safe altitude and hands you the transmitter. If you’re like most beginners, you’ll have the plane on its back almost immediately (beginners have the tendency to over-control the plane). Your instructor quickly grabs the transmitter back from you and rights the plane. Then he gives you back the transmitter. You get about 3 more seconds of practice before he has to grab the transmitter again.

This passing back and forth of the transmitter is very cumbersome, error prone, and downright scary. In the beginning, when you are just trying to keep the plane in the air, passing the transmitter will suffice. But as you get better, and you begin to do maneuvers closer to the ground (like takeoffs and landings), you'll want a more fail-safe method of instructor control.

Typically called a buddy box, the trainer system allows you to connect a slave transmitter with the master transmitter via a cable. Once set up properly, the instructor will take the master transmitter and give you the slave transmitter. He'll get the plane in the air and when ready, he’ll simply press a button and you'll have control. If you get into trouble, he releases the button and he has control again. No more passing

transmitters. The trainer system will dramatically improve your odds of learning how to fly without crashing even once (especially as you begin taking off and landing).

Unfortunately, you have to have both a master and a slave transmitter. Most beginners do not want to buy a second complete radio system just to get the slave transmitter. And most pilots will not let you borrow their transmitters to be used as a slave (the servo reversing switches may have to be changed which can cause major problems when they go back to flying their own airplane). Fortunately, the 495th Squadron maintains a buddy box for Futaba and JR radios and cords available to work with students. These are available during normal training times at the field.

Note that the trainer system connector port is not equipped with all radios. Most older AM style radios, for example, do NOT come with this port and those that do typically are not compatible with our modern FM systems. ***You should plan on buying a current model Futaba FM transmitter, JR FM transmitter, or 2.4Ghz unit to ensure that your radio will operate with our training equipment.*** If you prefer to purchase any other brand of radio system, plan on purchasing your own buddy box and trainer cord as well.

Pre-flight inspections - Beginners to RC flying vary dramatically when it comes to building skills. Some are building their very first flying model and find it quite challenging while others may have built other types of flying models and find it rather easy. The kind of airplane has a lot to do with how difficult it is to get into flying condition. ARF's tend to be rather easy, requiring little more than final assembly while kits can be much more challenging. Additionally, correctly installing radios and engines can be somewhat difficult, even for ARF airplanes.

For these reasons, we insist that all beginners have their planes checked for air-worthiness prior to starting flight training. Instructors will check for problems that need to be corrected. Common mistakes that must be corrected before the plane can be flown include having servos activate control surfaces in the incorrect directions (easily fixed by using servo reversing), not placing foam rubber around the receiver for padding, not properly gluing wing halves (on ARFs), not correctly gluing hinges, and improper center of gravity point. Keep in mind that these are but a few of the many things that can cause an airplane to crash, and the instructor must be on the lookout for many more.

Additionally, there may be things an instructor finds that may not cause the airplane to fail (yet) but should be repaired in the near future. For example, certain control surface hardware (clevises, control horns, and linkages) works better than others. An instructor may be willing to help a beginner today, but ask that some things be changed before further help will be given.

Appendix B includes a complete Mechanics Check List for new planes. Encourage students to go over the check list with their plane at home before bringing it to the field. This will minimize the amount of time spent at the field going over the plane for the first time. Review the Mechanics Check List with the student at the beginning of each flying day. In particular, ensure that the engine can be completely stopped by means of the throttle trim. Do not allow any plane to be flown that is not airworthy in every regard.

IMPORTANT SAFETY NOTE: Be sure that the buddy box is properly matched to the student's transmitter before each and every flight. We often share buddy boxes among multiple students on any given day and the potential for reversed servo controls and/or misaligned flight trims should be assumed to be present at any time.

SECTION II

IMPORTANT THINGS A BEGINNER MUST KNOW

Here we include discussions that beginners need to be aware of as they learn to fly. These presentations are made directly to the beginner, so feel free to copy and distribute this information to your students.

