

# Vintage Radio Control Society

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VRCS is an AMA Special Interest Group

[www.vintagercsociety.org](http://www.vintagercsociety.org)

**Eighth Edition - April 2017**

(Revisions since sixth edition are found on page 15.)

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**Landing:** At the conclusion of the final approach leg, the model continues to descend at a gradual rate and lands on the heading used in the final approach leg. After landing, the model must roll in a straight line and come to a complete stop. The landing should be downgraded if:

1. Approach during landing is too steep.
2. Gallops in pitch, yaw or roll during approach.
3. Model impacts or thuds onto the ground due to lack of flare- out.
4. Model bounces on landing.
5. Model turns left or right while rolling to a stop.
6. Landing is dead stick.
7. Model fails to make pronounced stop.
8. Model pitches over and makes ground contact with nose or wingtip.
9. If model flips over on its back or cartwheels on wings - zero points.

### ***REVISIONS FROM SEVENTH EDITION***

The following contents have been revised from the seventh edition of this booklet dated April 2015:

- Chapter Criteria - removed the following requirement, "Provide annual update of members to the Membership Chairman."

Reason- Impractical to implement.

- Added contact for obtaining Special Awards.

Reason - Not previously defined.

- Removed the following statement from Concours, Pattern and Scale Flight Categories; "Airplanes must have been designed for radio control".

Reason - This statement is redundant to the first sentence under "Eligible Aircraft".

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**Split “S”:** Half roll to inverted flight followed by an immediate half loop back to level flight. Model should lose altitude and make a 180 degree change in heading. The Split “S” may be downgraded because:

1. Model not level at entry.
2. Half roll loses heading or altitude.
3. Half loop does not commence immediately after completion of half roll.
4. Half loop not round or deviates to left or right.
5. Recovery not exactly 180 degrees from entry heading.
6. Model not level at recovery.

**Touch and Go:** After a smooth and gradual descent on a straight line path into the wind, the model lands and slows down to taxi speed (approximately ¼ the normal flight speed) but must not stop. Following this the model must accelerate and take off on the same heading as the entry. The maneuver may be downgraded for the following:

1. Approach during landing is too steep.
2. Gallops in pitch, yaw or roll during approach.
3. Model impacts or thuds onto the ground due to a lack of flare out.
4. Model bounces on landing.
5. Model deviates left or right while rolling on ground.
6. Model fails to slow down to a distinct “taxi” speed.
7. Model stops on ground.
8. Changes in heading during take off run.
9. “Jumping” from the ground.
10. Retouching the ground after becoming airborne.
11. Too steep a climb angle.
12. Gallops in pitch, yaw or roll during climb.
13. Changes in heading during climb.
14. Dropping a wingtip.
15. Model is too far away to be seen clearly at any time during the maneuver.

**Landing pattern:** The rectangular approach is commenced with the model flying into the wind, a turn of 90 degrees away from the runway, a cross-wind leg, a second 90 degree turn, a downwind leg, a third 90 degree turn, a cross-wind leg, a fourth 90 degree turn and straight flight toward the point of touchdown. The maneuver is finished just prior to touchdown (six foot altitude). The landing approach may be downgraded because:

1. Legs of rectangle are not straight and perpendicular to each other.
2. The 90 degree turns are not smooth, precise and sharp.
3. Gallops in pitch, yaw or roll during approach.
4. Model climbs during approach.
5. Attempts to break out of pattern and go around again - zero points.

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| <br><b>NOTE: THE AIRCRAFT REQUIREMENTS FOR EACH FLYING CATEGORY CAN BE FOUND ON THE VRCS WEB SITE AT <a href="http://www.vintagercsociety.org">www.vintagercsociety.org</a></b> |                    |

# VINTAGE RC SOCIETY BY-LAWS

(Revised April 2015)

