



# **The Johnson Space Center Radio Control Club (JSCRCC) Handbook**

October 10, 2013

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## **I. GENERAL INFORMATION**

### **CHARTER**

The Johnson Space Center Radio Controlled Club (JSCRCC) is chartered by the Academy of Model Aeronautics (AMA charter club # 617). All Club members must be AMA members. The club is open to the general public, not just Johnson Space Center contractors and employees. The objectives of the JSCRCC are to promote the building and flying of Radio Controlled (RC) model aircraft in a safe and friendly environment. Ground and flight training are provided to maximize enjoyment and to insure new flyers can operate their models with minimum risk to their equipment, facilities, fellow club members and guests.

### **MEETINGS**

Club meetings are held at the Clear Lake Park building off of NASA Rd 1. The Clear Lake Park building is located east of Space Center Blvd., across from Landolt Pavilion, at the intersection of NASA Rd 1 and Clear Lake Park Rd. Club meetings are held on the second Thursday of each month. The meetings start at 7:00 PM and are generally over by 9:00 PM. Two special events are held in lieu of the regular monthly meeting on the second Thursday in November (Auction or Flea Market) and the second Thursday in December (Christmas Party). All interested parties are welcome to come to the meetings. A monthly newsletter is issued to each member providing news, information on upcoming events, and meeting minutes including Model of the Month award.

### **FLYING SITE**

One of the best features of this club is the large tract of land available for our use. We are located on approximately 300-500 acres of open land inside NASA. The nearest residential areas are several miles away. The field is large enough to have more than one active flight line – allowing fixed wing aircraft, helicopters and gliders to have their own airspace in designated areas. Being on government property, we do not have the risk of a developer carving our field into subdivisions. And thanks to NASA's generosity in allowing us to use the antenna range for our flying field, club dues are very modest compared to other clubs.

To get to the site from Hwy. I-45 southbound take NASA Rd 1 East. Take a left at Saturn Drive and then a right onto the main gate into NASA, 2nd Street. Stop at the guard house showing your club field pass and a picture ID. When cleared for entrance drive straight and turn left immediately after passing building 14 (first building you come to on the left). This is the first street you come to that goes along the side of building 14. Behind Building 14 you will see a two lane concrete road that goes to the flying field. Stop at the stop sign and wait to be waived in by a member (if present). Do not drive in unless waived in when planes are flying. A map showing the location of the flying site can be found in Figure 1.



Figure 1. Location of Flying Site

Due to security restrictions at the Johnson Space Center, access to the site requires current JSCRC membership card and a government issued photo identification card (driver's license, school picture I.D. etc.) to use the flying field. Also, member's names must be submitted to and cleared by NASA security, a duty performed by the Club's Treasurer which usually takes two weeks to accomplish. Access to the NASA will be denied if members (or guests) names are not on the security list. A friend or visitors of members can be issued Non-Flyer Guest Passes—names must be submitted to security as above. Please allow the Treasurer two weeks advance notice to process guest passes through NASA security.

Lost or mutilated club membership cards can be replaced by sending a stamped addressed envelope to the club Treasurer. Membership cards will be issued after submitting a membership application form, Appendix A.

Membership cards are issued to three classes of members. They are Student, Pilot and Instructor. Qualifications of each are discussed later in the handbook.

### DUES

The schedule of annual club dues is outlined in detail in the club's by-laws. In general, new member dues are \$55.00/year and renewal is \$35.00/year. Dues for renewal are payable to the Membership Chairman by the 31st of January or when specified by the membership application/renewal form. See membership application form (Appendix A) or contact the club Treasurer for details.

## **CLUB WEB SITE**

The JSCRCC maintains a web site for the benefit of its club members. General club information, news, pictures of members and their aircraft, and copies of past newsletters can be found. Also available are an RC forum and current weather conditions from the top of Building 30. Subscribing to the emailed monthly newsletter is accomplished through the web site, <http://www.jscrcc.com>

## **JSCRCC HISTORY**

The JSCRCC club was formed in 1964. The initial members were mostly engineers involved with the Mercury/Apollo/Gemini programs. This fledging group was able to secure shared use of the antenna test range where we have remained to this day. Some of the early newsletters are on ditto sheets typed on a manual typewriter dating back to the late 1960s. The club started with around 20 members and grew to 160 in 1990. JSCRCC currently has an average membership of 130 members.

It is fortunate that our club through the years has retained documentation on some of the outstanding accomplishments of members who interfaced with NASA programs such as high lift over drag flying bodies, and various acrobatic designs. It was one of the original club members who built the first conceptual R/C model of the Shuttle Orbiter 747 to demonstrate the possibility of returning the Orbiter from California to Florida by using a Boeing 747 to piggyback the Orbiter. NASA liked the idea and the rest is history.

Some of the early model of the month submissions were the Southern R/C Atlas, RCM Trainer, Honker Bipe, and VECO Cherokee Babe. The field started out having both free flight and RC aircraft. It was also very helpful in those early days to be knowledgeable about radios—as most control equipment was largely homemade in the early 1960's.