When can I fly by myself? The whole point of RC training is to get the beginner to the point where they no longer need the constant help of an instructor. Once you have successfully completed the pre-flight instruction, the four steps of the training program and have earned your solo certificate you should be ready. You must understand, however, that this training will not by any means transform you into an expert pilot! The practice you receive in training is done with close supervision. In the real world, there will be no instructor there to take control when things go wrong. ***You can quickly and unexpectedly get your plane into rather precarious situations from which you may not recover.*** This knowledge should inspire you to be quite cautious for a while.

A few words on discipline. It is important that student's have proper expectations set up front for the approach to flight instruction. Flight training can be very enjoyable and rewarding, for both the student and the instructor. But the instruction must be taken seriously in order to be effective. Instructors should not simply be baby sitters tied to a child by an electronic umbilical cord. The instruction process should proceed from step to step, with each prior step being mastered before moving on to the next. ***The student should not be sidetracked by attempting loops, rolls and other aerobatic maneuvers prior to achieving solo certification status.*** Repetitive practice of the basic training maneuvers will prepare you to react more instinctively when the time comes for aerobatic instruction. The first priority is to develop your skills to become an independent, competent, responsible pilot.

Safety! Safety! Safety! The time we spend at the flying field is intended to be fun, right? From the time we pull into the parking lot until the time we pack up to leave, the only thing on our minds is to enjoy the time away from our troubles. Nobody likes going out to the field only to be bombarded with a bunch of rules and regulations. And of course, no one likes to be yelled at for doing something wrong. We all want to go about the business of having fun.

Unfortunately, our hobby can be a dangerous one. As flyers, we must all treat the hobby with respect and acknowledge the potential for danger. There are numerous times when what one flyer thinks is safe and acceptable will be totally rejected by other flyers on the flight line. We've all heard and seen what happens when a fellow flyer steps out of line. It isn't a pretty sight.

Truly, no intelligent flyer will intentionally do something to cause an accident. It is only when one flyer or another makes an unintentional mistake that accidents can occur. While beginners bear the brunt of the silliest mistakes, even experienced pilots have been guilty of unwittingly breaking safety-related rules.

Appendix A
Field Equipment

The equipment required to get a trainer off the ground can be very inexpensive. There are a few basic items that will suffice to get a beginner into the air and learning to fly but there are other items that can be added to make the job a lot easier.

MINIMUM EQUIPMENT

NAME	DESCRIPTION
Glow Plug Driver	Clip on battery for supplying power to glow plug
Chicken Stick	Stick used for flipping the prop to start the engine
Fuel	Fuel mixture recommended by engine manufacturer
Fuel Bulb	Rubber bulb used to transfer fuel to model tank
4 - Way Wrench	Combination wrench with sizes to fit glow plug, prop nut, etc.
Tool Box	Any box suitable for carrying the other equipment

These items should cost about $60. This can vary depending on the brand of the items and the place from which the items are purchased. An assortment of screwdrivers, pliers, and allen wrenches may also be needed to perform field maintenance.

OPTIMUM EQUIPMENT

NAME	DESCRIPTION
Starter	Battery powered motor for starting model engine
Glow Plug Connector	Clip on battery connector for supplying power to glow plug
Power Panel	Power distribution panel for distributing power from a field battery to starter, glow plug connector, etc.
Field Battery	Small 12 volt wet or gel cell battery
Fuel	Fuel mixture recommended by engine manufacturer
Fuel Pump	Electric pump used to transfer fuel to model tank
4 - Way Wrench	Combination wrench with sizes to fit glow plug, prop nut, etc.
Field Box	Tool box specifically designed for carrying model field equipment

These items will cost about $200. The cost will vary depending on the brand of the items and the place from which the items are purchased. Field box kits are available for a wide range of prices but can be built from readily available materials. An assortment of screwdrivers, pliers, nut drivers, and allen wrenches is also desirable to perform field maintenance.

Appendix B
Mechanics Check List

POWER PLANT

1. PROPELLER

Propeller nut tight
Spinner on tight
Propeller balanced

2. ENGINE

Hold down bolts tight
Head bolts tight
Carburetor secure
Glow plug tight
Note: carburetor will be "stroked" during the CONTROL operation.

