

SUN PARLOR R/C FLYERS

WINDSOR ONTARIO

MEMBER OF M.A.A.C.



THE EMITTER

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**The next meeting will be Wednesday May11, 2022: 7:00 pm At
Windsor flying club and online Zoom**

President's Report March 2022

Members,

This will be our last meeting before start of the flying season. But we will keep sending updates thru our many ways of communication between members. So, this meeting will again in person at WFC and thru Zoom online. Wednesday May 11 @ 7:00pm info for zoom to follow.

Membership can now be renewed thru E-transfer online payment as I sent out before and in person as well or even sent to Jim by mail.

Sorry again for the changes to our dates for the meeting as couple of items forced me to do this. One being the finishing up of the sound testing a few other models. More to report on this at the meeting.

Secondly a meeting arose from Maac in which I was asked to attend.

We still need a CD for the Season Opener and to setup volunteers. Few items have been taken care of at the field like I mentioned the other day, but few more taken care of.

As for Lawn cutting, it will be on Thursdays after noon, exact time TBA, that will be our regular day of cutting unless weather permitting.

Ok see you all Wednesday

Paul Sousa

Sunparlor R/C Flyers President

Sunparlor RC Flyers

Meeting April 4, 2022

NOTE:

Once again we were able to have an in person meeting at the Windsor Flying Club. For those unable to attend, the meeting was also offered it on-line via the Zoom platform.

Meeting called to order by President Paul Sousa @ 7:03 pm. He welcomed all present in attendance. We had no guests but welcomed new member Charles Oldfield to our Club.

Paul requested a motion from the floor to accept last month's meeting minutes as published in this months' Emitter. Dave Kool offered the motion, second was Peter Durand. Carried.

Treasurers Report

Jim presented a review of the budget vs actual statement for March 2022 with corrected investment account totals that included accrued interest.

Jim motioned the March statement be accepted as posted with corrections. Second was Pat Sheehan. Carried

Old Business:

Paul reported we presently have 47 paid up members. He revised the membership application package to include the changes regarding time limitations for ICE powered aircraft and noise level testing. He also included an areal view of the field showing our no-fly zones with a reminder we are all responsible for reporting any violations of this rule so appropriate action can be taken.

Paul also reported due to the new Transport Canada rules and guidelines recently approved, our US AMA members will require MAAC membership to be able to fly in Canada. The same will now apply to us requiring AMA membership to be able to fly in the US. MAAC and the AMA are working on some form of a temporary membership application process to resolve this issue. More on this issue as the information becomes available. Paul will revise the rules and guidelines accordingly to reflect these changes.

The flying field will remain locked out until the weather and field conditions permit continued use without damage. This has put off any scheduled noise level testing. Paul will advise via e-mail when the field conditions permit opening the field.

The Season Opener is still a "go". Paul suggested we offer a special invitation to the Amherstburg town council members as a show of appreciation for their diligence on the by-Law changes. We still require a CD to come forward to run this event before we can continue.

No other old business was presented.

New Business:

There was a discussion regarding Db levels and testing at the field prior to flying our ICE aircraft. As the town has not stipulated any maximum sound level in their revised by-law, we will stay with the MAAC Db level guideline of 90 Db @ 7 meters (just over 21 ft.) at all angles. A form has been developed to be filled out at the time of testing for each plane to record the plane's specifications and sound levels. These records will be kept on file for future reference if required.

Another discussion was tabled regarding work table replacement at the field as the present tables are in poor condition at best. Steel tube frame tables with composite plank tops were suggested. A motion was tabled by Dennis Pratt that we purchase the steel tube frame tables from U-line. The motion seconder was Peter Veighey. Mike Salter had a concern regarding table weight and ease of mobility for grass cutting etc. Pressure treated wood tops vs composite was also mentioned as a cost saving. After further discussion, it was decided to conduct some further research and re-approach the membership at our next meeting. Dennis withdrew his motion pending the outcome of the research.

Paul discussed a situation where one of our clubs lost its MAAC sanctioning in British Columbia due to disregard for new MAAC/Transport Canada rules regarding flying too close to an airport. As a word of caution for all clubs, these new rules are being strictly monitored and enforced by both parties.

It was reported one of our field neighbors has posted signage indicating "NO FLYING PERMITTED" in field areas where they have no jurisdiction. We are good to fly in the areas shown on the field aerial picture outside of the no-fly zone.

