

# **RACINE R/C CLUB MEMBERS HANDBOOK**



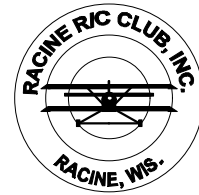
## **2024**

**RACINE RADIO CONTROL CLUB  
AMA CHARTER #668  
RACINE, WISCONSIN**

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# RACINE R/C CLUB MEMBERS HANDBOOK



Welcome to the Racine Radio Control Club. We believe that flying radio controlled model aircraft should be fun. Our club is a private corporation organized to promote safe, and enjoyable radio control model flying.

The club does it's flying at the *Mt. Pleasant Miniature Airport*, located north off of highway 20 and west of highway "H" in the Village of Mt. Pleasant, west of the City of Racine. Turn north onto the road at the intersection of highway 20 and the West Road (at the old red brick schoolhouse) and proceed north about ½ mile. If you follow the sign to the Mt. Pleasant compost site, you will find our flying field.

Only members and their invited guests who are members of the AMA (Academy of Model Aeronautics) are eligible to fly at the club field. The public is always welcome to visit our field and spend some time watching the flying and talking to the pilots.

If you are a newcomer to the hobby, you hopefully have taken the time to learn what equipment you should have, and where you can acquire it. Don't be afraid to ask questions of our members. They will be glad to help you get started the right way. Remember, we all started like you. Get involved! This will aid you getting known by the membership and will help you understand the methods of safe R/C flying, which starts in your workshop.

All new club members, and guest flyers, whatever their experience, need to familiarize themselves with the club field rules and safety policies before flying. New members, and guest flyers, irrespective of their experience, will need to pass a check flight before being permitted to fly alone.

Please review the following pages. They are set up to act as a guide to our club, and to help the new flyer learn what R/C flying is about.

Jim Litwin  
President

# **RACINE R/C CLUB FLYING FIELD RULES**

**(11-12-23)**

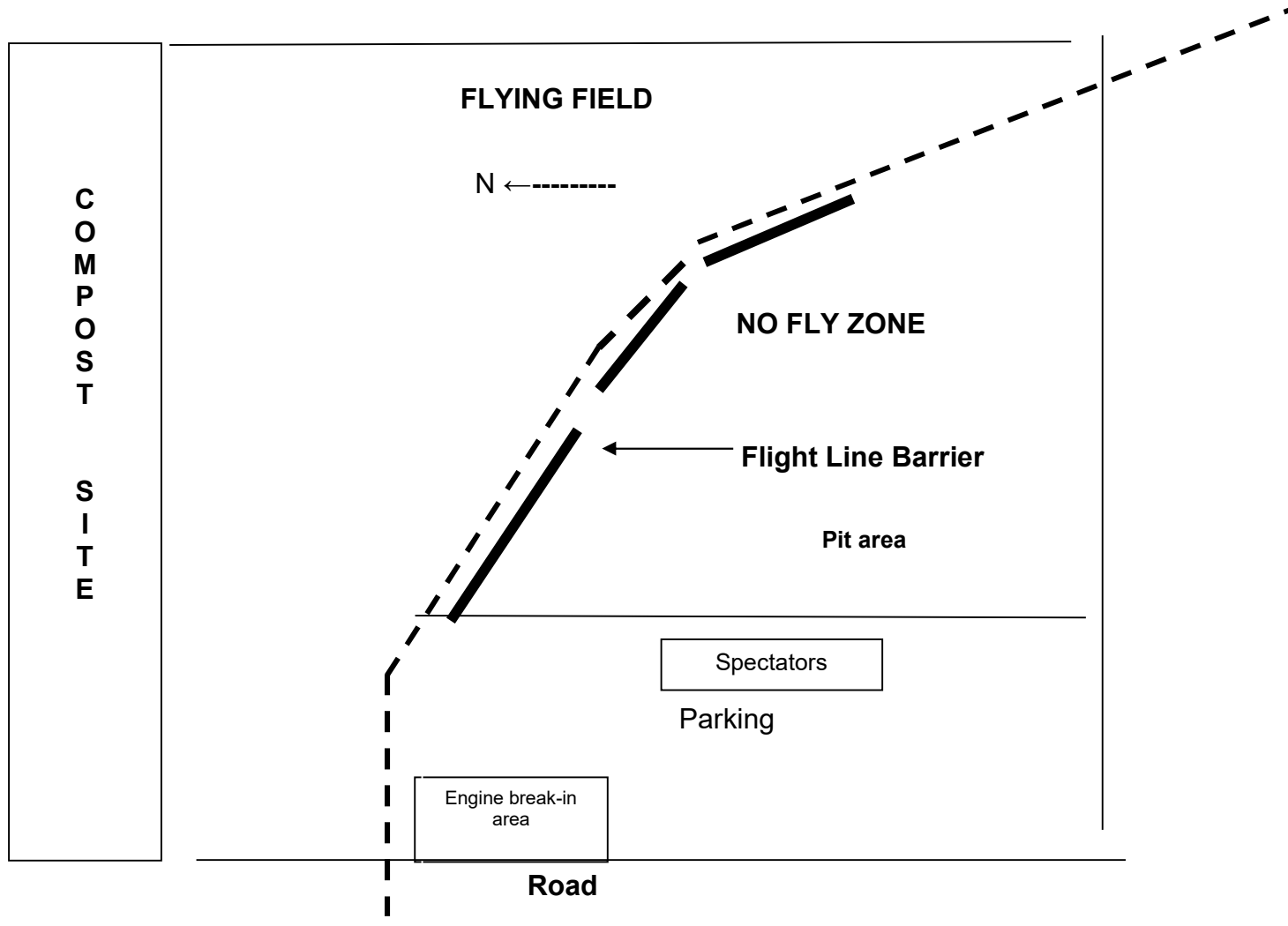
## **(OPERATIONAL)**

- 1. All non-qualified pilots or students must fly with a qualified instructor.**
- 2. Flying for internal combustion powered aircraft (including turbines) begins at 9:00 AM and ends at sunset. 'Silent flight' aircraft, including electric powered aircraft and those using a "highstart" can fly from sunrise to 10:00 PM.**
- 3. Aircraft must be in good condition and equipment installed correctly. All quarter-scale and larger aircraft shall comply with IMAA standards for construction. The flying of turbine powered aircraft (Jets) shall conform to all AMA requirements & standards.**
- 4. Use of an over-flow tank is required while fueling.**
- 5. All airplanes should attempt to comply with the AMA noise limit of 90 dba at 9 feet, as measured per AMA guidelines.**
- 6. No taxiing to, or from, your pit area directly behind any pilot. All taxiing, except in the landing field area, to be done away from people. See diagram at the end of the field rules for designated areas.**
- 7. All piloting should be done from behind the flight line barrier. As a courtesy, if someone is waiting for the frequency there is a 15 – minute time limit for each flight.**
- 8. Restricted flying:**
  - There shall be no flying while flying field grass is being cut or fieldwork is being done.**
  - There shall be NO intentional flying over the pit area, parking lot, or railroad tracks, or south beyond flying field wind socks.**
  - There shall be NO flying when the compost site is open for residents.**
  - When ONLY Village workers are in the compost site, limit flying so as to not fly directly over the Village workers.**
  - When the orange safety flag is displayed on the west wind sock pole, Drone Company (MENET AERO) may be testing drones by flying**

