

**THE FLYING ELECTRONS, INC.**  
Menomonee Falls, WI 53051

**FLIGHT TRAINING PROGRAM**  
(Including Pilot's Log)

The attached Pilot's Log must be maintained for the duration of this training course. As each lesson is successfully completed the instructor and student must each sign and date the form.

When all lessons have been successfully completed and a fully documented Pilot's Log has been submitted, pilot's wings and/or a certificate will be issued by the club attesting to the fact that the student has completed the required training program and has successfully soloed their aircraft.

**LIABILITY DISCLAIMER** - Successful completion of this course of instruction does not in any way obligate The Flying Electrons, Inc. (the club) or it's instructors with regard to the actions of any individual who completes this course.

**PRE-FLIGHT INSPECTION** - As part of our Flight Training Program, we require that you meet with your flight instructor some time before the first flight to conduct a complete pre-flight inspection of your flying model. We have seen many new planes brought to the field with the controls hooked up in reverse, warped wings, loose hinges, etc. Your instructor will help you correct any deficiencies.

**FLYING ELECTRONICS, INC. Menomonee Falls, WI 53051**

**PRIMARY FLIGHT TRAINING COURSE CURRICULUM**

**Chief Instructor: Marvin Ingerson Sr.**

**Lesson 1. Aircraft Familiarization (How to properly pre-flight model)**

1. Inspect aircraft structure and balance point.
2. Inspect radio installation.
3. Inspect all linkages and control surfaces for security and proper directional movement of control surfaces.
4. Inspect the engine and propeller for proper installation and security.

This should be reviewed prior to each flying session.

**Lesson 2. Radio and Field Procedures (Proper radio use at field)**

1. The need for frequency control.
2. Frequency flag use.
3. Conducting a range check.
4. Abnormal operation of radio and interference.
5. Batteries: charging and checking.
6. Servo load limits.
7. Pit area: engine operation, flying over pit and parking lot areas.
8. Other traffic and right of way on field.

This should be reviewed prior to each flying session.

**Lesson 3. Flight Familiarization (To allow student to get familiar with their model)**

1. Instructor will fly the student's model to be sure of performance and air worthiness and will also trim for straight and level flight.
2. Before student flies, go through a short ground school: turns, up elevator, etc.
3. Explain procedures to be used to pass transmitter.
4. Explain what you would like the student to do.  
EXAMPLE: "JUST GET FAMILIAR WITH THE CONTROLS AND DON'T WORRY ABOUT LOSING CONTROL. THAT'S WHY I'M HERE."
5. Allow student to fly when a reasonable altitude and airspeed are reached. Correct students' control inputs verbally if time permits.
6. Don't let student get nervous. If this happens, take control and let student relax.

This lesson is complete when the student is able to determine and execute proper control inputs to achieve desired changes in the model's attitude. Proficiency and accuracy of control is not a criteria at this point.

## PRIMARY FLIGHT TRAINING COURSE CURRICULUM

### Lesson 4. Flight Maneuvers (Teach student proper control of model)

1. Level flight and trim.
2. Banked turns.
3. Straight climbs.
4. Climbing turns.
5. Gliding turns.
6. Disorientation - discuss disorientation and trim control before the lesson.

This lesson is complete when maneuvers are performed without assistance. Each maneuver should be done with a reasonable degree of accuracy, i.e., smooth and altitude maintained fairly well.

### Lesson 5. Accuracy of Maneuvers (Develop skill to control model in a specific manner)

1. Level flight, maintaining heading and altitude.
2. Level flight at reduced power. Retrim to maintain heading and altitude as required.
3. Left and right turns to specific headings.
4. Climbing turns to specific headings.
5. Power off (idle) glides: students must maneuver model to a specific area and approximate altitude.

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

### Lesson 6. Orientation Maneuvers

(Teach student control regardless of its heading or direction relative to himself.)

1. Figure 8 - must maintain altitude.
2. Student flies right and left hand traffic patterns and must maintain a consistent altitude.
3. Student flies procedure turns right and left using center line of runway for return straight and level flight.

This lesson is complete when figure 8, procedure turns, and traffic patterns are consistent and accurate.