A motion from Bob Barrow to close the meeting at 8:20 pm. Dave Kool was the seconder. Motion carried.

50/50 draw winner was Len Morissette. Not sure how much???

Paul's hats raffle as an attendance prize from this meeting. #20 – Bob Barrow's number was drawn.

Attendance

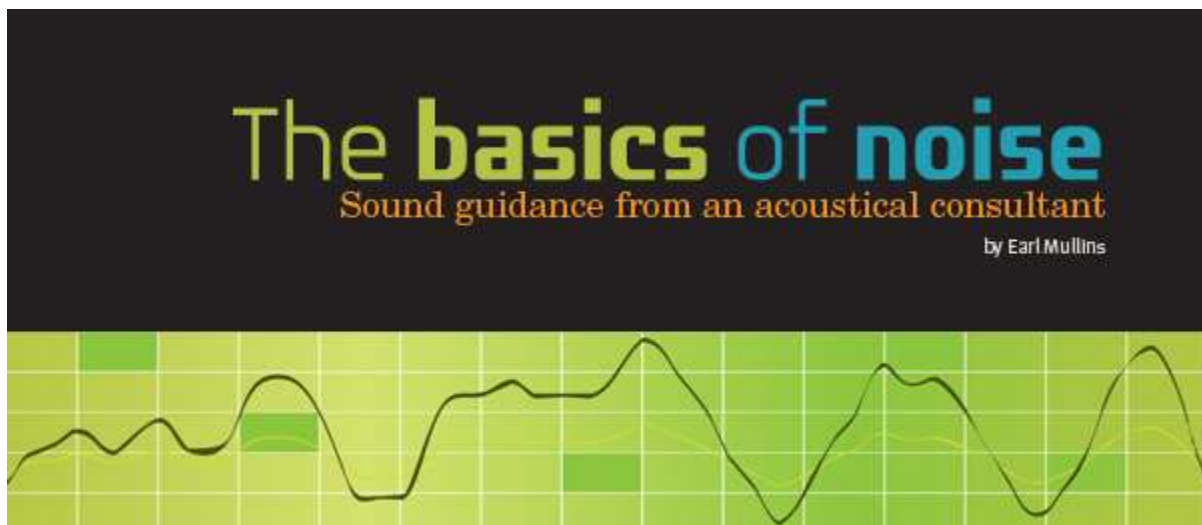
Paul Sousa	Jim Bridge
Bill Green	Wayne Pink
Dave Kool	Kaz Sawiak
Pat Sheehan	Mike Ouellette
Len Morissette	Denis Pratt
Bob Barrow	Peter Veighey
Greg Meyer	Peter Durand
Chuck Oldfield	
Via Zoom	
Dan Wright	Rob Morissette
Ron Morissette	Wilfred Marengo
Jerry Beneteau	Juan Pallero
Mike Salter	Gary Wolf
Thomas Lee	Larry Hawksworth

Ramblings off the Green

Well Paul has done it again, He always sends me the president's report the day before our meeting. No preassure. Good thing he runs the club well.

We were able to get out to the field to do some sound testing, Interesting results to be discussed at the next meeting. Wednesday the 11th. Here are a document regarding model airplane sound testing.

The Basics of Noise



Written by Earl Mullins Sound guidance from an acoustical consultant. Featured in Model Aviation March 2013.

Noise is one of the major issues threatening RC airfields and many other recreational activities. What you consider to be a pleasant sound from a glow engine at 17,000 rpm can be an unbearable racket for the neighbors who do not share your passion for RC flight. Part of the definition of noise is, "sound that is unwanted or undesired."

The sound factor draws many into RC aircraft flying—a big part of the fun is the engine noise. Some hobbyists avoid electric-powered airplanes because of the lack of engine sounds.

I choose to ride a large Honda touring motorcycle which is no louder than a typical car. My neighbor down the street loves his Harley, complete with loud aftermarket exhaust pipes. For him, the noise is an integral part of the experience. The neighborhood is not as enamored, especially at 7 a.m.



During engine run-up the pilot is exposed to significant short-term noise levels. Although seldom used, hearing protection is a good idea, even with limited exposure. Sound levels at the pilot's position during a flight are typically 75 dBA or less.

The Basics of Noise

Our eardrums sense tiny fluctuations in air pressure, which we interpret as sound. The decibel scale is used for expressing sound levels because we do not perceive loudness in a linear fashion. We detect loudness in a logarithmic way, similar to the Richter scale for earthquakes.