1. **Name** - The name of this organization is the Vintage Radio Control Society; also known as the VRCS.
2. **Objective** - The VRCS is intended to preserve and promote the memory of Radio Control Aero-modeling activity as it was in the past.
3. **Membership** - Individuals who desire to maintain the objective of the VRCS will be granted membership upon payment of the annual dues (based on the current calendar year, January through December), the amount of which is set by the current VRCS Officers. Exceptions: (1) Life Members; those who have been selected to the VRCS Hall of Fame need not pay the annual dues, and they are considered free members during their lifetime. (2) VRCS Officers and Executive Council; during their current term of office. Note: VRCS members who fly model aircraft at VRCS sanctioned events are also required to be current members of the Academy of Model Aeronautics (AMA).
4. **Officers** - VRCS Officers shall consist of a President, a Vice President (who shall serve as president whenever or if the President is unable to serve in that capacity), a Treasurer and a VRCS Newsletter Editor. These Officers are considered to be volunteers who serve without pay, but with permissible occasional compensation for VR/CS related expenses, if such compensation is unanimously agreed upon by the other current Officers.
5. **Executive Council** - The Executive Council shall consist of six current members, one each from six regions of the U.S., to be appointed by the President in consultation with the other Officers. The council will be consulted on administrative and organizational matters as needed.
6. **Selection of Officers and Term of Officer Service** - Officers shall be elected for two-year terms by vote of the general membership. Elections shall be held in November of the odd numbered years.
7. **Termination of Membership** - This is automatic upon non-payment of current membership dues, or by unanimous agreement by current Officers and Executive Council to terminate an individual membership.
8. **Chapters** - The organization shall encourage the formation of associated Chapters to help develop vintage RC activity on a local, regional, and possibly overseas level.
9. **Competition** - The VRCS shall encourage low intensity competition in the areas closely associated with VR/CS roots, i.e. Class I (rudder only), Class II (rudder and elevator) and Class III (rudder, elevator and aileron) in local, regional or overseas events. Concours and Scale competition should also be encouraged.
10. **Dissolution** - In the event that, by a majority vote of the membership, it is decided to dissolve this organization all residual funds in the VRCS treasury will be donated to the AMA Museum.
11. **General** - Amendments to these By-Laws, shall be determined by unanimous agreement of the current officers and Executive Council. Changes to other items require only a 2/3 majority of officers and Executive Members.

2. Half roll not 180 degrees.
3. Model deviates from straight course during half roll.
4. Changes in heading or altitude during inverted flight.
5. Inverted flight segment not centered.
6. Second half roll not 180 degrees.
7. Model does not return to straight and level upright flight after second half roll.

**One Outside Loop:** The model commences the outside loop flying straight and level, then noses down into an outside loop and recovers flying straight and level on the same heading and altitude as entry.

The outside loop is downgraded in the same manner as the inside loops.

**Note: Contestants may choose to perform a “Reverse Outside Loop” at their discretion. In this maneuver the plane is rolled to inverted before the loop and rolled to upright after the loop. The half rolls are part of the maneuver.**

**Three Turn Spin:** The plane establishes a heading by flying straight and level, pulls up into a stall and commences the spin through one, two, three turns and recovers to level flight on the same heading as the initial flight direction. The spin may be downgraded because:

1. Initial heading is not level.
2. Commencement of the first spin is sloppy or uncertain.
3. Does not do exactly three turns. Less than two or more than four turns should be scored a zero.
4. Does not recover on same heading as initial heading.
5. If any of the three turns are spiral dives rather than spins, the score is zero.
6. Rate of rotation in spin is excessively rapid.
7. Does not finish level.
8. Does not straight and level (for at least 50 feet) upon recovery.

**Rolling 8:** One inside loop followed by a half roll immediately followed by another inside loop followed by a half roll. Maneuver creates a vertical eight with one loop above and one loop below the entry-recovery axis. The Rolling 8 may be downgraded because:

1. Initial heading not level.
2. Loop not round or deviates to the left or right.
3. Half roll not immediately after loop.
4. Change in heading or altitude during half roll.
5. Second loop does not commence immediately after completion of half roll.
6. Second loop not round or deviates to the left or right.
7. Half roll not immediately after second loop.
8. Recovery not at same heading and altitude as entry.