## II. CONSTITUTION

- Article 1. The name of this organization shall be "Johnson Space Center Radio Control Club", abbreviated as the JSCRCC.
- Article 2. The purpose of this organization is to provide a common meeting ground for hobbyists interested in any phase of radio controlled model airplanes or helicopters; to enforce and maintain conformance with regulations governing radio control operation and techniques; to increase knowledge of the art of radio control by mutual exchange of information and ideas and to stimulate interest in radio control flying.
- Article 3. The Officers of this organization shall consist of a President, a Vice President, a Secretary, and a Treasurer, who shall serve for a period of one year, or until a successor is elected. The President must have been a club member in good standing for a minimum of one year. The officers shall be elected by secret ballot annually by the members of the organization. In addition, the club will have a Safety Officer appointed by the President with concurrence from the other officers.
- Article 4 The control and management of this organization shall be vested in the membership, unless otherwise provided by this constitution or the by-laws, and is subject to the regulations governing use of the flying site at JSC.
- Article 5 The Constitution and By-Laws may be revised or amended by a 2/3 majority vote of those present at any regular meeting provided that the proposed revision(s) or amendment(s) shall have been submitted to the membership through the Club newsletter prior to the meeting.
- Article 6 The privilege of making motions, debating, and voting shall be limited to members of the organization in good standing.

### III. BY LAWS

Article 1. Section 1. The membership of this organization shall be composed of hobbyists interested in the radio control of model airplanes and helicopters.

Article 2. Section 1. Only 27 mhz or 72mhz aircraft only frequencies (channel 11 through 60), 50mhz amateur radio band radios, or 2.4 Ghz currently approved by the AMA and the Federal Communications Commission (FCC) shall be used at the club field. Each member flying on the 50mhz ham band is required to possess a valid amateur radio license as prescribed by FCC rules.

Section 2. Each member shall be a member in good standing with the AMA.

Section 3. The club's fiscal year begins January 1st and ends December 31st.

New Members: The first year dues for a senior new member (18 years of age or older) shall be \$55.00. New members joining the club in the months of October, November and December shall be credited with membership for the following year without additional charge. A member absent from the club for more than two years is considered a new member. The first year dues for junior members (under 18 years of age or a full time student) shall be waived.

Renewals: Senior member renewing shall pay \$35.00. Dues for junior members (under 18 years of age or a full time student) are waived

Family Membership: In the case of multiple club membership in a single family, the dues are same as for new members and renewals.

Dues are waived for club officers, committee chair, and the newsletter editor.

Upon payment of club dues and AMA verification the member will be issued a club field pass.

Article 3. Section 1. Only members in good standing shall have the right to vote in any general or special election.

Section 2. Election of Club officers: Nomination for the positions of President, Vice-President, Secretary, and Treasurer will be accepted at the regular club meeting in September and will be closed at the end of that meeting.

Ballot forms with the nominations for the various positions will be forwarded to the membership via the October club newsletter. These ballot forms will have the return address of a club member that has been appointed to adjudicate the election process.

Voting: Each Club member in good standing will be allowed one vote for each of the positions on the ballot form. The ballot form may be mailed to the adjudicator or handed in at the October Club meeting. Deadline for ballots to reach the adjudicator is the refreshment break of the October meeting.

Results of the election will be announced before the end of the October club meeting and in the following newsletter.

Elected Club Officers: Newly elected club officers will serve a term of office from November 1st to October 31<sup>st</sup>.

Section 3. In case of a vacancy occurring in the office of President, the Vice-President will fill the vacancy for the remainder of the existing term.

Section 4. In the case of a vacancy in the office of Vice President, Secretary, or Treasurer, a replacement will be elected at the next scheduled club meeting.

Article 4. Section 1. It shall be the duty of the President to preside at all regular meetings of this organization, preserve order, enforce the Constitution and By-Laws, and exercise supervision of its affairs. The president shall decide all questions of procedure and order for the organization, shall appoint all committees, shall see that all officers and committees properly respond to and perform all duties that may be placed upon them.

Section 2. It shall be the duty of the Vice-President to assist the president in the discharge of his/her duties and to occupy the chair in his/her absence. He or she shall direct, under the supervision of the president, the internal organization and operation of the club, e.g., serve as Program Chairman.

Section 3. It shall be the duty of the Secretary of this organization to keep a true and correct record of all the proceedings of the Club, receive all communications, conduct all correspondence, have charge of all Club records, and keep the minutes of all meetings.

Section 4. It shall be the duty of the Treasurer to handle all financial matters of the Club and report the Finances of the Club at each regular meeting. He shall act and be a member of all committees of this Club that may be required to receive or disburse money.

Article 5. The Club shall meet on the second Thursday of each month at 7:00 PM. Changes to meeting location, time, or day may be implemented by the club president to accommodate holidays or other conflicts.

Article 6. It shall be the responsibility of all officers upon accepting the position to which they were elected to discharge their duties as outlined in these by-laws. In the



event any officer does not (at the discretion of the membership) fulfill his/her duties, the membership shall have the right at any time to elect a replacement.

Article 7.

It shall be the responsibility of each member to fly their airplanes or helicopters in a safe and orderly manner in accordance with all applicable regulations. Members shall have a Club Field Pass, and AMA license/membership card with them at all times when flying at the JSC flying site.

Article 8.

All student pilots will select an instructor (one can be found through one of the club officers or from the list published in the newsletter) and undertake the Pilot Certification Program described in Appendix B. After passing the Pilot Certification test and receiving a signed Final Exam and Solo Flight form from his/her instructor the student will be classified as a Pilot and be issued a Pilot field pass upon submission of the form to the Treasurer.

Current members holding Pilot badges as of June 1, 2005 will be “grandfathered” as certified pilots.

All other senior and junior members who are neither an instructor nor a pilot shall be classified as Students and subject to the provisions and restrictions of this handbook.

Article 9.

Pilots wishing to become flight instructors must undertake the certification process outlined in Appendix C. Final approval will be by the Chief Flight Instructor.

Current instructors as of the June 2005 newsletter will be “grandfathered” as certified flight instructors.

Article 10.

A Chief Flight Instructor will be selected by majority vote of the current flight instructors with approval of the President.