Although an increase of 3 decibels (dB) doubles the sound energy or amplitude, it takes a change of 10 dB to be judged as twice as loud. Each similar decrease of 10 dB is considered to be half as loud as the original sound.

Changes of 1 dB are not perceptible. A 3 dB change can be heard by a critical listener under ideal conditions. A 5 dB change is normally the threshold where a difference is readily noticeable, either up or down.

A-weighted decibels (dBA) are commonly used to measure sound levels. The A-weighted scale

deemphasizes low frequencies to directly compare loudness from different sounds. Theoretically, a diesel locomotive measuring 80 dBA has the same loudness as a cymbal at 80 dBA, although the frequency content is much different.

Our ears and hearing system are constructed to put more emphasis on high-frequency sound than low tones.

It is important to hear a twig snap (high-frequency) from behind as the grizzly bear stalks you. Low-frequency rumble from distant thunder miles away is less critical. Most of the information content from speech is in the middle and higher frequencies, 500 Hz to 2000 Hz.

The time of day, duration, and variability of sound affects the annoyance factor. Steady sounds are less annoying and more easily accepted than a varying sound. Sounds with pure tones or major fluctuations in level are more noticeable, which is why those sounds are used for alarms and sirens.

In the case of RC airplanes, the sound levels change throughout the flight. The variability makes the noise more noticeable and annoying to the public.

Two common ways to express sound levels are the equivalent continuous noise level (L_{eq}) and the momentary maximum level (L_{max}). The L_{eq} is the summed total of the sound energy occurring throughout the event or a time period. Although not mathematically precise, L_{eq} can be thought of as the average sound level.

The L_{max} is the loudest noise that occurs, if only for a second or two. It takes a more sophisticated sound meter to measure L_{eq} and calculate the running average. A decent sound meter of reasonable accuracy will cost at least \$300. An integrating sound meter that can directly measure L_{eq} typically costs \$1,500 or more.

Noise Limits

There is no magic number to make everyone happy and avoid annoying or offending others. There also is not a definite dB value where everyone agrees that noise becomes a problem. Because humans are involved, there is always a certain amount of subjectivity and variability.

The U.S. Army has noise criteria for military firing ranges that define acceptable noise levels when up to 15% of the nearby population is annoyed. The Occupational Safety and Health Administration allows a workplace level of 90 dBA for an eight-hour shift, without running an undue risk of hearing damage throughout a career.

Not all jurisdictions have a noise ordinance. Even if a city or county has an ordinance, it may be flawed and incomplete. I formerly lived in a small city that has an ordinance adopted in the 1950s. It lists octave bands (different component frequencies rather than the overall dBA value) that have not been used since the early 1960s.

In my 28 years as a full-time acoustical engineer, I have never seen a sound meter that can measure the octave bands that are listed. If the text of an ordinance has technical flaws you are usually stuck with them. A knowledgeable expert can sometimes make a case for different interpretations, but the letter of the law is usually what counts. Often, the government staffers do not understand their own noise ordinance.

Many noise ordinances will express noise limits as either L_{eq} values or L_{max} values. In the case of L_{eq} , the wording is usually something similar to: "...noise level shall not exceed L_{eq} 60 dBA for any given

daytime hour.”

Another approach is listing the maximum permissible level (Lmax) regardless of duration such as, “...noise shall not exceed 70 dBA at a residential property or property line at any time.” Noise limits are typically 10 dB lower between 10 p.m. and 7 a.m.

Another approach to noise limits is ambient plus five dB. In this case, the average existing background or ambient noise in the area is measured without the noise in question. While the RC aircraft are flying, another set of sound levels are observed. The two levels cannot differ by more than five decibels.

If the background noise is Leq 59 dBA for example, the noise when RC airplanes are flying cannot exceed Leq 64 dBA. This option is helpful in areas that are already noisy.

If the stated limit is 60 dBA but the highway traffic is 64 dBA, you cannot easily demonstrate compliance with the lower limit. The ambient adjustment can be a double-edged sword. If the area is quiet and the background noise averages 40 dBA, then your noise limit becomes 45 dBA.

Some ordinances do not have any numerical limits. They simply use vague language such as, “...shall not create a nuisance at nearby residences” or similar phrasing. But what constitutes a nuisance? One’s sweet sound is another’s awful racket. A numerical decibel limit is more understandable and less open to interpretation, and more defensible in court should it come to that.