## VINTAGE RC SOCIETY SPECIAL AWARDS

8. Second loop not same size as first loop.
9. Maneuver not completed at same altitude and on same heading as beginning.
10. Model fails to do level flight at end of maneuver.

**Immelmann turn:** The model starts Immelmann flying straight and level, pulls up into half loop followed by a half roll and finishes flying straight and level exactly 180 degrees from the heading t entry. The Immelmann may be downgraded because:

1. Model not level at start.
2. Model deviates left or right during half loop.
3. Half loop not completed exactly above point of commencement of half loop.
4. Half roll does not commence immediately after half loop.
5. Plane deviates from straight line during roll.
6. Model does not finish in level flight.
7. Model does not finish exactly opposite the direction of entry.

**Stall Turn:** The model starts from straight and level flight and noses up to a vertical position, yaws through 180 degrees, then dives along a parallel path and finishes the maneuver with the plane level at the same altitude as entry. The Stall turn may be downgraded because:

1. Model not level at start.
2. Does not become exactly vertical.
3. Turns left or right during pull up.
4. Does not yaw tightly through 180 degrees.
5. Return path more than two wingspans from entry path.
6. Return path not parallel to entry path.
7. Maneuver not finished at same altitude as entry.
8. Plane not level at finish of maneuver.
9. Model does not fly straight and level to complete maneuver.

**Wingover:** (Class I only) 180 degree change in direction, with level recovery at same altitude as entry.

1. This is a “fly through” maneuver, not a vertical pull and pivot as in the stall turn.

**Inverted Pass:** The model should be brought parallel to the runway, begin the maneuver with a straight and level entry, then half rolls to inverted flight. The inverted segment should be approximately 300 feet in length, followed by another half roll. The maneuver is completed with a straight and level exit. The Inverted pass may be downgraded because:

1. Model not straight and level at entry.

**Spirit of Selinsgrove:** An award to honor a person that has contributed mightily to the "vintage" movement. This person might be one that worked for the Society as an officer, editor or as a frequent contributor to the Newsletter or other publications. Efforts to help run the reunions or organize one might be recognized with this award. This is an organizational award since it is the award that carries the Selinsgrove name and it was the organizers of that effort that are remembered with the award's name.

**Dr. Walter Good Technical Achievement:** An award to honor those that keep the memory of the pioneer equipment developers alive by restoring or recreating some early radio or actuating system. This award was renamed in 2003 to honor Dr. Walter Good, who is recognized as the major contributor to radio control model aviation. The ongoing purpose of this award is to promote both recreation of vintage systems with modern gear and restoration of vintage systems. Both will be considered on an equal basis.

**Concours:** This award is intended to recognize the one vintage aircraft project that truly represents the early days. The project should be as exact as possible in outline using the construction techniques of the original. Projects to be considered should have the same covering, perhaps the same color scheme -- top consideration to the correct and original power plant and radio system. The airplane should be flown and its flight characteristics should emulate those of the original. This award should satisfy those that want absolute purity in the Society events and still allow modern coverings and power plants for the majority of members attending the reunion.

**CONTACT THE VRCS PRESIDENT FOR AWARD PROCEDURES.**

## VRCS HALL OF FAME

Until 2001 the VRCS Hall Of Fame had been made up of all modelers who had received the Howard McEntee Award presented at the WRAM Trade show by the Westchester Radio Aero Modelers. In 2002 the VRCS Hall Of Fame committee was formed. *The committee is made up of the executive council members and the Vice President who will chair the committee.* The committee considers the WRAM's selection and either concurs or disagrees. If there is disagreement with the WRAM's selection the committee decides who will be honored. A maximum of three new members shall be selected annually.

An article explaining the Howard McEntee Award can be found in Flying Models Nov. 1985. Members shall receive lifetime membership in VRCS.

Visit the VRCS web site for the list of members by year.

## ***CHAPTER CRITERIA***

Est. 12/01

Rev. 4/17

The VRCS By-laws Article 8 states, "The organization shall encourage the formation of associated Chapters to help develop vintage RC activity on a local, regional, and possibly overseas level."