## IV. SAFETY RULES

Retaining our privilege to fly at the JSC Antenna Range site depends on every member taking personal interest in following and enforcing the field safety and procedural rules. Read them, memorize them, and follow them! Any JSCRCC member who does not comply with or follow the safety procedures and rules stated herein will be subject to having his/her club field pass pulled for two months, or club membership terminated, depending on severity or reoccurrence of the infraction.

### SAFETY RULES

1. Safety first in everything you do. Pre-flight check your plane and radio gear. Look out for fellow Club members on the flight line. Be considerate of others and most of all think about your actions.
2. Frequency Control
  - a) Transmitters and receivers are to be turned off before coming to the flying site.
  - b) The AMA frequency numbering and flagging of transmitters is in effect at the flying site.
  - c) Each aircraft must have a pilot/owner name, address, and AMA number on or in the plane for identification in case the aircraft gets beyond the control of the transmitter or pilot
  - d) A transmitter impound rule is in effect at the flying site. Transmitters shall be placed in the impound (switch off!) when arriving at the field and when not in use.
  - e) A transmitter can only be turned on if the pilot has obtained the proper JSCRCC frequency pin from the frequency tree, exchanging the frequency pin or 2.4 Ghz pin on the tree with his/her Club Field Pass and attached the pin to the transmitter antenna. When finished using your transmitter, switch off transmitter, return transmitter to impound, remove your Club Field Pass from frequency tree and replace the frequency pin in its proper place. Return the frequency pin promptly—others may be waiting their turn on that frequency. Do not remove the frequency pin from the flying site. Return the pin as soon as possible if you do accidentally take the pin off site.
3. Pilots are to utilize assistance from other modelers in holding aircraft during engine startup. When human assistance is not available, mechanical hold down devices (several provided by the club are available at the field) are to be used.
4. Do not fly over the pit area or spectator area at any time. If possible, first flights of a new untried plane or helicopter should be made at off hours when there are a minimum of spectators and Club members present.
5. Taxing, Take-off & Landing

- a) Two major Directional Flight Lines (DFL) are provided to accommodate the wind direction (See Figure 2).