**them. Do NOT fly near trees located northwest of flying field / compost site.**

- **See Diagram below for guidance**

- 9. Announce take-offs and landings. All dead sticks have right of way. No restarting of engines beyond flight line.**
- 10. No hot dogging close to or directly at the flight line or pit area. Keep low level, high speed flying over center of the field at all times. THIS WILL BE STRICTLY ENFORCED.**
- 11. No breaking in of engines at the pits. Breaking in is to be done at the west end of the parking lot.**
- 12. No excessive running or revving of engines at the immediate flight line. All take-offs must be made from the flight line, with the pilot in proper position.**
- 13. All guest flyers must be a member of AMA, qualify, and be accompanied by club member in good standing, and abide by club rules. Guest flyers limited to "Club Invitational Events" and/or two (2) times per calendar year.**
- 14. Pick up all trash and debris before leaving field.**
- 15. No alcoholic beverages allowed or consumed at the flying site at any time, nor shall pilots be under the influence of an intoxicant.**
- 16. The Racine RC Club does not allow rotary wing aircraft with the exception of special demonstrations, and the search & recovery of down aircraft. No other aircraft may fly while the rotary wing aircraft are being flown.**
- 17. All aircraft must be flown within visual line of sight of the person operating the aircraft, and that the operator use his or her own natural vision to observe the aircraft, and people other than the operator may not be used in lieu of the operator for maintaining visual line of sight.**
- 18. There shall be no operating of defective / inappropriate aircraft and / or operating aircraft in an unsafe manner which is detrimental to the club.**
- 19. Members shall not conduct themselves in an abusive, indecent, profane, boisterous, unreasonably loud or otherwise disorderly conduct which is lacking in courtesy and sportsmanship.**



**NO FLY ZONE**

**There is NO flying behind the flight line, marked as “NO FLY ZONE”, for any reason.**

# FLYING FIELD GATE LOCK SYSTEM

## (INFORMATIONAL)

Some basic rules will apply with the use of the padlocked gate.

1. When arriving at the gate and it is locked, unlock the combination pad lock on the lock box. The lock box is attached to a gate post. Remove the gate key and unlock the gate pad lock. Open the gate, and leave it open. Replace the gate key in the lock box, and secure the lock box with the club's combination pad lock. This allows visitors to watch our flying and access to emergency response personnel.
2. The last person leaving the flying field shall lock the gate upon leaving the flying field. This insures that unauthorized individuals cannot access the flying field or compost site.
3. Do not give out the combination code to the lock to others. Only current members will be given the current combination code, and the combination code will be changed each year, to insure that only current members have access to the gate. New members will have the combination code placed on the back of their membership card, or it will be given out via special memo.
4. The club's padlock is a "Sesamee" brand. It will have the letters "RC" scribed on the sides.

To open - Turn wheels to the combination. Depress shackle.

To lock - Turn the wheels to scramble the numbers. Depress shackle.

Only the Village's key operated padlock will be used on the gate.

This system should insure that the gate will not become locked in such a way as to prohibit Village personnel from accessing the site.

# **RACINE R/C CLUB BY - LAWS (10-18-2020)**

**(OPERATIONAL)**

## **MEMBERSHIP**

### **SECTION 1.01 ELIGIBILITY**

1. Flying membership shall be open to any person who is a member of the Academy of Model Aeronautics and by application, payment of dues and assessments for that year in full, and approval of any one of the officers. A member must maintain his/her membership in the Academy of Model Aeronautics.
  - A. Up to 30%, and including, of the membership may reside outside of Racine and Kenosha counties. The maximum number of non-Racine or Kenosha county residents for the forthcoming year is to be determined based upon the total current membership number as of the club year-end, December 31st. Acceptance of any additional applications for membership in excess of this number are only to be accepted by vote of the membership.
  - B. At the time of application/renewal, all regular members and senior citizen members shall be obligated to sign up to work at least three (3) shifts at the Mt. Pleasant compost site. Compost Site duty dates may be selected by the member prior to the opening date of the compost site for the season. After that date, the Compost Site Chairman may assign any member a duty date, if the member has not selected a duty date. The member is responsible for working the Compost Site assignments selected or assigned. The Club will not be involved in a date changes or replacements
  - C. Membership in the club is conditional upon agreement to assist with staffing the Mt. Pleasant Compost Site on scheduled Wednesday afternoons, Noon - 6 PM, and AMA membership.

That in the event there are insufficient regular and senior citizen members to staff the compost site, that additional staffing to fill vacant positions would be accomplished by:



- (1). Volunteers from the membership. Volunteers, who do an additional 4 hours, will be excluded from any lottery selection as described in # 2 below. In the event there are insufficient volunteers;
- (2). A lottery would be used to select members for the additional staffing needs. Those selected to staff the compost site from the lottery would be excluded from any future lottery selections for the next five (5) years, however, they would still be obligated to fulfill their normal, annual, compost site obligations.

## **SECTION 1.02 CLASSES OF MEMBERS**

1. There shall be the following classes of members:
  - A. Regular Member – A regular member shall be eighteen (18) years of age or older. Dues rate to be \$70.
  - B. Junior Member – A junior member shall be under eighteen (18) years of age. Special junior rate to be \$1.00 .
  - C. Senior Citizen – A senior citizen shall be sixty-five (65) years of age or older. The senior citizen rate applies if the person achieves the age of 65 at any time during the club's fiscal year. Special senior citizen rate to be \$40.
  - D. Non-Flying Member – Dues rate to be \$30 with no assessments.
  - E. Family Member - Two (2) adults residing at the same address. Special family rate to be \$80.
  - F. Honorary Member – Shall be granted by a majority vote of the club membership in attendance at a regular meeting, in appreciation of the support or service to the club and/or the RC hobby. May be awarded to those members ceasing to be active members. There are no flying privileges, voting rights, nor any other rights as afforded other members of the club. Honorary members may receive the club newsletter if requested.
2. All members shall be that age attained on or before July 1<sup>st</sup> of that year.
3. Any member may change their membership status by paying the difference in cost from their current membership class to the new membership class.

## **SECTION 1.03 VOTING**

1. Only members in good standing shall have voting rights.

## **SECTION 1.04 GOOD STANDING**

1. To be in good standing, members must have paid their dues for the current fiscal year. The good standing of a member must be suspended in the manner provided in Article 1.05.

### **SECTION 1.05 EXPULSION AND SUSPENSION**

1. For Non-payment of Dues, Penalties or Assessment: A member shall automatically be expelled without any necessary action of the members of Board of Directors for failure to pay all dues penalties, or assessments, or performing required Compost duty.
2. Hardship Considerations: Financial problems would be reviewed individually by Club Officers upon request.
3. Expulsion or Suspension of Good Standing for Rules Violation: A member may be expelled or his/her standing revoked for a period of time for violating any of the club rules or regulations. The Secretary shall give written notice to a member of his/her proposed expulsion or suspension of good standing. The proposed expulsion or suspension shall be presented by the Secretary to the members at a regular or special meeting called for the purpose. Expulsion or suspension for a period of time for rules violation shall be only by affirmative vote of two-thirds of the members present at such meeting. Voting shall be done by a paper ballot.
  - A. Those individuals who did not perform or cover in some way their "Compost Duty" obligation shall pay a \$40 penalty assessment in addition to their yearly dues at the time of their membership renewal for the New Year, in addition to the provisions of By-Law provisions "Reinstatement" 1.06(1).

### **SECTION 1.06 REINSTATEMENT**

1. Once expelled, a former member may be reinstated upon application and approval at a regular membership meeting by a two-thirds vote of all the members present at such a meeting, and all dues and assessments he/she would have paid if he/she had not been expelled are paid.

### **SECTION 1.07 WITHDRAWAL**

1. A member may withdraw from membership upon written application to the Secretary setting forth the reasons for such withdrawal. Reinstatement of a withdrawn member shall be in the same manner as a new member. If such reinstatement shall be during the same calendar year as the withdrawal, the reinstated member shall pay all dues, assessments, or other amounts he/she would have paid had he/she been a continuous member for the calendar year.