3. FUEL SYSTEM

Lines connected properly
Line routing , bends, kinks
Tank mounting
Clunk free

FUSELAGE

1. CONTROLS

Throttle control free
Servos mounted securely and tight
Servo hardware tight
Servo pushrods clear of mechanical interference

2. LANDING GEAR

Main Gear and Nose Gear Hardware tight
Wheels free and collars tight

3. RECEIVER

Check all receiver plugs for proper seating
Check antenna routing
Check receiver overall crash protection

4. BATTERY AND SWITCH

Check switch mounting (opposite muffler side of fuse.
Check wire leads for routing and binding and proper hook-up
Check battery crash protection
Check battery voltage

EMPENNAGE

1. VERTICAL STAB

Check all glue joints for rigidity where joined to fuse
Check rudder hinges
Check rudder control horn
Rudder throw will be checked and set under CONTROL OPERATION

2. HORIZONTAL STAB

Check all glue joints for rigidity where joined to fuse
Check elevator hinges
Check elevator control horn
Elevator throw will be checked and set under CONTROL OPERATION

WING

1. CONTROL SURFACES

Check aileron hinges
Check aileron control horns
Aileron operation will be checked and set under CONTROL OPERATION 2

2. WING ALIGNMENT

Check wings center section joint
Check wings for warp

CONTROL OPERATION

1. TRANSMITTER

Check for your PIN on the frequency pole and no frequency conflicts before operating transmitter
Check transmitter voltage meter for proper operating voltage
Check for proper flags on transmitter
Set all trim controls on center

2. RUDDER AND NOSE GEAR

Check rudder for correct direction (check also nose gear if tricycle gear) (change transmitter switch if necessary)
Check for proper throw
Check all hardware for tightness (especially nose gear control horn on shaft)

3. ELEVATOR

Check for correct direction (change transmitter switch if necessary)
Check for proper throw
Check all hardware for tightness

4. AILERON

Check for correct direction (change transmitter switch if necessary)
Check for proper throw
Check all hardware for tightness and check aileron control shaft from pushrod connection through trailing edge bearings to connection on aileron. There should be no "slop" in the system.
Check for symmetry in neutral position.
Check all hardware for tightness

5. THROTTLE

Check for correct direction (change transmitter switch if necessary)
Check for proper throw. Trim down-carb barrel closed. Trim up-carb open to fast idle. Throttle control off for these checks. Throttle full up-carb barrel full open.
Check all hardware for tightness

BUDDY BOX OPERATION

1. TRIM

Set all transmitter and buddy box trim to neutral or center position.
Ensure that the buddy box power switch is OFF.

2. OPERATION

- Check buddy box for proper tracking with main transmitter for Rudder, Elevator, Aileron, and Throttle. Correct buddy box as necessary to track with main transmitter.

3. RANGE CHECK

Range check transmitter with antenna collapsed and distance of 200 feet.
Check also operation of buddy box through transmitter at the range check.

ACTIVE & CURRENT RCMB INSTRUCTORS
As of August 9, 2009

(1) Jack Stites Chief Instructor	410-592-6996
(2) George Kirsch	717-229-0871
(3) Bob Somers	410-526-4875
(4) Don Stricker	410-329-5226
(5) Bill Heying	410-486-1540
(6) Ron Jasion	410-592-6240
(7) Carl Larson	410-472-4149
(8) Jim Westdorp	410-256-7326
(9) Neil Westdorp	410-256-7526
(10) Jerry Stevens	410-776-5130
(11) Lou Sardella	443-506-3545
(12) Mike Bagley	410-561-3137
(13) Chris Good	410-357-5689
(14) Dr. Mark Lamos	410-683-0026
(15) TroY Lawicki	410-916-8251
(16) Jerry McCallum	410-654-1385

HELICOPTERS

(17) Rick Vinas	410-472-1097

Reminder: Some of the above listed instructors are not often at the field. You may want to call ahead for a time to meet one of our instructors. Remember the instructor is giving up his own flying time.

Students are advised that you can fly one(1) time with an instructor without an AMA membership.
You can fly two (2) additional training days without an RCMB club membership but only with an AMA membership.

After that, you will be required to have both AMA and RCMB club membership.

Other Club, AMA and Baltimore County Parks and Recreation rules apply.

Don't forget to go to the opening page of our website. "Click" on memebership to get your applications to RCMB an AMA.