To this end, the following benefits and responsibilities for VRCS Chapters have been established;

### **Chapter Benefits:**

1. National recognition through our newsletter, "Vintage Flier" and our Web Site.
2. Assistance from the organization in conducting reunions or other events.
3. Access to regional membership information such as member names and mailing addresses.
4. A voice within the VRCS to suggest new activities and events.
5. All initial chapter members will receive a VRCS patch and a VRCS decal.
6. A Chapter Package will be sent to the Chapter Contact and will include;
  - Official Chapter Certificate listing charter members
  - Competition Regulations
  - Decals for charter members
  - Guidelines for hosting an VRCS event

### **Chapter Responsibilities:**

1. Submit a Chapter Application to the Membership Chairman containing at least five (5) current members.
2. Conduct at least one (1) AMA sanctioned event annually.
3. Provide timely chapter activity news to the "Vintage Flier" editor. This information will be used to update website information. This shall be provided by the chapter contact named on the application.
4. Pay a one time \$25 Chapter Registration Fee upon submission of application.

## ***REUNIONS & OTHER EVENTS***

During the year VRCS events are sponsored by Chapters and AMA clubs around the country. Watch the VRCS web site at [www.vintagercsociety.org](http://www.vintagercsociety.org) for the latest information on these activities.

1. Loops not round and smooth.
2. Entry not level.
3. Loops deviate left or right.
4. Finish of loops not at same altitude as entry.
5. Model pauses between loops.
6. Recovery not at same altitude as entry.
7. Recovery not level.

**Axial Roll(s):** The model enters from a straight and level flight and rolls on its longitudinal axis until the required number of rolls are performed. The recovery must be on the same heading and altitude as the entry. The roll maneuver should be downgraded for the following:

1. Model not level at the start of the rolls.
2. Changes in heading.
3. Roll rate not uniform throughout.
4. Pauses between rolls.
5. The plane changes altitude during rolls.
6. The plane does not do exactly one or three roll(s).
7. The plane is not level at the end of the rolls.
8. The plane fails to do level flight at the end of the rolls.

**Barrel Roll(s):** The model enters from straight and level flight and makes a complete rotation on its longitudinal axis while following a helical path. The maneuver should be downgraded for the following:

1. Model not level at the start of the rolls.
2. Changes in heading.
3. Roll rate not uniform throughout.
4. Pauses between rolls.
5. The plane does not do exactly one or three roll(s).
6. The plane is not level at the end of the rolls.
7. The plane fails to do level flight at the end of the rolls.

**Reverse Cuban 8:** Plane enters in straight and level flight, pulls up into a 45 degree climb, half rolls to inverted and proceeds to inside loop until it is again climbing at a 45 degree angle. Plane then does another half roll to inverted that should cross the flight path of the first half roll, then again proceeds to inside loop until it has reached straight and level flight on the same heading and altitude as the beginning. Maneuver shall be downgraded for the following:

1. Entry not straight and level.
2. First roll not on 45 degree line.
3. Loop not round or deviates to left or right.
4. Second roll not on 45 degree line.
5. Middle of second roll does not cross middle point of first roll.
6. Second loop not round or deviates to left or right.
7. Second loop not at same altitude as first loop.

**Straight Flight Out:** The model must be brought parallel to the runway and flown an absolutely straight path into the wind for a distance of approximately 300 feet before starting the Procedure Turn. Straight flight may be downgraded because:

1. The model does not fly a parallel course to the runway.
2. Plane deviates left or right.
3. Does not hold a constant altitude.
4. Gallops in elevation.

**Procedure Turn:** Immediately after the straight flight, the model must turn exactly 90 degrees away from the runway, then exactly 270 degrees in the opposite direction and cross over the point where the first turn commenced. The turn may be downgraded because:

1. First turn not 90 degrees.
2. Second turn not 270 degrees.
3. Changes in altitude during turn.
4. Turns not smooth and circular.
5. Does not head back over exact outgoing path.