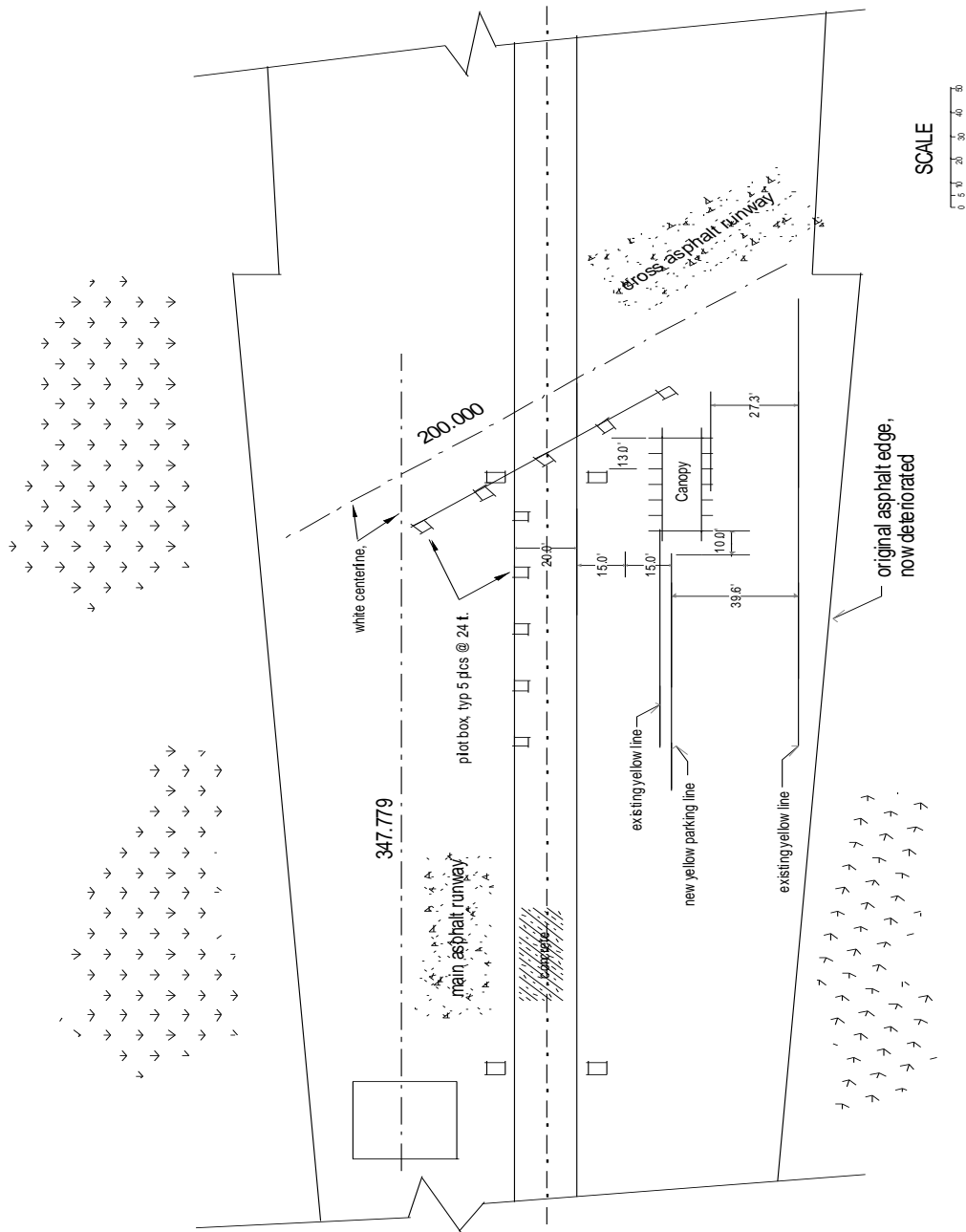


Figure 2. Field Layout

- b) Depending upon the direction of the wind, the "Current Flying Session" (CFS) flight line will be determined by the flyers present on the field.
- c) No taxiing out of the pit area under the aircraft's own power. Planes should be hand controlled until outside the pit area. **NO TAKE OFFs FROM THE PIT AREA!**
- d) All powered take-offs and landings will be done within the CFS flight line areas.
- e) Pilots will fly from within the marked boxes behind the designated "Pilot Line". The Pilot boxes are spaced at 25 feet apart to prevent two closely adjacent transmitters mixing low level frequencies that can cause interference potentially resulting in loss of control and a crash.
- f.) Non-powered sailplanes, electrics, and "1/2A" planes (.02 to .05 powered without landing gear) may be hand launched and landed over the grass area behind the pavilion and parking area provided:
  - Both takeoff and landing paths are up wind of and/or away from the CFS and
  - The plane never comes closer than 40 feet to the paved area and roadway behind the pavilion.
- g) Helicopters will be flown from designated area opposite of the CFS flight lines in use. Flying will be no closer than 40 feet of the nearest person in the CFS, the pit or spectator area. Flying over the pit and spectator areas is prohibited.
- h) Helicopter rotor blades will be engaged only on the runway or designated helipad - not in pit area or taxi way.

#### 6. Location of Pit & Spectator Areas

- a) The "PIT" area is where all pilots and equipment are kept, including field boxes, planes, helpers, coolers, chairs, etc. deemed necessary by a pilot (see Figure 2).
- b) If a plane's engine quits on the runway just prior to an attempted take-off, the pilot and/or helper should make every attempt to clear the plane from the runway quickly and return to the pits to resolve the problem.
- c) The "Spectator" area is located behind the Pit area for a distance of 15 feet and running parallel to the Pit area. Visitors and spectators should be directed to this area as quickly as possible to maximize the safety of the people and minimize the disruption of the flying activities.
- d) When approaching the field from the parking area behind Bldg. 14, all vehicle and pedestrian traffic will stop whenever R/C aircraft are flying. Vehicles and pedestrians will wait until acknowledged and motioned to proceed. Vehicles will then travel, without stopping, at a speed less than 20 mph, on the same side of the field as the airplane pits.

7. When the JSCRC Club and the NASA/Houston National Rocket Club are using the JSC antenna range at the same time, the following safety rules will be followed:
- a) Everyone will proceed with caution from the parking area behind Bldg. 14 while observing aircraft and rocket activities and following procedures given in 5e above.
  - b) People on foot may proceed with caution, walking on the airplane pit side of the field, avoiding the airplane landing strip.
  - c) Vehicles returning from the rocket launch area at the end of the field will follow the reverse procedure. Driving on the same side of the field as the airplane pits, stopping at the west end yellow line, waiting to be acknowledged and motioned to proceed, and then proceeding slowly without stopping.
  - d) While vehicles are traversing the flight line area, airplane pilots will fly their planes in a pattern outside the runway area, and will not, under any circumstances, over fly the runway.
  - e) In the event of an aircraft engine failure, the pilot will not attempt to land on the pavement when vehicular traffic is present.
  - f) Rockets will not be launched toward the aircraft pit and flight line area, nor such that they can drift into that area during recovery.
  - g) An attempt will be made by each organization to sound an audible alert in the event an out-of-control model situation occurs.

### **First Flight Pre-flight Inspection**

The first flight of any new model must be given added attention to insure the aircraft is flight worthy and imposes minimal risk to the pilot, spectators and adjacent facilities.

1. Overall appearance should suggest that the model is sound and flight-worthy. Covering should be secure and without holes, tears and other structural flaws. Is it excessively heavy or, suspiciously light?
2. Check all hinges by pulling firmly on all control surfaces. If one tears out here, rest assured that a crash was averted. Are the hinge gaps tight?
3. Is plane properly balanced according to the plans? Do not go by spar locations it is not necessarily the balance point.

4. Are the engine, prop, spinner, muffler and wing securely mounted? Does the thrust angle of the engine appear correct? (No major misalignment) Has the prop been smoothed and balanced?
5. Has the fuel system been leak tested and hooked up correctly? Is the tank well padded?
6. Is the radio installed correctly? The power switch must be on the opposite side of the plane from the exhaust. Batteries and receivers must be secured such that they cannot move in flight and must be wrapped in foam for vibration isolation. Batteries and receivers may be wrapped in plastic bags to protect them from fuel. The antenna must not be cut for any reason and should be fully extended aft either inside or outside the airplane and secured. Finally, a range check must be done.
7. Servos and their mounting rails must be secure. Servos must be mounted in rubber grommets with proper hardware. Check that the servo arm screw is in place and snug. Check pushrod-to-servo arm attachments. The JSCRCC recommends that EZ type connectors with plastic retainers be used only for throttles and other non-critical applications. Z-bends or metal or plastic clevises with a piece of fuel tubing over them are safe and secure attachment methods. The new clip type clevises assure the connection between the servo and the control surface. Check with your instructor on how to use them. If tube within tube pushrods is used, are they well secured at both ends, and free of binding? Listen to the servos to determine if they are working smoothly. Measure control surface throws and compare to the plan specifications if they are available. Wiggle each control surface while the radio is on to assure that no excessive play exists.
8. Is the landing gear securely mounted and not bent or not correctly aligned? Do the wheels roll easily? Is the steering free and positive? Does the airplane roll straight?
9. Are the batteries fully charged?
10. If sparkplug ignition is installed, is a kill switch installed and functional?
11. Is the wing free of warps? Is the center section properly reinforced?
12. Are the fuselage and its attachments straight? Is the engine area fuel-proofed?
13. The prop spinner must not touch the prop blades. Damaged props must be discarded. Repairs are not safe at the high speeds of model engines.
14. Engine, muffler, and glow plug tight?
15. After repair or modification, the checklist should be gone through again, with particular attention to the areas that were worked on or repaired.