## **SECTION 1.08 RIGHTS OF MEMBERS**

1. Upon expulsion or withdrawal, all rights of the member in the club or its property shall cease.

## **SECTION 1.09 RIGHTS NON-TRANSFERABLE**

1. Membership and all rights arising there from are non-transferable.

## **ARTICLE II**

### **DUES AND ASSESSMENTS**

#### **SECTION 2.01 DUES YEARS**

1. Dues shall be in the amount set by the members at a regular or special meeting called for that purpose before the end of the preceding calendar year. In the event dues are not set in the preceding calendar year, dues for the current year shall be in the same amount as the preceding calendar year.

#### **SECTION 2.03 ASSESSMENT**

1. Assessments to members in amounts not to exceed twenty five (25) dollars in any one calendar year may be made by affirmative vote of two-thirds of those members present at a regular or special meeting called for that purpose. Regular club members shall be assessed at 100% of the assessment, and senior citizen members shall be assessed at 50% that of regular members. New members joining the club following an assessment shall pay those assessments of the current year prior to their joining the club.

#### **SECTION 2.04 WHEN DUES ARE DUE**

1. Yearly dues shall be due on or before January 1<sup>st</sup> previous to the flying year.

#### **SECTION 2.05 PRORATING OF DUES**

1. Dues for new members joining after August 1<sup>st</sup> of a calendar year shall be fifty percent (50%) of the yearly dues paid plus 100 percent (100%) of any assessments for that year. Returning members shall not be eligible for the reduced rate unless gone from the club for two (2) years.

## **ARTICLE III**

### **MEETINGS**

#### **SECTION 3.01 ANNUAL MEETING**

1. The annual meeting of the members of the club shall be held annually on the second Sunday of November at such time and place, in Racine County, State of Wisconsin, as may be fixed by the President.

#### **SECTION 3.02 MONTHLY MEETINGS**

1. Regular monthly meetings of the members shall typically be held on the third Sunday of each month, except November and December, which will be held on the second Sunday, at the time and place set by the President.

#### **SECTION 3.03 SPECIAL MEETINGS**

1. Special meeting of the members shall be called by the President, or at the written request of five (5) members to the President. No business shall be conducted at any special meeting excepting such as may be related to the purpose designated in the notice thereof.

#### **SECTION 3.04 NOTICE OF MEMBERS MEETINGS**

1. Notice of the time and place of the annual and all special meetings shall be given by the Secretary to each member of the club by mailing such notice not less than three (3) days before the day appointed for such meeting, addressed to each member at his/her address as it appears on the records of the club, provided, however that any member may waive notice to him/her of any meeting. If the proposed meeting is a special meeting, the notice will state the purpose of such meeting.

#### **SECTION 3.05 QUORUM**

1. Ten of the members of the club entitled to vote shall constitute a quorum at a meeting, but a smaller number shall have the power to adjourn at a meeting of the members from time to time.

#### **SECTION 3.06 VOTING AND ELECTIONS**

1. All voting shall be acclamation, except that:

- A. All elections shall be by secret ballot whenever any candidacies are contested, and
- B. Upon request of any five (5) members before or immediately after a vote, the vote of any other matter shall be finally determined by ballot or roll call.
- C. There shall be no proxy voting.

## **ARTICLE IV**

### **OFFICERS AND BOARD OF DIRECTORS**

#### **SECTION 4.01 COMPOSITION OF THE BOARD OF DIRECTORS**

1. The Board of Directors shall consist of the officers of the club.

#### **SECTION 4.02 TERM**

1. All terms for all officers shall be one year, starting January 1. There is no limit on the number of consecutive terms for an officer.

#### **SECTION 4.03 VACANCIES**

1. The position of an officer and director shall become vacant whenever:
  - A. He/she ceases to be a regular member in good standing, or
  - B. He/she shall resign such office, or
  - C. His/her office shall be declared vacant by affirmative vote of two-thirds of the members at a regular or special meeting, whether for failure to attend meetings, neglect duties, or any other reason deemed sufficient by the members.
2. In the event of a vacancy of any officer or director, the Board shall appoint by a majority vote of the entire remaining Board, a regular member in good standing to fill out the unexpired portion of said vacancy.

#### **SECTION 4.05 NOTICE OF MEETINGS**

1. Notice of all Board meetings, except that meeting immediately following the annual meeting, shall be given to each officer and director by delivery of, or telephoning such notice personally, or by message left at his/her office or residence twenty-four (24) hours or more before such meeting, or by mailing such notice to the officer and director at his /her address shown on the books of the club forty-eight (48) hours or

more before such meeting. Any officer and director may waive notice of any meeting.

#### **SECTION 4.06 QUORUM**

1. A majority of the officers and directors at the time in office shall constitute a quorum.

#### **SECTION 4.07 OFFICERS**

1. The officers shall be the President, Vice-President, Secretary-Treasurer, Field Chairman, Tractor Chairman, Newsletter Editor, Safety Officer, and Compost Site Chairman and Webmaster.

#### **SECTION 4.08 DUTIES OF OFFICERS**

- A. President - The President shall be the principal officer, preside at all meetings of the members and Board, and perform all such duties as are incumbent on such office. The president-elect shall develop an estimated budget of expenditures for the up-coming year. This budget is informational and not subject to approval by the membership. Expenditures will still require membership vote.

**NOTE:** The membership authorized the President, with concurrence of another club officer, to spend up to \$200 per year on special matters relating to the operation of the club, without needing approval by the membership. (10-15-2000)

- B. Vice-President - The Vice-President shall assume the duties of the President in case of his/her absence or temporary disability, and perform all other duties required of him/her. He/she will also be Event Director for the year.
- C. Secretary-Treasurer - The Secretary-Treasurer shall keep minutes of all meetings, conduct correspondence, take custody of all monies and all valuable papers and property of the club and perform all other duties.
- D. Field Chairman – The Field Chairman shall see to the maintenance of the flying site and all structures.
- E. Tractor Chairman – The Tractor Chairman shall see to the maintenance of the tractor and field equipment.
- F. Newsletter Editor – The Newsletter Editor shall publish a monthly newsletter prior to that month's meeting.
- G. Safety Officer – The Safety Officer shall be responsible for noise abatement, frequency markers, and safe flying practices, and coordination of instructors. The Safety Officer shall act as chairman of the Safety Committee. The Safety Committee shall consist of the officers of the club and two (2) members at large.
- H. Compost Site Chairman – Compost Site Chairman shall be responsible for coordinating membership participation at Mt. Pleasant Compost Site. Shall also

act as a liaison with the Village of Mt. Pleasant. The Compost Site Chairman has the authority to assign Compost Site Duty dates to those members who have not selected, prior to the opening of the Compost Site, a compost site duty date.

- I. Webmaster – Maintaining the clubs' internet website.

#### **SECTION 4.09 SPECIAL DUES CONSIDERATION**

1. Officers shall be exempt from dues for their term of office.

### **ARTICLE V**

#### **COMMITTEES**

##### **SECTION 5.01 APPOINTMENT**

1. The President, after consultation with the Board of Directors, shall appoint the chairman of any committees, who shall hold office at the pleasure of the President. The members of any committees shall be appointed by the chairman after consultation with the President.

### **ARTICLE VI**

#### **FISCAL YEAR**

##### **SECTION 6.01 FISCAL YEAR**

1. The fiscal year of the club shall begin on January 1<sup>st</sup> and end on December 31<sup>st</sup> in each year.

### **ARTICLE VII**

#### **AMENDMENT OF BY-LAWS**

##### **SECTION 7.01 AMENDMENT OF BY-LAWS**

1. These by-laws may be amended at the annual (November) membership meeting by a majority vote of those present.

##### **SECTION 7.02 AMMENDMENT OF FIELD RULES**

1. These field rules may be amended at the annual membership meeting by a majority vote of those present. All proposals shall be brought before the Rules Committee, (All officers and two (2) volunteers from the membership).