**Straight Return:** Immediately after the procedure turn the model should fly a down wind course along the same line as the outgoing path. The straight flight back may be downgraded because:

1. Turns or wiggles during the straight flight.
2. Changes in altitude.
3. Flight not along original path.

**Figure 8 ( parallel to runway ):** The figure shall be parallel to the runway. From straight and level flight, the model performs a 90 degree turn away from the spectator area. The model then performs a 360 degree turn followed by a 270 degree turn in the opposite direction. Maneuver is finished on the same heading as its entry. The Figure 8 should be downgraded for the following:

1. First full circle not smooth or round.
2. First full circle has gallops in pitch, roll, or yaw.
3. First full circle changes altitude.
4. Second full circle not smooth or round
5. Second full circle has gallops in pitch, roll or yaw.
6. Second full circle changes altitude.
7. Model does not complete second full circle at same crossover point as finish of first circle.
8. Does not finish on same heading as entry.
9. Does not finish at same altitude as entry.
10. Does not fly straight and level to complete maneuver.

**Inside Loop ( one or three ):** The model starts the maneuver flying straight and level, then pulls up into a smooth, round loop. Class II & III perform a second and third loop in exactly the same path with a straight and level recovery to finish. The maneuver may be downgraded because:

## ***ELIGIBLE AIRCRAFT***

Any airplane that *was designed for* radio control and was kitted, published or flown (attested to by the builder) and meets the following classifications is eligible.

**There are three classifications;**

**PIONEER - prior to January 1, 1955**

**CLASSIC - prior to January 1, 1965**

**NOSTALGIA - thirty-five years before January 1 of the current year.**

**Exception: Planes entered in Concours, Pattern or Scale competition must be designed prior to January 1, 1976.**

**See VRCS web site at [www.vintagercsociety.org](http://www.vintagercsociety.org) for list and procedure for additions.**

## ***VRCS CATEGORIES & DEFINITIONS***

### **Preface**

The practice of building and flying vintage radio control (RC) aircraft is intended to be casual, enjoyable and interesting for everyone involved, with no desire to advance aeromodeling's state-of-the-art or rewrite what has been recorded in aeromodeling history. The intent of these guidelines is to define the requirements for airplanes flown at Vintage RC Society events, and to provide consistency in these events.

### **General**

These official guidelines shall apply to all models flown at Vintage RC Society events, with their emphasis on maintaining the primary objectives of the group. These primary objectives are to preserve and promote the memory of radio control aeromodeling activity as it was in the past.

Pilots are responsible for furnishing documentation for any model not on the "VRCS Approved Airplanes List" as published on the website ([www.vintagercsociety.com](http://www.vintagercsociety.com)).

It is suggested that all pilots affix the plane's name and design year to the plane so it is easily visible and readable. A minimum of 1/2 inch graphics should be used. This suggestion is to provide vital information about the plane for judging and general member and spectator interest.

## **VRCS Recognizes Four Flight Categories**

### **Open**

The Open category applies to all flying at Vintage RC Society events that does not fall into the specific categories of Concours, Pattern or Scale. Note that free flight and control line designs that have been modified for radio control operation are permitted to participate in this category, and *only* in this category.

### **Concours d'Elegance**

This premier category is for those models that best represent the spirit of imagination, experimentation and craftsmanship that characterized the early days of radio control aeromodeling.

Any airplane that has been awarded First Place in Concours competition shall be retired from future competition in the same host's VRCS event.

### Pattern

This category is for airplanes flown in Aerobatics, Precision Aerobatics or "Pattern" competition.

### Scale

This category is for airplanes that are exact or near-exact facsimiles of full-size aircraft.

The intent of the VRCS Scale event is not so much to produce a model that exactly matches the full-scale airplane, but one that most closely matches the plans and box art of the model being submitted. All aspects of the outline, finish, color and markings should be decided by their conformance to the model plans and box art, with no regard whatsoever for how closely or vaguely the original model may or may not match the outline, finish, color and markings of the full-scale airplane.