Noise-Control Techniques

Noise control works on a source-path-receiver model. Noise can be reduced at the source (using mufflers, quieter engines, electric motors), along the path of propagation (distance, barriers), or at the receiver (enclosures, better windows, earplugs).

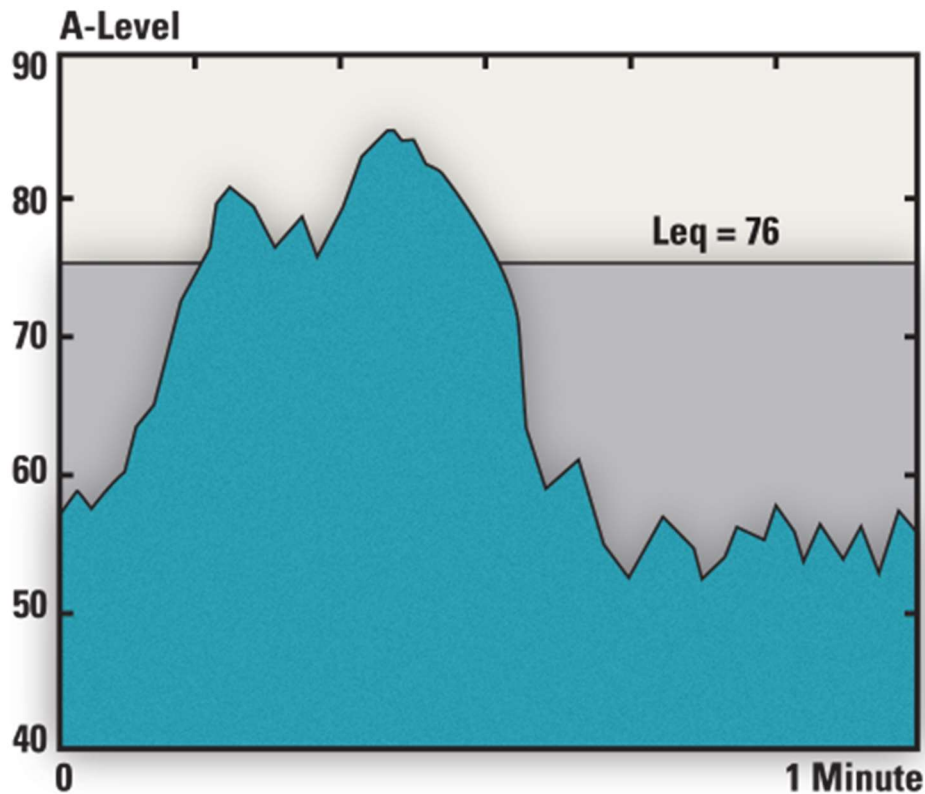
In the case of RC aircraft, the noise source is elevated and moving, so an enclosure or a property-line noise barrier is typically not an option. Good luck getting the neighbors to wear earplugs because you want to fly!

The available options usually fall into a few categories:

- *Limits on aircraft type (electric powered versus glow powered, or a ban on turbines).*
- *Restricted hours for the field (typically not after 9 p.m. or before 10 a.m.).*
- *Noise limits on the aircraft (requiring mufflers or baffles, or a limit on engine size).*

Although there is no handy library or compilation of sound data for RC aircraft, my experience shows

that the typical sound levels for various types of RC aircraft, at a reference distance of 100 feet, are:



Glow- and gas-powered airplanes	Leq 66-75	Lmax 75-90
Glow- and gas-powered helicopters	68-70	77-79
Electric-powered helicopters	Leq 66-68	Lmax 75-76
ducted-fan jet airplanes	56-58	67-70
Turbine-powered airplanes	Leq 68-71	Lmax 80-90
Turboprop airplanes	58-60	75

The Leq value shown is for approximately 3 to 5 minutes of a given flight. Lmax is the highest momentary level that was observed during a high-speed pass or a takeoff. It is complicated to extrapolate a five-minute Leq out during an entire hour, as is often required when assessing compliance with a local noise ordinance.

That calculation is well beyond a simple explanation. A 5-minute Leq taken during a flight will be higher than the same sounds averaged for an hour. If the limit is Leq 60 for an hour, and you measure Leq 65 during each of several 5- to 10-minute flights that hour, the overall average will likely comply.