## **SECTION 7.03 AMENDMENT**

1. By – Law amendments and field rule changes will be discussed and voted on during the annual meeting. All proposals shall be published in the October and November month's newsletter. Emergency situations will be handled as necessary.

## **ARTICLE IX**

### **GRIEVANCE PROCEDURE**

#### **SECTION 9.01 GRIEVANCE PROCEDURE**

1. Purpose: The grievance procedure provides a mechanism to enforce existing safety rules by providing a progressive disciplinary system when needed. Although most complaints can be resolved informally, if a complaint is serious or cannot be resolved informally, the matter should be referred to the Safety Committee for its consideration by means of a Grievance Form to be filled out and turned into the Safety Committee Chairman. At least one witness is required to sign the Grievance Form.
2. Safety Committee: The Safety Committee shall use its judgment in carrying out action on the following:
  - (a) A grievance form (see page below) will be filled out and turned into the Safety Committee Chairman. At least one witness is required.
  - (b) FIRST VIOLATION
    - a. Viewpoints of both complainants and accused will be considered.
    - b. Complainant's name will be disclosed.
    - c. A verbal reprimand will be given to the accused by the Safety Committee, and this will be recorded in the Committee files.
  - (c) SECOND VIOLATION
    - a. Complainant's name will be disclosed.
    - b. The accused has the right to a written rebuttal, to be reviewed by the Committee.
    - c. If the Committee so decides, the flying privileges of the accused will be suspended for thirty (30) days. Written notice of this shall be issued and a copy published in the Club newsletter.
  - (d) THIRD VIOLATION
    - a. Committee will notify the accused in writing and the Club members via the Club newsletter that the Club will vote on the expulsion of the accused at the next meeting.



- b. Said expulsion will last for a one-year minimum. (Longer if deemed necessary by the Board of Directors).
  - c. A member may be expelled from the Club only upon a two-thirds (2/3) majority vote of the membership present at the meeting.
  - d. Voting will be by secret ballot at a regular monthly meeting.
  - e. The expelled member may reapply for membership after the expiration of the expulsion time period.
- (e) The three actions will not be enforced unless they are accumulated within a two-year period of time.
- (f) Any member receiving a Grievance, who directs any retaliation action against the person filing said Grievance, will be subject to immediate expulsion from the Club. This is to include threats, intimidation, physical harm, intentional equipment damage, or any other action deemed to be retaliatory by the Board of Directors.

# **RACINE RADIO CONTROL CLUB**

## **Grievance Form**

Date: \_\_\_\_\_

Time : \_\_\_\_\_

Nature of Violation:

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Signature of Complainant ( Person Filing Grievance):

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Witness (To Violation): \_\_\_\_\_

Additional Witnesses (Not Required):

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The grievance procedure provides a mechanism to enforce existing safety rules by providing a progressive disciplinary system when needed. Although most complaints can be resolved informally, if a complaint is serious or cannot be resolved informally, the matter should be referred to the Safety Committee for its consideration by means of a Grievance Form to be filled out and turned into the Safety Committee Chairman. At least one witness is required to sign the Grievance Form.

# **RACINE R/C CLUB RADIO USAGE GUIDELINES**

## **(OPERATIONAL)**

The Racine R/C Club has adopted the following system for using and displaying radio control aircraft frequencies. The adopted system incorporates AMA recommendations, and should make flying at our field both safe and take advantage of state of the art radio equipment.

The FCC has directed, with the AMA concurring, that the so-called "old frequencies" (72.080, 72.160, 72.320, 72.400, 72.960, and 75.640) will no longer be legal for model operation after December 20, 1987, and they will not be allowed at the Racine R/C Club flying field after that date.

**EFFECTIVE MARCH 1, 1998, ALL NON-NARROW BAND TRANSMITTERS WILL BECOME ILLEGAL TO OPERATE PER FCC MANDATES. It is suggested that your receiver be upgraded .**

At this time the following frequencies are authorized at our flying field:

### **I. 72 MHz AIRCRAFT FREQUENCIES AUTHORIZED**

Channel 11 thru Channel 19  
Channel 21 thru Channel 60

### **FREQUENCY BOARD IDENTIFICATION**

1. No 72 Mhz transmitter shall be turned on unless the operator of the transmitter has inserted into the appropriate slot on the "Frequency Board" their current club membership card and AMA membership card, claiming the frequency.

### **II. NO AIRCRAFT SHALL BE OPERATED ON THE 27 MHZ FREQUENCY RANGE AT THE RACINE R/C CLUB FLYING FIELD.**

### **III. 6 METER AMATEUR RADIO BAND**

Aircraft operated by radio equipment in the 6 Meter band shall conform to the following guidelines.

<u>CHANNEL #</u>	<u>FREQUENCY</u>	<u>CHANNEL #</u>	<u>FREQUENCY</u>
00.....	50.800	06.....	50.920
02.....	50.840	08.....	50.960
04.....	50.880		

### **FREQUENCY BOARD IDENTIFICATION**

1. No 6 meter transmitter shall be turned on unless the operator of the transmitter has inserted into the appropriate slot on the "Frequency Board" their current club membership card and AMA membership card, claiming the frequency.

### **53 MHz AIRCRAFT FREQUENCIES**

<u>FLAG COLORS</u>	<u>FREQUENCY</u>
Black - Brown.....	53.100
Black - Red.....	53.200
Black - Orange.....	53.300
Black - Yellow .....	53.400
Black - Green.....	53.500
Black - Blue.....	53.600
Black - Purple.....	53.700
Black - Gray.....	53.800

### **FREQUENCY BOARD IDENTIFICATION:**

1. No 53 Mhz transmitter shall be turned on unless the operator of the transmitter has inserted into the appropriate slot on the "Frequency Board" their current club membership card and AMA membership card, claiming the frequency.

Note: The use of a transmitter frequency number flag, and the red transmitter "Aircraft Frequency Banner" are optional.

# **RACINE R/C CLUB COMPOST SITE GUIDELINES (2023) (OPERATIONAL)**

Proper operation of the Mt. Pleasant Compost site is required by the membership of the Racine R/C Club if we are to continue using our flying field. In order to properly perform our duties, the following guidelines must be followed.

1. **One Racine R/C Club members needs to be present while the compost site is in operation on our assigned days. Please wear the safety vests.**
2. **Approach each person coming to the site and determine if they are a Mt. Pleasant resident. Use the address index if they do not have a bright green or yellow Mt. Pleasant compost site sticker.**
3. **Check the items coming to the compost site to insure they meet the following:**

**ALLOWED:** Grass clippings, leaves, and vegetative matter in one pile, and brush/branches not more than 7 feet in length, and 4" in diameter or less in the other pile.

**NOT ALLOWED:** Sod, soil, concrete, rocks, garbage, and recyclable items. No lumber , fencing, or lumber products.

**NOTE:** Contractor permits are available at the Town Hall and are required.

**NOTE:** Brush is to be placed on the west side of the big brush pile (The side towards the shed).

4. **We are responsible for the compost site on Wednesdays from 12 Noon to 6 PM.**
5. **Walk around the compost site while vehicles are unloading to insure that only the appropriate items are being left at the site. Ask residents to pile their items as high as they can to prevent the pile from growing too wide.**
6. **Make notations in the log book if you find any inappropriate items left at the site when you start your shift, or if you have any problems. Use the counter to record the numbers of vehicles entering the compost site & record in the log book.**
7. **PLEASE BE POLITE ! The Village compost committee will be checking on our performance. Please cooperate. It is a small price to pay to keep our flying field.**
8. **Contact, Chuck Roberts, Compost Site Chairman, immediately if someone does not show up as scheduled, or for all problems and questions at 224-717-9998 (Cell).**

# RACINE R/C CLUB

## SAFETY TIPS

### (INFORMATIONAL)

Safety is a something that should be practiced not only at the flying field, but also in your work shop, while transporting your model airplane, and throughout your day. It would be impossible to list all the safety rules that would apply, but the list shown should be representative of what you should be considering.