## AIRCRAFT REQUIREMENTS FOR ALL FLYING CATEGORIES

Detailed requirements for each category can be found on the VRCS web site at [www.vintagersociety.org](http://www.vintagersociety.org).

### PATTERN COMPETITION GUIDE

There will be three classes recognized for VRCS pattern competition as follows;

Note: Throttle control is permitted in all classes.

- A. **Class I (Port):** Planes controlled about the Yaw axis, by rudder control only. *No* auxiliary aerodynamic controls are permitted ( flaps, spoilers, etc.); *no* auxiliary non-flight controls are permitted (brakes, steerable wheels, etc.)
- B. **Class II (McEntee):** Planes controlled about the Yaw and Pitch axis, by rudder and elevator control only. Auxiliary non-flight controls ( brakes, steerable wheels, etc. ) *are* permitted without limitation. Auxiliary flight controls ( flaps, spoilers, etc. ) *are not* permitted.
- C. **Class III (Brooke):** Planes controlled about the Yaw, Pitch and Roll axis, by rudder, elevator and aileron control, with no limitations or restrictions on primary aerodynamic controls, auxiliary aerodynamic controls or auxiliary non-flight controls.

### EVENT RULES:

- A. Aerobatic competition is based on maneuver sequences of the sixties.
- B. In order that the pattern category does not dominate a VRCS event, there will be a limit to the number of scored flights. It is recommended that three flights be scored with the total of the best two used to determine final standings. However, if necessary to accommodate a large number of contestants and/or to complete the event in one day, the best of two scored flights should be used.

## MANEUVER SEQUENCES

| Class I                          | Class II               | Class III             |
|----------------------------------|------------------------|-----------------------|
| 1. Takeoff (not scored)          | 1. Takeoff             | 1. Takeoff            |
| 2. Straight flight out           | 2. Straight flight out | 2. Stall turn         |
| 3. Procedure turn                | 3. Procedure turn      | 3. Three inside loops |
| 4. Straight return               | 4. Straight return     | 4. Three axial rolls  |
| 5. Figure 8 (parallel to runway) | 5. Stall turn          | 5. Immelmann turn     |
| 6. One barrel roll               | 6. Three barrel rolls  | 6. Reverse Cuban 8    |
| 7. One inside loop               | 7. Three inside loops  | 7. Rolling 8          |
| 8. Immelmann turn                | 8. Immelmann turn      | 8. Inverted pass      |
| 9. Split "S"                     | 9. Split "S"           | 9. One outside loop   |
| 10. Rolling 8                    | 10. Rolling 8          | 10. Split "S"         |
| 11. Wingover                     | 11. Three turn spin    | 11. Three turn spin   |
| 12. Landing pattern              | 12. Touch and go       | 12. Touch and go      |
| 13. Landing (not scored)         | 13. Landing pattern    | 13. Landing pattern   |
|                                  | 14. Landing            | 14. Landing           |

### NOTES:

- 1. **Class I Takeoff may be ROG or hand launch.**
- 2. **An unscored trim pass follows each takeoff.**
- 3. **Airborne maneuvers can be flown in any direction.**
- 4. **Only the Class I and Class II maneuvers of Straight Flight Out, Procedure Turn and Straight Return must be flown immediately after each other.**

### MANEUVER DESCRIPTIONS

**Takeoff:** The model must start from a standstill. Model should accelerate gradually and the takeoff run should be in a straight line. Plane shall lift off gently and climb at a gradual angle, continuing in its straight flight path until at least six feet off the ground.

The takeoff should be downgraded for the following reasons:

- 1. Pushing or assisting the model when released.
- 2. Changes in heading during the take-off run.
- 3. "Jumping" from the ground.
- 4. Retouching the ground after becoming airborne.
- 5. Too steep a climb angle.
- 6. Gallops in pitch, roll or yaw during climb.
- 7. Dropping a wingtip.
- 8. Starting a turn before reaching six feet in altitude.

Note: Hand launching is an automatic zero.

Note: After the maneuver is called "complete", the model is not judged until the next maneuver is called. The model is allowed one down wind "trim pass" before beginning the airborne maneuvers.