There were some surprises in this data. Turbine aircraft were expected to be louder than glow engines,

but the difference was only 3 to 4 dBA. Some glow-powered propeller airplanes were louder than the smaller turbine airplanes. A level that is 3 decibels higher is not dramatically louder. Jets with turbines rated from P-60 to PT-160 were measured.

The electric helicopters were slightly quieter than the nitro-powered helis (600 to 800 series, or rotor diameters of 600 mm to 800 mm). Most of the noise comes from the rotor disc during aggressive maneuvers, not the engine.

The loudest propeller airplane measured was a 40% scale gas-powered aerobatic model with a 160cc four-stroke gas engine. On average, its noise was Leq 70 throughout the 6-minute routine, but the peak was higher than other airplanes (90 dBA during a high speed pass down the runway). Smaller gas- or glow-powered aircraft were in the 72 to 86 dBA range for their momentary maximum levels, depending on aircraft size and the power setting.

It is important to note that any sound data must include a distance. If someone says, "My airplane makes 92 dBA," we need to know at what distance. It makes a huge difference whether that 92 dBA level occurs at 5 feet (glow engine during run-up) or at 500 feet (Boeing 747 during takeoff).

Distance is typically beneficial. Sound dissipates at roughly 6 dB per doubling of the distance, according to the inverse-square law. A level of 90 dBA measured at 100 feet becomes 84 dBA at 200 feet, 78 dBA at 400 feet, and so forth.

Most are surprised to learn that trees and vegetation do not make a big difference in the sound levels at distances. A row of trees around the field will not lower sound levels at a nearby home.

*A mature forest that is 100 yards wide will have roughly a 5 dB net noise reduction value compared to an open, grassy field. Five decibels is slightly noticeable, so the benefit gained by a couple of rows of thinly spaced trees is negligible. There can be an out of sight, out of mind psychological benefit, but nothing that sound meters can quantify. **Conclusion***

The RC hobby can be noisy, particularly with fuel-powered aircraft. Most clubs realize that they need to be good neighbors and go to reasonable lengths (or sometimes well beyond reasonable) to protect the hobby and keep using their airfields.

If your club or flying field is threatened by community complaints or enforcement action, it is worthwhile to get advice from someone who is competent in noise assessment. These experts are usually listed under acoustical consultants in the telephone book.

Navigating the maze of noise regulations, zoning requirements, permits, and neighborhood opposition without some expert guidance is unwise. It's similar to representing yourself in court or diagnosing your own illness.

—Earl Mullins, Professional Engineer noisebuster@hotmail.com

About the author

Earl Mullins has been an acoustical consultant for 28 years, and has a mechanical engineering degree. He has studied and evaluated noise from a wide variety of sources, including major airports and a few RC airfields. He has expertise in writing and interpreting noise ordinances—addressing a variety of specific problems and community complaints. He also routinely develops noise-control measures to

meet specific criteria.

He recently became an AMA member and is learning to fly several different electric-powered trainer airplanes. He no longer actively flies full-scale aircraft.

He learned to fly in Alaska and spent 14 years doing remote-area flying, including search-and-rescue missions.

FIELD RULES AND GUIDELINES

FIELD RULES

- 1) Any actions contravening to the following rules and / or the M.A.A.C. rules are subject to a warning. Continued disregard for the rules and guidelines by any individual will be reviewed by the executive board with the possibility of not being welcomed to return to our club.
- 2) The field and facilities are to be used by members who are in possession of a current M.A.A.C. and SPRCF club membership. Any out of county guest may use the club's facilities up to three times per year if accompanied by a club member. This guest must have proof of a current M.A.A.C. or A.M.A membership. (insurance)
- 3) Access to the Tower Field is from the 4th concession by the road adjacent the south boundary of the field.
- 4) Parking will be limited to the gravel lot which is bordered by railroad ties, on the south side of the pits and runways, with exception to special event.
- 5) All areas of the field will be kept clean. Each member is responsible to remove their own garbage. If you are a smoker do not throw your butts on the field or in the portable toilet you must take them home with you.
- 6) Pets are permitted in the parking area on a maximum 10-foot (3 meter) leash. It is the owner's responsibility to clean up after their pet.
- 7) No smoking beyond the spectator safety fence will be permitted at any time.
- 8) Cell phone use is to be limited to spectator and parking area only.
- 9) Any member under the age of 16 years must be accompanied by a parent or guardian when at the field.
- 10) There will be no alcohol or illicit drugs consumption permitted at the field at any time.
- 11) You must show proof of current M.A.A.C. membership before being issued a club membership.
- 12) Members who have not obtained their level 1 restricted wings (fly only the aircraft you were trained on or one similar in performance) are not permitted to fly without an instructor alongside said member during flight.
- 13) You must have your name and address inside your aircraft for identification.
- 14) You must taxi out to runways via taxi ways only.
- 15) **NO** internal combustion engine operation (except for field maintenance equipment) is permitted between 8:00PM and 9:00AM on any day of the week.
- 16) All aircraft with combustible engines before using our field **MUST** be tested for sound level and meet the noise limitations of 90 dB at a distance of 7 meters before allowed to be used at Tower field. Suspect aircraft will be tested at a 360-degree perimeter at full throttle with the highest recorded reading by the sound meter being used
- 17) It is the responsibility of anyone operating a gasoline or turbine powered (not Glow) aircraft to always have a suitable fire extinguisher with them at the starting box at all times.
- 18) Any turbine powered aircraft must use a reasonable means of deflecting exhaust during start up as to not damage the field and surrounding properties.