#### **WORKSHOP**

Make sure your model building area is safe. Keep sharp tools secure and away from any youngsters that might be around. Insure there is plenty of ventilation available when using CA adhesives, and use a dust mask when you are doing a lot of sanding. Watch the hot irons when covering your model. Survey your work area with safety in mind.

#### **AIRPLANE**

Look over your plane as you build it, making sure that it has the physical integrity to fly safely. Paint the prop tips with a light color so you can see the tips as the engine is running. As you build, make sure you properly install all radio equipment, with sufficient padding and it is well secured. All servos should work easily, and there should be no chattering or glitches in the radio system when you test it. All control surfaces should move freely when they are not linked to a servo, and hinges firmly attached. Pinning the hinge is recommended. Your radio system batteries should be cycled periodically to insure they have the proper capacities, and keep them charged. You should use a spinner, or a safety nut to help prevent problems should the prop nut come off. Your name, address, and AMA number should be located inside your airplane. It is recommended that you use the attached "Check List" after completing your airplane to see if you missed anything.

If you are building a giant scale model airplane, it must conform to the IMAA standards (Rule #4), and these are included in this handbook.

#### **PIT AREA**

Make sure your airplane is properly positioned in the pit area and use some type of hold down device to help keep your plane in position when you are starting it. Wheel chocks could be used. Your radio should be in the impound rack when you have not claimed a radio channel to use. Your channel plaque must be on your transmitter. When starting your airplane, make sure the prop is clear. Things like wires from your power panel to the glow plug, starter power cable, and radio transmitter antenna all have a way of getting near the prop when starting your engine. **KEEP YOUR FINGERS AWAY FROM THE ARC OF THE PROP.** It is easy to stick you fingers into the prop when adjusting the engine carburetor , so be

careful. Start your engine from the front, and make deliberate motions so as to avoid the prop. When you want to increase the RPM of your engine, do it while standing at the rear of the plane.

### **FLIGHTLINE**

Take-off and landings for everyone at the field should be from the same corner of the flight line, depending on the wind direction of the day. When moving your airplane from the pit area to the flight line area, either carry the airplane, or hold onto it as you go to the corner of the flight line. Watch to see if anyone else is either starting to take-off or land. Call out loudly your desire to take off, and listen to the responses to determine if anyone else is preparing to land. Make sure your transmitter antenna is extended, radios equipment on and perform one last control surface test. Announce your take-off intention, and then take off. After take-off, it is suggested that you move down the flight line to make the corner position available to someone else who may want to take-off or land. Fly safely and respect the flying space of others. When you plan to land your airplane, announce your intent so others will know what is going on around them.

### **EMERGENCIES**

If someone gets hurt, and medical help is needed, see if anyone has a cellular telephone. If not, drive to the nearest home, and request a rescue squad. This can be done by dialing 9-1-1. Mt. Pleasant Rescue will respond. There is a first-aid kit near the radio transmitter impound rack for minor injuries.

# SAFETY INSPECTION CHECK LIST

## (INFORMATIONAL)

The below listed check-list should be used everyone prior to flying a new plane, or one that has been rebuilt after a crash or hard landing. It will help detect problem with your airplane before it gets into the air. It is also recommended that everyone use this check list when bringing your plane out after winter storage.

**AIRCRAFT** \_\_\_\_\_ **ENGINE** \_\_\_\_\_ **SIZE** \_\_\_\_\_

**OWNER/BUILDER** \_\_\_\_\_

	<u>ACCEPT</u>	<u>REJECT</u>
<b>GENERAL APPEARANCE</b> - overall appearance (check for damage, warps, loose covering, etc.)	( )	( )
<b>PROPELLER</b> - secure (check for cracks, damage)	( )	( )
<b>ENGINE</b> - securely attached	( )	( )
<b>KILL SWITCH</b> - except glow engines (see if able to kill engine with radio)	( )	( )
<b>LEFT WING</b> - attachment secure	( )	( )
<b>LEFT WING</b> - aileron hinges secure	( )	( )
<b>LEFT WING</b> - control link secure	( )	( )
<b>LEFT WING</b> - control pushrod stiffness	( )	( )
<b>ELEVATOR</b> - hinges secure	( )	( )
<b>ELEVATOR</b> - control link secure	( )	( )
<b>ELEVATOR</b> - control pushrod stiffness	( )	( )
<b>RUDDER</b> - hinges secure	( )	( )
<b>RUDDER</b> - control link secure	( )	( )
<b>RUDDER</b> - control pushrod stiffness	( )	( )
<b>TAIL SURFACE</b> - brace wires secure	( )	( )
<b>RIGHT WING</b> - attachment secure	( )	( )
<b>RIGHT WING</b> - aileron hinges secure	( )	( )
<b>RIGHT WING</b> - control link secure	( )	( )
<b>RIGHT WING</b> - control pushrod stiffness	( )	( )
<b>CANOPY OR WINDSCREEN</b> - secure	( )	( )
<b>HATCHES OR COVERS</b> - secure	( )	( )
<b>WHEELS AND LANDING GEAR</b> - secure	( )	( )
<b>BATTERIES FULLY CHARGED</b> - check	( )	( )





# IMAA SAFETY CODE

(Revised 01/31/2003)

(OPERATIONAL)

## **SECTION 1.0: SAFETY STANDARD**

**1.1 Adherence to Code:** The purpose of this Safety Code is to provide a structure whereby all participants, including spectators, will be aware of the inherent dangers in the operation of radio controlled aircraft. This code is meant to serve as a minimum guideline to all participants. It is understood that the ultimate responsibility for the safety of any aircraft lies with the owner(s), pilot(s) and spectator(s) involved in any event. It is the responsibility of all participants to exercise caution when operating, or observing the operation of all radio controlled aircraft. The pilot/owner of an aircraft will not be dissuaded from taking whatever steps they deem necessary, in addition to this code, to insure that their aircraft is safe.

**1.2** The most current AMA Safety Code in effect is to be observed.

**1.3** It is the responsibility of the Safety Officer to inform all participants, including spectators, of the dangers involved in the operation of radio controlled aircraft. Announcements are to be made at regular intervals to remind all individuals of the necessity of being observant, and on the alert for any problems with an aircraft.

## **SECTION 2.0: SAFETY OFFICER**

**2.1** Each IMAA sanctioned event will appoint a Safety Officer. The Safety Officer will appoint a Safety Committee who will be responsible for assisting pilots with their safety review of their plane. The Safety Committee has the right to ground a plane should the pilot not perform the required safety review. The Safety Officer, as assisted by the Safety Committee will also be responsible for the transmitter impound, crowd control, and assisting all participants in order to provide for a safe and enjoyable event.

**2.2** The Safety Officer(s), required by this Safety Code, are to help and assist the pilot (or owner), and are not to determine the technical airworthiness of a model, or the competence of the pilot. It is the responsibility of the pilot (or owner), and theirs alone, for a safe model and a safe flight.

2.3 The Owner/Pilot agrees to abide by the most current AMA Safety Code as described in Section 1.2

### ***SECTION 3.0: SAFETY REVIEW***

**3.1** All pilots must perform a Safety Review in the presence of a member of the event's safety committee.

**3.2** The IMAA has an official Safety Review Form that is to be used for the purpose of inspecting aircraft for any deficiencies/requirements. It shall be completed and signed by the pilot in the presence of a member of the event's Safety Committee. Copies of the IMAA Safety Review Form are available from the District Director or IMAA Sanction Coordinator.

**3.3** After completing a Safety Review, the aircraft may be flown as often as the pilot desires, provided that they follow the chosen frequency control standard. However, if the airplane is involved in an accident, no matter how minor, and the pilot wishes to fly again, the aircraft shall go through another Safety Review.