## **Daily Flight Checklist:**

**(Recommended for each plane at the start of each flying day)**

### **Radio-off Inspections:**

Verify that all critical components are in good working order

- Determine if there has been any significant work done on aircraft since the last flight day. If so go to the First Flight Pre-Flight Inspection Checklist
- Verify switches (ignition, on-board glow, etc.) are securely mounted and correctly connected

Prior to wing mounting, verify that all components are correctly installed

- Servos Screws (mounting and control arm)
- Receiver, antenna and battery
- Power Switch and wiring harness
- Throttle cable/rod
- Fuel tank including pressure line to muffler
- Wing mounting apparatus
- Control push rods and clevises (keepers in place)

After assembly of aircraft, verify all control surfaces

- All wing mounting hardware is securely installed
- Hinges are secure (pins installed for pinned units)
- Control horns are secure
- Surfaces are free moving (only pressure is against the servo)
- Landing gear has no loose components
- All flying wires or struts are secure
- All accessories are secured (hatches, cockpit covers, cowlings, etc.)

Verify engine assembly is in good working order

- Engine mounting is tight
- Muffler is secure
- Glow Plug is secure
- Propeller nut has been tightened recently
- Propeller has no damage
- Rotating clearances are adequate

### **Radio-on Inspections:**

Verify radio is functioning correctly (*Frequency pin is required for this one*)

- Assure, that on model selectable transmitters, that correct model is selected
- Verify Ailerons, Elevator(s), Rudder, Flaps, Throttle movement is in correct direction
- There are no glitches on any of the controls otherwise verify radio with range check and eliminate cause of control glitches before flying. Check radio operation with engine running

**Pre-Flight Checklist:**  
**(Recommended prior to each flight)**

***Before going to the Flight-Line-*** Prior to each flight verify the following:

- \_\_\_\_\_ Aircraft has been fueled
- \_\_\_\_\_ Fuel lines are in correct locations (tank pressure, carburetor, etc.)
- \_\_\_\_\_ Receiver battery voltage has been verified
- \_\_\_\_\_ Transmitter has been correctly checked out of the impound, with frequency pin

***At the Flight-Line-*** Prior to starting the aircraft:

- \_\_\_\_\_ Before the transmitter is initially turned on, make sure that you have the correct frequency pin first and that the pin matches the frequency of the transmitter in your hand. When the transmitter is first turned on, see if anyone on the flight line starts having any trouble. It is possible that someone may have forgotten to pull his own frequency pin; this will almost certainly crash their aircraft! If you hear someone yelling that they are having a control problem, immediately turn off your radio and investigate before proceeding.
- \_\_\_\_\_ Transmitter battery voltage has been verified
- \_\_\_\_\_ Model selectable transmitters have correct model selected
- \_\_\_\_\_ All control surfaces move in the right directions (one more time, to be sure)
- \_\_\_\_\_ Verify that control surface trims are correct
- \_\_\_\_\_ There are no glitches on the controls

***When starting the aircraft:***

- \_\_\_\_\_ Verify that the aircraft is secured by a tie-down or qualified assistant
- \_\_\_\_\_ Throttle is set below mid-point
- \_\_\_\_\_ All persons and equipment are clear of the "propeller rotation area"

From this point individual aircraft have unique requirements but the key point is that we want to ***maximize SAFETY by minimizing risks.***

***Approaching Pilot Box:***

- \_\_\_\_\_ Always know the flight pattern prior to taking-off. Your first turn will always be away from the flight line- NEVER towards it
- \_\_\_\_\_ Remember to call your intentions when taking-off, landing, entering and exiting the runway.
- \_\_\_\_\_ Never work on an aircraft while it is sitting on the runway, you may be hit by a landing aircraft. Return your plane to the flight line or the pits if the adjustment can't be done quickly.



## **V. JSCRCC FIELD PROCEDURES**

Due to our flying field being on government property, several procedures are unique to the club and must be observed at all times as listed below.

1. Any time the Antenna Range is in use by NASA the field is closed to all R/C flying. Also flying is not permitted during working hours.
2. All JSCRCC members should be prepared to show their Club Field Pass and photo ID when requested by NASA Security Personnel. Members must also be on Security's check list to ensure that members will be allowed on site at any time.
3. Club members will drive with caution to the field parking area at the edge of the pavement near the shade canopy. When RC aircraft are flying, all vehicles and pedestrian traffic will wait at the stop sign to be motioned on.
4. The only people with permission to fly on the JSC flying site (Building 14 Antenna Range) are JSC Government employees, JSCRCC current Club members, and guests with a current AMA license/membership card accompanied by a JSC or JSCRCC Club member. No JSCRCC Club member may fly without his/her Club Field Pass.
5. Keep the flying site and parking areas clean. Every member must do their part, even if we didn't have anything to do with creating the litter on the field. Pick it up and take the litter home for proper disposal in your trash can.
6. All engines having a displacement of more than 0.10 cubic inches must be fitted with an effective silencing device when being operated at the flying site. Straight extensions or stacks are not allowed.
7. No pilot shall fly while under the influence of alcohol or illegal substances. NASA regulations prohibit entering or leaving JSC property, or operating a motor vehicle while under the influence of alcohol or illegal drugs.
8. Club field passes are prepared by the Club Treasurer and are labeled as "R/C PILOT", "INSTRUCTOR", or "STUDENT". All new club members will be issued a "STUDENT" field pass until it can be verified that he/she meets certain flying standards per the pilot certification procedures given in Appendix B.
9. Holders of "STUDENT" field passes will not be allowed to fly without an instructor present.