SPRCF GUIDELINES

- 1) PLEASE RESPECT YOUR FIELD
- 2) Flyer's will cooperate with the method of frequency control approved by the club. If you cause an aircraft crash due to interference and it is proven that you are at fault, you will be required to replace the lost aircraft or provide the cash value for damages.
- 3) Aircraft will be prepared for flight on one of the cement starting pads or raised starting stations with the aircraft's forward direction facing the flight field. Do not start or arm engines in the pits. This also applies to battery powered electric aircraft
- 4) All flyers are required to display their current membership card at the frequency box while occupying the field.
- 5) No flying over the pits, parking lot, spectator area or restricted (no fly) zones. Know that the flight line is always beyond the petro mat.
- 6) All runways and grass landing area should always be kept clear for emergency landings. Please note it is mandatory to call out landing prior to a landing attempt.
- 7) Landings will be made with the pilots back to the pits.
- 8) Prior to a low fly by, no person should be on the field beyond the pilot line. All low fly-bys must be called out.
- 9) When more than one aircraft is in the air, pilots must fly in the same circuit or in different sections of the field as decided by mutual agreement between the pilots flying at that time.
- 10) NO Flying in the no fly zones that are posted at the field and included in this document.



Sun Parlor R/C Flyers Inc.

Membership Application

Please Print Clearly

New:

Renewal:

Name: _____

Address: _____

City: _____ Postal Code: _____

Telephone Home: _____ Work: _____ Cel: _____

Email: _____ MAAC No: _____

Flying Ability: Beginner: Pilot: Instructor: MAAC Expiry: _____
Subject to club approval

Group: Open: Junior: Trial: MAAC Confirmed:
18yrs or over on Jan 1st Under 18yrs on Jan 1st Treasurer use only

Do you wish to have your name published in the club phone number directory? Yes: No:

Annual Membership Dues

All members must obtain their MAAC membership directly from MAAC before joining SPRCF (www.maac.ca).

	Club	New Member Lawnmower Assessment	New Member Total
Open <small>18yrs or over on Jan 1st</small>	\$75.00	\$30.00	\$105.00
Trial 3 Month* <small>All ages</small>	\$20.00	\$0.00**	\$20.00
Junior <small>under 18yrs on Jan 1st</small>	\$25.00	\$0.00***	\$25.00

*Not available to anyone who has been a SPRCF member in the last 5 years

**After trial membership, members are required to pay lawnmower assessment when purchasing full club membership

*** Junior members are required to pay lawnmower assessment after turning 18 and becoming an open member.

Dues paid after September 1st are for remainder of year and following year (New Membership's Only)

Sun Parlor R/C Flyers Inc. requires all members to volunteer a minimum of four (4) hours per year to assist the club in maintaining facilities and staging events. A surcharge of \$20.00 will be added to the next year's club dues for members we do not volunteer. (Members with health issues are excluded from this policy)

I have read the Sun Parlor Club field rules and agree to abide by all rules and guidelines approved by the club. I understand that my failure to comply with the MAAC Safety Code may result in failure of MAAC liability insurance for any damages or claims. I will not fly without a current MAAC membership.

Signature: _____ Date: _____

Parent or Guardian(if under 18): _____



No Fly Zone