**3.4** Flight Testing: All aircraft are to have been flight tested and flight trimmed with a minimum of six (6) flights before the model is allowed to fly at an IMAA Sanctioned event.

**3.5** Proof of Flight: The completing and signing of the Declaration section of the Safety Review form (see Section 3.2) by the pilot (or owner) shall document, as fact, that the noted aircraft has been successfully flight-tested and proven airworthy prior to the IMAA event.

### ***Section 4.0: SPOTTER / HELPER***

**4.1** Spotter/ Helper Definition: An assistant to aid the pilot during start-up, and taxing onto the runway. The spotter/helper will assist the pilot in completing a safe flight.

**4.2** Each pilot is required to have a spotter / helper at all IMAA sanctioned events. The event Safety Committee should be prepared to assist those pilots who do not have a spotter/helper to make sure that every registered pilot has the opportunity to fly at a sanctioned event.

### ***SECTION 5.0: EMERGENCY ENGINE SHUT OFF (Kill Switch)***

**5.1** Magneto spark ignition engines must have a coil-grounding switch on the aircraft to stop the engine. This will also prevent accidental starting of the engine. This switch shall be readily available to both pilot and spotter/helper. This switch is to be operated manually and without the use of the Radio System.

**5.2** Engines with battery powered ignition systems must have a switch to turn off the power from the battery pack to disable the engine from firing. This will also

prevent accidental starting of the engine. This switch shall be readily available to both pilot and spotter/helper. This switch shall be operated manually and without the use of the Radio System.

**5.3** There must also be a means to stop the engine from the transmitter. The most common method is to close the carburetor throat completely using throttle trim, however other methods are acceptable. This requirement applies to all glow/gas ignition engines regardless of size.

## ***SECTION 6.0: RADIO REQUIREMENTS***

**6.1** All transmitters must be FCC type certified.

**6.2** FCC Technician or higher-class license required for 6 meter band operation only.

## ***SECTION 7.0: MAXIMUM AIRCRAFT ALLOWANCES***

**7.1** IMAA aircraft weight is not to exceed 55 pounds, including a full load of all liquids (engine fuel, smoke fluid, etc.)

**7.2** The Academy of Model Aeronautics, in conjunction with IMAA has developed an Experimental Aircraft category that covers models over 55 pounds (including all liquids), but not to exceed 100 pounds (including all liquids). If the host Chapter decides to allow these heavier aircraft that exceed Section 7.1 to be flown at their event, then the current AMA Experimental Radio Control Aircraft Program Requirements and Inspector Information approved by AMA Executive Council, May 4, 2002 shall apply during the demonstration flying of these aircraft. (Copies of the Experimental Class Rules and Regulations are available through the AMA.)

**7.3** The operation of aircraft using turbo jet engines will require a special waiver as stipulated by the AMA Safety Code. The waiver is to be provided at the time that the pilot completes their Safety Review.

## ***SECTION 8.0: FLYING SITE LAYOUT***

**8.1** The flying site shall be set up to provide, at minimum, the AMA standard of 65 feet from the near edge of the runway to the beginning of the spectator area, and where possible, a distance of 100 feet or more is recommended.

**8.2** A specific area will be set aside for engine test runs. This area will be remote from the spectator area, pits, and flight stations to reduce danger and annoyance to persons in this area. No engine may be started in any area other than the engine test area and runway entrance(s).

*The following recommendations are included in the Safety Code not to police such items, but rather to offer basic suggestions for enhanced safety. It is expected that IMAA members will avail themselves of technological advances as such becomes available, to promote the safety of all aircraft and participants.*

Servos need to be of a rating capable to handle the loads that the control surfaces impose upon the servos. Standard servos are not recommended for control surfaces. Servos should be rated heavy-duty ounces of torque. For flight-critical control functions a minimum of 45 inch/ounces of torque should be considered. This should be considered a minimum for smaller aircraft and higher torque servos are strongly encouraged for larger aircraft. The use of one servo for each aileron and one for each stabilizer half is strongly recommended. Use of dual servos is also recommended on larger aircraft.

On-board batteries should be, at a minimum, 1000 maH up to 20 lbs., 1200 maH to 30 lbs., 1800 maH to 40 lbs., and 2000 maH over 40 lbs. flying weight. The number and size of servos, size and loads on control surfaces, and added features should be considered as an increase to these minimums. Batteries should be able to sustain power to the onboard radio components for a minimum of one hour total flying time before recharging.

Dependable redundant and fail-safe battery systems are recommended.

The use of anti-glitch devices for long leads is recommended.

There is no maximum engine displacement limit, as it is the position of this body that an under powered aircraft presents a greater danger than an over powered aircraft. However, the selections of engine size relative to airframe strength and power loading mandates good discretionary judgment by the designer and builder. Current AMA maximums for engine displacement are 6.0 cu. in. for two-stroke and 9.6 cu. in. for four-stroke engines. These maximums apply only to AMA Sanction competition events such as 511, 512, 515 and 520. All non-competition events should be sanctioned as Class C events, in which these engine size maximums do not apply.

Generally, it is recommended that no attempt should be made to fly a radio controlled model aircraft with a gasoline engine in which the model aircraft weight would exceed 12 pounds per cubic inch of engine displacement (under powered), or be less than 5 pounds per cubic inch of engine displacement (overpowered). Example: Using a 3 cu. in. engine, a model would likely be under powered at an aircraft weight greater than 36 pounds. With the same engine, an aircraft weighing less than 15 pounds would likely be overpowered.

Servo arms and control horns should be rated heavy duty. Glass filled servo arms and control horns are highly recommended.

Control surface linkages are listed in order of preference:

1. Cable system (pull-pull). A tiller bar is highly recommended along with necessary bracing.

2. Arrow-shaft, fiberglass or aluminum, 1/4" or 5/16" OD. Bracing every six (6) to ten (10) inches is highly recommended.

3. Tube-in-tube (nyrod). Bracing every few inches is highly recommended. Inner tube should be totally enclosed in outer tube.

4. Hardwood dowel, 3/8" OD. Bracing every six (6) to ten (10) inches is highly recommended.

Hinges should be rated heavy duty and manufactured primarily for use in giant sized aircraft. Homemade and original design hinges are acceptable if determined to be adequate for the intended use.

Clevis (steel, excluding heavy-duty ball links) and attachment hardware should be heavy-duty 4/40 thread and rod type. 2/56 thread size rod is acceptable for some applications (e.g. throttle). Clevises must have lock nuts and sleeve (fuel tubing) or spring keepers.

Propeller tips should be painted or colored in a visible and contrasting manner to increase the visibility of the propeller tip arc.

## **BIG IS BETTER**

# **RACINE R/C CLUB PILOT ( SILVER WING) QUALIFICATION REQUIREMENTS POWERED FIXED WING**

## **(OPERATIONAL)**

A student pilot, or an experienced R/C pilot who has just joined the club must qualify on the below indicated flight course in order to be qualified to fly alone at our field. This is not just because of our insurance liabilities, but because we want our members to be able to fly safely and not damage their property, or anyone else's property.

A member who wishes to qualify for their PILOT (Silver) wings will be accompanied by an instructor, and the instructor will advise the student as to the flying patterns they are to demonstrate, which are described below. The student's performance will be watched by two (2) instructors who will determine if the student has demonstrated their abilities to fly the described patterns in a safe and controlled manner.