# 2014 - JSCRCC Registration Form



RENEWAL                       NEW MEMBER                      DATE: \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ BIRTHDATE: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

HOME PHONE: (\_\_\_\_) \_\_\_\_\_ BUS. PHONE: (\_\_\_\_) \_\_\_\_\_

CELL PHONE: (\_\_\_\_) \_\_\_\_\_ US CITIZEN     YES     NO

AMA #: \_\_\_\_\_     STUDENT     PILOT     INSTRUCTOR

Email address is used for communication strictly for JSCRCC

EMAIL ADDRESS \_\_\_\_\_

GUEST \_\_\_\_\_ GUEST \_\_\_\_\_  
US CITIZEN     YES     NO                      US CITIZEN  YES     NO

GUEST \_\_\_\_\_ GUEST \_\_\_\_\_  
US CITIZEN     YES     NO                      US CITIZEN  YES     NO

GUEST \_\_\_\_\_ GUEST \_\_\_\_\_  
US CITIZEN     YES     NO                      US CITIZEN  YES     NO

GUEST \_\_\_\_\_ GUEST \_\_\_\_\_  
US CITIZEN     YES     NO                      US CITIZEN  YES     NO

|       |                       |         |                         |
|-------|-----------------------|---------|-------------------------|
| DUES: | ADULT RENEWAL         | \$35.00 | SEND COMPLETED FORM TO: |
|       | ADULT NEW MEMBERSHIP  | \$55.00 | HERMAN BURTON           |
|       | JUNIOR RENEWAL        | Waived  | 2918 Sea Ledge Dr.      |
|       | JUNIOR NEW MEMBERSHIP | Waived  | Seabrook, TX 77586      |
|       |                       |         | PHONE # 281-474-7133)   |

===== Reserved for Membership Chair =====

AMOUNT REMITTED: \_\_\_\_\_ AMA CHECKED: \_\_\_\_\_

DATE FIELD PASS SENT \_\_\_\_\_

## Appendix B – Pilot Certification

The goal of the JSCRCC is to teach the new R/C flyer to fly safely with a minimum of risk to his airplane, facilities, and guests. In order to meet this end a comprehensive flight-training program has been developed. While in the program, a student will be taught not only the basics of safe, controlled flying but related subjects including battery maintenance, safe construction practices, basic engine tuning and care, frequency control and flight line courtesy skills.

All instruction is supplied by JSCRCC certified instructors. Each student's airplane will be inspected by the instructor to insure that it is airworthy. Engine tuning and care will be reviewed along with airframe care. The student will learn an overview of the ownership of model aircraft beyond the skills needed to fly.

A list of current JSCRCC instructors is published monthly in the club newsletter. A student **MUST** be a member of the Academy of Model Aeronautics before receiving instruction at the JSCRCC field. All flyers must join the club after **three** flying visits to the field in order to continue to have flying privileges at JSCRCC. JSCRCC members must be certified pilots in order to fly without an instructor present. All existing JSCRCC members having Pilot Field Passes as of 1 June 2005 will be considered field solo/certified as JSCRCC Pilots.

Beginning flyers are encouraged to talk to instructors prior to purchasing their first trainer model, engine and radio. Many good trainer type aircraft are available in both kit, almost ready to fly (ARF) and essentially ready to fly (RTF) forms. All of them share some common characteristics which enable slow and forgiving flights. Good used trainers are often available through club members or hobby shops. These are often a way to get in the air quickly, and possibly at a cost savings. Take an experienced flyer with you when purchasing used gear. It is sold without warranty and it is the buyer's responsibility to assure that the plane, radio or engine is in serviceable condition and, in the case of radios, currently legal and acceptable at your field.

Buddy box training methods are required for instruction at JSCRCC. This system permits the student and instructor to each hold a transmitter, avoiding passing the transmitter back and forth. This also allows the instructor to take over and save a plane from a bad situation in far less time than if the student had to first decide to hand the transmitter over, giving the instructor far too little time and altitude to save the airplane. Airtronics, JR and Futaba offer transmitters with the buddy box connector. Many instructors have buddy boxes. Check to see which one has the type that is compatible with your equipment when choosing an instructor.

Finally, **SOLO** when your instructor believes you are ready. It is the sole responsibility of the instructor to establish your skills to solo.

## **First Trip to the Flying Field**

Once the student has a completed aircraft, the instructor will carefully inspect it before the first flight. Other subjects will also be reviewed before and after the first flight session. These subjects are flight patterns, transmitter impound, frequency control, engine starting and tuning and what to expect on the first flight. A post flight review of procedures and finally a review of battery maintenance.

The inspection will be a thorough one. The instructor will use the following check list items before the initial flight, even if the airplane has been flown elsewhere in the past. The sole purpose of these inspections is to increase the student's chances of success without airplane troubles. Review the "First Flight Pre-Flight Inspection" for added assistance in assuring a successful first flight. Remember, if you work on your airplane between flight sessions it should be inspected by the instructor to assure that everything is in order before the next flight.

## **First Flight Procedures**

Before flight training can begin the instructor and the student will review flight procedures for the field. The AMA Safety Code must be reviewed and compliance assured. The transmitter impound will be shown and procedures explained. The transmitter will be impounded, flight stations and methods will be explained, and field safety rules reviewed. Airplane restraints are demonstrated. Flight patterns and procedures are explained. Landing approaches are explained, including the downwind, base and final legs of the pattern. The events that occur during a landing are explained. Emergency procedures, including in-flight airplane trouble and loss of power (dead stick), as well as right of way are explained. The instructor will show how to declare take-off, landing and person "on the runway", when at the flight station. It is important to assure that everyone hears you when you call your intentions.