1. Proper pre-flight checks/ start up of aircraft
2. Control aircraft on the ground
3. Take – off (Items #2 & #3 may be substituted with a proper hand launch if appropriate)
4. Procedure turn right or left
5. Fly right rectangular pattern with little loss of altitude  
NOTE: Do not go near railroad tracks
6. Fly left rectangular pattern with little loss of altitude  
NOTE: Do not go near railroad tracks
7. Fly figure "8" with little loss of altitude
8. Slow fly right hand approach
9. Slow fly left hand approach
10. Controlled landing on the field

# **RACINE R/C CLUB GLIDER RADIO CONTROL QUALIFICATION REQUIREMENTS**

**(OPERATIONAL)**

A student pilot who desires to qualify for flying radio controlled gliders as opposed to normal powered radio controlled aircraft must demonstrate their abilities with the modified qualification course as shown below.

1. Proper pre-flight checks/ aircraft preparation
2. Controlled launch
3. Procedure turn right or left
4. Fly right rectangular pattern with little loss of altitude  
Note: Do not go near railroad tracks
5. Fly left rectangular pattern with little loss of altitude  
Note: Do not go near railroad tracks
6. Fly figure "8" with little loss of altitude
7. Slow fly right hand approach
8. Slow fly left hand approach
9. Controlled landing on the field

# **RACINE R/C CLUB INSTRUCTOR QUALIFICATIONS**

## **(OPERATIONAL)**

An Instructor is a club member who has expressed the desire to help student flyers learn to fly and receive their Pilot (Silver Wings) qualification. In addition to the below indicated requirements, an Instructor candidate should have witnessed and/or assisted in the instruction of two or more student flyers.

The specific requirements are:

1. Have Pilot (Silver Wings) qualification for at least one year.
2. Demonstrated proficiency in flying both high and low wing aircraft.
3. Be nominated for the position of Instructor, and be appointed by the membership.



# **RACINE R/C CLUB PRIMARY TRAINING INSTRUCTIONS**

**(INFORMATIONAL)**

1. Before leaving for the flying field, check your equipment. Do you have everything you'll need? Props, glow plug, enough fuel, wrenches, screwdriver, AMA & Club Membership cards.
2. Have the batteries been fully charged? Do all the servos work properly?
3. Has your transmitter and receiver been turned off?
4. After getting to the field take a few minutes to observe what's going on. Who's doing what, where, clouds, sun, wind, corner of flight line being used to take-off and land.
5. Set up as near as possible to fliers on your frequency.
6. Take the time to make a complete safety check of your aircraft and equipment.
7. Before starting your engine, be sure the prop blast won't be blowing smoke and dust on someone or someone's equipment. Make sure someone is not standing in line with the prop. Remember, sometimes there are visitors in the pit area and they may not be aware of the dangers of propellers.
8. Read the "PRIMARY FLIGHT TRAINING" article. Your instructor may not follow the course exactly as given but, it will give you a good idea of what your flight training will be about.
9. Be sure to read the club by-laws, field rules, and the other club guidelines.
10. Remember, safety comes before anything else.

# **RACINE R/C CLUB PRIMARY FLIGHT TRAINING COURSE (POWERED FIXED WING)**

## **(INFORMATIONAL)**

The function of this manual is to provide an organized and progressive series of lessons that will not only assist the flight instructor in teaching student flyers, but will enable the student to learn to fly safely with the basic understanding of their equipment and its limitations. The instructor will teach this material to the student, monitor their understanding and performance of it, and develop the skills and abilities they will need to fly safely.

Teaching is basically the communication of information. Teaching a skill, such as R/C flying, is a process of building confidence. The lessons are set so that the student can gain insight and understandings in easy steps that will help build their confidence in their ability so that by the time they are ready to solo, it will be just another flight in the course and the student and the instructor will both be confident of the outcome. Keep in mind that no two people learn at the same rate, and even fast learners have days when nothing goes right. Don't push. If a student is having trouble in one area, the instructor will go on to something else and come back to the problem area another time. Quite often it helps to review a lesson that the students are familiar with and able to do well. This gets the students mind off the trouble spot and restores confidence.

Each of the lessons is organized into four phases: (1) Purpose, (2) Objective, (3) Elements, and (4) Evaluation. This format will enable the students' progress to be easily monitored. The last page of the "FLIGHT TRAINING COURSE" contains a log in which the instructor will record the student progress. This way, all instructors the student will work with will know what the progress of the student is.

### **LESSON 1 – AIRCRAFT FAMILIARIZATION**

#### **Purpose:**

To teach the student how to properly pre-flight his model.

#### **Objective:**

At the completion of the lesson the student should be able to inspect his model and identify any deficiencies that could cause a malfunction or safety hazard. The student should also be able to start and adjust the engine.

#### **Elements:**

1. Inspection of the aircraft structure and C.G.
2. Inspection of radio installation.
3. Inspection of all linkages and control surfaces, including controls for proper throw, direction and freedom of movement.
4. Engine and fuel system installation and security, including props.

5. Instructor's demonstration of safe engine starting procedure and engine adjustment.
6. Student starts and adjusts the engine.
7. Instructor teaches the student how to identify rich and lean engine settings.

**Evaluation:**

Student should be able to perform lesson objectives. This lesson should be reviewed at the start of all following lessons.

## **LESSON 2 – RADIO AND FIELD PROCEDURES**

**Purpose:**

To teach the student how to use the radio at the field.

**Objectives:**

To make the student aware of the necessity for frequency control, self-disciplined use of the radio, and safe operation of their model at the field.

**Elements:**

1. The need for frequency control.
2. Frequency flags(optional).
3. Impound and the frequency board.
4. Conducting a range check.
5. Abnormal operation of the radio and interference.
6. Batteries: a. charging; b. checking; c. life
7. Servos-operating and load limits.
8. Pit area.
9. Engine operation in the pits.
10. Taxing on the field.
11. Use of, and operation on, the runway.
12. Flight area, and boundaries
13. Other traffic and right of way on the field.
14. Restricted air space (pits, parking lot, and compost site).

**Evaluation:**

The student is able to describe the proper procedures for setting up their model at the field in a safe manner.

## **LESSON 3 – FLIGHT FAMILIARIZATION**

**Purpose:**

To introduce the student to controlling the model in flight.

**Objectives:**

To allow the student to become familiar with the model's controls and their use in flight.

**Elements:**

1. Instructor flies and lands the students model to evaluate its performance are airworthiness. Note: This flight should be conducted in a safe and conservative manner. The model will most likely be the student's first R/C model and his confidence in your ability as a pilot and their ability as a modeler will be reinforced if they see their model make a successful flight. The instructor should

be careful not to do anything during this flight that might undermine the student's feeling of accomplishment.

2. On the ground, familiarize the student with the controls and what kind of reactions they can expect from them. Example: Explain the necessity for holding a little up elevator during turns to prevent the model from diving. Keep it simple!
3. Explain the procedures the instructor will use when giving the transmitter to the student and take it from them during the flight.
4. The instructor will explain what they want of the student. Example: Just get familiar with the controls and don't worry about losing control. The instructor is there to regain control of the model.
5. With the model trimmed in level flight and a reasonable airspeed, the instructor will allow the student to fly it. Whenever possible, the instructor should verbally correct the students control inputs rather than doing it themselves. The instructor should not let the student get nervous. If this is happening, the instructor will take control of the aircraft and let the student relax.

**Evaluation:**

The lesson is complete when the instructor has determined that the student is able to determine and execute proper control inputs to achieve a desired change in the model's attitude. Example: The model dives and the student uses up elevator to stop the dive. Proficiency and accurate control are not criteria at this point.

## **LESSON 4 – FLIGHT MANEUVERS**

**Purpose:**

To acquaint the student with the basic flight maneuvers.

**Objective:**

To teach the student to properly control the model during basic maneuvering.

**Elements:**

1. Level flight and trim.
2. Banked turns.
3. Straight climbs.
4. Climbing turns.
5. Gliding.
6. Disorientation. Note: An explanation and the use of trim should precede this lesson. The five maneuvers should be taught in the order listed, if possible.

**Evaluation:**

The lesson is complete when the student can perform the maneuvers without assistance from the instructor. Each maneuver should be done with a reasonable degree of accuracy. Example: Turns should be fairly smooth and altitude maintained fairly well.

## **LESSON 5 – ACCURACY MANEUVERS**

**Purpose:**

To teach the student to perform the five basic maneuvers to a standard that will develop proficiency in their execution.

**Objective:**

To develop the skill and ability of the student to control the model in a specific manner.

**Elements:**

1. Level flight, maintaining heading and altitude.
2. Level flight at reduced power, maintaining heading, altitude and trim.
3. Left and right turn to specific headings.
4. climbing turns to specific headings.
5. Power off (idle) glides that require the student to maneuver the model to a specific area and approximate altitude. Example: Have the student close the throttle over the east end of the field at 200 feet and glide to the west end arriving at an altitude about 100 feet. Note: Keep in mind that the objective is to develop skill and ability and an awareness of the model's position relative to direction and altitude. Don't insist on mechanical precision. Review disorientation with the student if necessary.

**Evaluation:**

The lesson is complete when the student can maneuver at the instructor's direction and can demonstrate an ability to control the model in an accurate manner.

## **LESSON 6 – ORIENTATION MANEUVERS**

**Purpose:**

To develop the judgment, skill and ability necessary for the student to make his first landing.

**Objective:**

To teach the student to control the model regardless of its heading or direction relative to themselves.

**Elements:**

1. Figure 8 – the student must fly a Figure 8 pattern consisting of two 360 degree turns, one left and one right. The student must place the maneuver in front of himself at a safe distance and altitude.
2. The student must fly a rectangular pattern at a safe altitude, with the upwind leg crossing the landing area. Note: The instructor will designate the size, altitude, and distance of both maneuvers.

**Evaluation:**

The lesson is complete when the student can fly the Figure 8 without experiencing disorientation and can fly both right and left rectangular patterns consistently and accurately.

## **LESSON 7 – STALLS**

**Purpose:**

To develop the student's understanding of stalls, their cause and avoidance.

**Objective:**

To teach the student to recognize and recover from stalls.

**Elements:**

1. Pre-flight discussion of stalls, what causes them, and how to recover.
2. Practice of stalls by the student with power and without power.

3. Stalls in turns. (Take-off, departure stalls.) Note: Take-off and departure stalls are almost impossible to set up with most trainers, but do occur in more advanced models. Therefore, it is recommended that power be reduced to about 1/3 throttle, and a steep climbing turn be entered. The stall entry will look similar to a spin entry with the model rolling toward the high wing. During this lesson it should be emphasized to the student that a stall can occur at any airspeed and is a function of angle or attack.

**Evaluation:**

The lesson is complete when the student understands the cause of stalls and has demonstrated the lesson elements and proper recovery.

**LESSON 8 – TAKE-OFF****Purpose:**

To teach the student how to make a normal take-off.

**Objective:**

To teach the student how to control the model during take-off.

**Elements:**

1. Discussion of the effects of torque during the take-off.
2. Use of the rudder.
3. Use of the throttle.
4. Student makes a normal take-off into the wind.

**Evaluation:**

The lesson is completed when the student has successfully taken off and established a normal climb with adequate airspeed. The student must also demonstrate adequate directional control during take-off.

**LESSON 9 – APPROACHES TO LANDING****Purpose:**

To prepare the student for their first landing.

**Objective:**

To develop the student's ability to visualize and perform a stable and controlled approach to landing.

**Elements:**

1. Review of Lesson 6.
2. Discussion of proper landing techniques.
3. Student flies a rectangular pattern as in Lesson 6, but reduces power and establishes a normal glide on the base leg and continues the approach until over the end of the runway, at which point he is to add power and go around. The minimum altitude at the end of the maneuver should be no less than 20 feet.
4. As the student becomes comfortable with the maneuver, the altitude should be lowered until the instructor is confident that the model can glide to the runway with the power off (idle).
5. Landing. At this point the instructor will tell the student to continue the approach and land. Note: The chances of a successful landing will be increased if the

instructor reminds the student to keep the power at idle. It may be necessary to talk the student through the flare and touchdown.

**Evaluation:**

The lesson is complete and the student can advance to supervised solo flight after the student has successfully landed the model several times and is comfortable with the maneuver.

## **LESSON 10 – SOLO FLIGHT**

**Purpose:**

Confidence building exercise.

**Objective:**

The student is to perform a solo flight demonstrating the knowledge and skill objectives of the previous nine lessons to the instructor.

**Elements:**

1. Pre-flight discussion to answer questions and resolve any problems that concern the student about the lesson.
2. Student performs a flight, under the instructor's supervision, starting with a thorough pre-flight and ending with the transmitter back at impound.
3. Student performs the Racine R/C Club's qualification course as the required flight.
4. Instructor monitors student's performance, along with two (2) other instructors who will certify the student's ability to control the aircraft.

**Evaluation:**

The lesson is complete and the student signed off for solo flight only after he has demonstrated a practical knowledge of all course objectives and has observed all safety and field operating rules, and has successfully flown his model unassisted.

## **LESSON 11 – EMERGENCY PROCEDURES (OPTIONAL)**

**Purpose:**

To prepare the student for the unexpected.

**Objective:**

To acquaint the student with safe procedures to be used in emergencies.

**Elements:**

1. Discussion of possible in-flight problems and how to deal with them.
2. Unusual attitude training (optional): a. Loops; b. Rolls
3. Student performs a dead stick landing.
4. Cross wind take-offs and landings (optional)

**Evaluation:**

The elements of this lesson are only suggestions and there are no minimum performance requirements. The objective is to provide the student with insights that will assist them in safely dealing with the unexpected. Experience will teach the student the rest.

# STUDENT FLIGHT LOG

## POWERED FIXED WING

### (INFORMATIONAL)

Questions that your Instructor will want to ask you. It will also help you and the different instructors that will work with you so they can see what your progress has been, and what you need to work on.

1. Have you ever flown before?
2. How many times?
3. With an instructor?
4. How did you determine what equipment to get?

### CHECK LIST

ITEM	DATE OK
PLANE CHECKED OUT READY TO FLY.....	_____
SETTING UP PLANE AT FIELD.....	_____
PROPER PLACEMENT AT FLIGHT LINE.....	_____
FREQUENCY BOARD/RANGE CHECK.....	_____
STARTING ENGINE/SETTING ADJUSTMENTS.....	_____
STUDENT BRIEFED ON FLIGHT LINE PROCEDURES.....	_____
PLANE TRIMMED IN FLIGHT.....	_____
STUDENT BRIEFED ON PLANES CHARACTERISTICS.....	_____
STUDENT FLY STRAIGHT/FLAT.....	_____
RIGHT TURN.....	_____
LEFT TURN.....	_____
FIGURE "8".....	_____
TAXI.....	_____
TAKEOFF.....	_____
APPROACH.....	_____
LANDING.....	_____



**RACINE R/C CLUB  
PILOT (SILVER WINGS)  
QUALIFICATION  
POWERED FIXED WING  
(OPERATIONAL)**

NAME:

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The above named person has successfully completed the required flight maneuvers as outlined below and is now entitled to wear their “wings” which designate them as a qualified pilot.

**REQUIREMENTS:**

1. Demonstrated proper pre-flight checks and startup of aircraft
2. Control aircraft on the ground
3. Take off (Items #2 & #3 may be substituted with a proper hand launch if appropriate)
4. Procedure turn right or left
5. Fly right rectangular pattern
6. Fly left rectangular pattern
7. Fly figure “8”
8. Slow fly right hand approach
9. Slow fly left hand approach
10. Controlled landing on the field

**INSTRUCTORS WITNESSING:**

		Date
		Date

**Instructors to also sign & date the back of flyers’ membership card.**