A person on the runway has the right of way, but should not go onto the runway without declaring his or her intentions and clearing his need to be on the runway with all of the pilots currently flying. He should clear his airplane from the runway as promptly as possible and declare that he is clear of the runway. Landing priority is given to dead stick aircraft first. Pilots should also give immediate runway access to any aircraft that is having in-flight trouble.

When the student is ready for the start of the first flight, advise other pilots that a "maiden flight test" is occurring. It is recommended that all other flight operations be discontinued prior to the taking of a maiden flight of an aircraft. AMA rules prohibit maiden flights in the presence of spectators (unless you are assisted with an experienced pilot), so this flight should be done on a day when the field is not busy. The frequency pin is taken from the pin board and replaced with the club member's AMA card and club's field pass. The pin is attached to the transmitter. Once the pin is acquired and prior to the first flight, testing should include a radio range test with the engine running.

The airplane, field box and transmitters (master and buddy box) are taken to an available flight station, remembering that only four aircraft should be in the air at one time. Both transmitters need to be checked and the control, trim and travel direction of all servos verified that they match. The wind direction is observed and the flight pattern for the day is explained, giving the student the proper takeoff direction information for future reference. The details of the first flight experience should be explained, including the instructor's need to give and take control of the aircraft. An instructor will always do everything in his or her power to save the student's plane, as long as it doesn't endanger someone.

The instructor assists the student as necessary in fueling, restraining the aircraft, starting and tuning the engine. Each item is explained as to the reasoning and methods used. This builds understanding of the process for future knowledge of the student. The controls are given a final check for movement and direction. When the engine has warmed up, the intent to takeoff is declared to the other pilots. Once the airfield is cleared, the airplane should be taxi tested before attempting its first flight. Once all on ground testing is completed, the plane is taxied to its take off position and taken off by the instructor.

The instructor will bring the aircraft to a good altitude and attitude for flight-testing and to determine that all is in good order. The control trims will be adjusted as needed to assure level flight (needs to be on both transmitters). After the aircraft has been stall tested and the instructor is familiar with its characteristics, the instructor may need to land the model to allow for adjustments. If this is not required, the student may fly at this point, keeping in mind the amount of fuel remaining due to the taxi and flight-testing. Note: A flight timer is recommended to help in keeping track of the fuel used.

At the end of the first flight session, the student should be supervised for impound procedures, defueling and aircraft cleanup. The plane should be inspected after the wing is removed; looking for any parts that may have loosened or failed. Any needed changes or adjustments should be discussed. Additional flights may be taken, depending on the readiness of the student and the aircraft.

At the end of the flight day, the status of the student's progress should be discussed. Each aspect of things that went well and things that need to be improved on should be noted. The student should be told how to recharge the batteries of the radio system and what to look for on the aircraft overall in preparation for the next flying session.

Once all areas of the first flight have been reviewed with the student and the Daily Flight Checklist and the Pre-Flight Checklist have been discussed the student is ready to begin normal flight instruction. Students are required to master several basic maneuvers as listed in the Final Exam and Solo Flight form in order to obtain a "Pilot Certification".

## Final Exam and Solo Flight

At this point the student has completed all required instruction and may make his/her solo flight when ready. The instructor or another instructor may administer the solo flight exam.

The test has two parts. The first is an informal discussion where the student explains the AMA Safety Code, club safety rules and procedures to the instructor. The second part of the exam is a flight test. A buddy box **may not** be used during this test. If the student requires assistance he/she is not passed but may retest again when ready, but may not retest sooner than the following day.

1. Understanding of the AMA Safety Code, JSCRCC safety rules, and JSC field procedures \_\_\_\_\_

2. Student pilot flight test demonstrating proficiency in all associated ground procedures, taxi out, takeoff, level flight, landing pattern, a controlled on runway landing and taxi back to the flight station area and in such maneuvers as the instructor deems necessary to insure safe and proper operation of his/her aircraft. \_\_\_\_\_

Upon satisfactory completion of these tests, the student is a certified pilot and may fly without an instructor. A copy of this form must be submitted to the club's Treasurer in order to obtain a "Pilot's" field pass.

New Pilot: \_\_\_\_\_ (name)

Approved as a certified RC pilot. Date \_\_\_\_\_

\_\_\_\_\_  
Instructor (Sign)

I understand the rights and responsibilities of being a pilot in the Johnson Space Center RC Club and agree to abide by the AMA and Club Rules.

\_\_\_\_\_  
New Pilot (Sign)

## Appendix C -Instructor Certification

There are several purposes of a flight instructor certification program. The first and most important is to produce a safe learning environment. Another is to insure quality instruction for the student pilots. Teaching from a standardized set of guidelines will allow a student to switch instructors or use multiple instructors without loss of continuity. Finally, by certifying individuals as instructors, both the club and students know exactly who the instructors are and the list is published each month in the newsletter.

The requirements for flight instructor certification are not complicated. Flight instructors need to be people known by the club to be reliable and safety conscious. They need sufficient experience to fly comfortably themselves. An instructor must recover a student's airplane from unusual attitudes without delay. The instructor must have the time required to help students. A flight instructor does not need to be a pattern or acrobatic competition level flier. He or she should have adequate knowledge of airframes to conduct a safety inspection of the student's aircraft. He should know how to adjust the engine correctly.

The club shall certify an instructor by first knowing that person and accepting him as reliable. In addition, his experience, understanding and abiding by club and AMA rules will be key criteria in his being accepted. Once this is established, the instructor applicant will display his flying skills. The Instructor Certification authority (Chief Flight Instructor) will observe the flight skills demonstrated by the instructor applicant. A flight demonstration shall consist of the following, in any order:

1. Taxi
2. Takeoff
3. Flying in the standard pattern in both directions
4. Horizontal figure eights showing the ability to hold relatively constant altitude
5. Loops, exiting at entry
6. Rolls, controlling altitude reasonable well
7. Invert flight greater than 10 seconds
8. Split S
9. Immelman
10. Spin and recover
11. Fly a landing pattern
12. Land on the runway and taxi off the runway and kill the engine
13. Ability to recover the aircraft from unusual attitudes
14. Ability to setup and trim a buddy box prior to and during flight

There are several considerations for the instructor relating to general safety. The first issue above all is the safety of spectators and other flyers. The prudent instructor will take control of the student's aircraft at the first sign of a problem. Problems will include flying too near the pit area or flight line, flying towards or over the pits, flying too low, flying in unusual attitudes or in a state of disorientation. An instructor must be willing to put the safety of the crowd first. He will protect the model aircraft when possible.

On the first day, teaching should be limited to the basic familiarization with the aircraft. This should involve a thorough examination of the model and an explanation of the methods of training to be used. It is essential that the student understand the functions of the equipment and aircraft. He or she needs to have the safety aspects explained in detail prior to the first flight. Once these items are covered the first flight should concentrate on straight and level flight. Turns should be flat and maintain constant altitude. As the student builds confidence, the degree of difficulty of maneuvers may be increased. Usually this should be reserved for future lessons. Takeoffs, landings and basic aerobatic maneuvers should be added as the student's progress allows. Each student will develop skills at a different pace. It is up to the instructor to work within the limits of the individual when going through the student-training program.

Flight line, pit and transmitter impound etiquette should be taught as part of the students learning experience. It is key to have them understand the importance of knowing how things work on the flight line and how the impounding of transmitters assures safety at the field.

Students who continually refuse to follow instructions and rules may have flying privileges suspended and may be dropped from the club membership.

Each instructor is required to sign-off a student a year. If this is not accomplished, they will be required to be re-certified during the next year. The Chief Flight Instructor will review flight-training methods during the next year, to assure the quality of the club's training. Any issues that arise will be discussed with the individual instructor.

All instruction at the JSCRCC field requires the use of a buddy box (either personally owned or owned by the club). In the situation where the buddy boxes stored at the field are missing or broken and no other functioning buddy box is available for use, the Chief Flight Instructor may waive this requirement until the equipment can be repaired or replaced. Any instructor requesting such a waiver shall discuss this with the Chief Flight Instructor.

Each instructor shall have a good understanding of the student handbook prior to working with a student. It is extremely important to work through the details of the information included in the handbook to assure a solid foundation for the student's development.



## JSCRCC Instructor Approval

Applicant Name: \_\_\_\_\_

The Applicant has been reviewed and has agreed to abide by the previous pages' requirements.

Experience and Club requirements have been reviewed. \_\_\_\_\_

Safety compliance is understood. \_\_\_\_\_

AMA and JSCRCC regulations are understood. \_\_\_\_\_

Flight requirements have been met. \_\_\_\_\_

New Instructor has reviewed the Student Certification Program. \_\_\_\_\_

Chief Instructor \_\_\_\_\_ Date: \_\_\_\_\_  
( signature)

Applicant: \_\_\_\_\_ Date: \_\_\_\_\_  
(signature)

## Appendix D

### Previous Presidents and Current Officers

#### Previous Presidents

|      |                |      |                  |
|------|----------------|------|------------------|
| 1964 |                | 1989 | Jim Brock        |
| 1965 |                | 1990 | Mike Goza        |
| 1966 |                | 1991 | Charles Copeland |
| 1967 |                | 1992 | David Dale       |
| 1968 |                | 1993 | David Tadlock    |
| 1969 |                | 1994 | Ed Copeland      |
| 1970 |                | 1995 | Ray Randolph     |
| 1971 |                | 1996 | Bill Langdoc     |
| 1972 |                | 1997 | Michael Laible   |
| 1973 |                | 1998 | Michael Laible   |
| 1974 |                | 1999 | Joe Parlanti     |
| 1975 |                | 1999 | Preston Hunt     |
| 1976 | J. W. Smith    | 2000 | Preston Hunt     |
| 1977 | J. W. Smith    | 2001 | Clay Bare        |
| 1978 | Tom McPhearson | 2002 | Clay Bare        |
| 1979 |                | 2003 | John Boyle       |
| 1980 | Dave Thomasson | 2004 | John Boyle       |
| 1981 | Dick Centnar   | 2005 | Herman Burton    |
| 1982 | Henry Lee      | 2006 | Herman Burton    |
| 1983 | Dave Tomasson  | 2007 | Mike Laible      |
| 1984 |                | 2008 | Mike Laible      |
| 1985 | Bradley Prior  | 2009 | Mike Laible      |
| 1986 | Jon Vincent    | 2010 | Mike Laible      |
| 1987 | Jon Vincent    |      |                  |
| 1988 | Dennis Smerz   |      |                  |

#### JSCRCC officers for 2010 are

|                 |                |                                    |
|-----------------|----------------|------------------------------------|
| President:      | Mike Laible    | 281-474-1255                       |
| Vice-President: | Phil Etling    |                                    |
| Treasurer:      | Dave Hoffman   | 281-479-1945(W), 713-813-2986(pgr) |
| Secretary:      | Kent Stromberg |                                    |