## PRIMARY FLIGHT TRAINING COURSE CURRICULUM

### Lesson 7. Stalls (Teach student to recognize and recover from stalls)

1. Discuss the stalls, what causes them and how to recover.
2. High altitude practice with and without power (idle).
3. Stalls in turns (Take-off, departure). Take-off stalls occur when the aircraft is lifted from the ground before sufficient airspeed is obtained to maintain lift. The model may roll in either direction. Departure stalls occur when the model is in a climbing turn and the angle of bank is too steep for the speed of the aircraft. However, stalls can and do occur at any airspeed and angle.
4. Trimming - The instructor offsets trims and student trims aircraft for straight and level flight.

This lesson is complete when the student understands the cause of stalls and has demonstrated proper recovery procedures, and after the student has demonstrated the ability to properly trim a model.

### Lesson 8. Take-off (Teach student to make normal take-off)

1. Discuss the effects of torque during take-off and initial climb out.
2. Use of the rudder.
3. Use of throttle.
4. Student makes normal take-off into the wind.

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

### Lesson 9. Approaches to Landing (Prepare student for first landing)

1. Review Lesson 6 (traffic patterns).
2. Discuss the proper landing technique.
3. Student flies traffic pattern with a reduced power glide to an altitude of about 20 feet. The student then applies full power for a go around. The student should practice this maneuver until the student becomes comfortable with it.
4. The altitude slowly becomes lower until the model is very close to the ground. Power is reduced and the student flairs the aircraft slowly and landing occurs.
5. The above are full stop landings.
6. For touch and goes, advance to full throttle, keeping the aircraft going straight down the runway and slowly ease in up elevator. Fly straight out and enter the traffic pattern again.

This lesson is complete after several landings and take-offs have been completed and the student is comfortable with these maneuvers. The student can now advance to supervised solo flight.

## PRIMARY FLIGHT TRAINING COURSE CURRICULUM

**Lesson 10. Solo Flight** (Student must demonstrate the knowledge and skill objectives of the previous 9 lessons)

1. This lesson is to be given by the Chief Instructor and an instructor witness.
2. Pre-flight discussion to answer questions and resolve any problems that may concern the student about the lesson.
3. Review lessons 1-9.
4. The student will do a complete pre-flight of their aircraft, range check the radio, fuel up, start engine, taxi to active runway, take a deep breath and start roll for take-off. Student will do all maneuvers taught, land the model and bring it to a full stop. The model may be taxied back to the flight line at the option of the student. The Chief Instructor will stand by student and assist only if necessary.

When this lesson has been completed, the student is signed off for solo flight only after he has demonstrated a practical knowledge of all safety and field operating rules, all course objectives and has successfully flown their model unassisted.

**Lesson 11. Emergency Procedures Discussion** (Prepare student for the unexpected. To acquaint student with safe procedures to be used in emergencies)

1. Possible in flight problems and how to handle them.
2. Unusual attitude training (optional) loops, rolls, spins, snap rolls.
3. Perform dead stick landings (optional).
4. Cross wind take-offs and landings (optional).

The elements of this lesson are only suggestions and there is no minimum performance requirement. However, dead stick landings are a good thing to do since they will happen sooner or later. The object of this lesson is to provide the student with insights that will assist you in safely dealing with the unexpected. Experience will teach you the rest.

**Good luck and happy flying!**

**FLYING ELECTRONICS, INC.**  
Menomonee Falls, WI 53051

**PRIMARY FLIGHT TRAINING COURSE**  
Chief Instructor: Marvin Ingerson Sr.

**FLIGHT TRAINING LOG**

Students Name: \_\_\_\_\_

This log of accomplishment must be completed prior to the issuance of a pilot's certificate or wings by The Flying Electronics, Inc..

Successful completion of this course of instruction does not in any way obligate The Flying Electronics, Inc. or the instructors with regard to the actions of any individual who completes this course.

## FLIGHT TRAINING LOG

### Lesson 1. Aircraft Familiarization

Objective: How to properly pre-flight model.

The required steps of proper pre-flight inspection were taught. These steps will be followed before any future flights are attempted.

Student Pilot: \_\_\_\_\_

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

### Lesson 2. Radio and Field Procedures

Objective: To learn proper radio use at the field.

The proper frequency control, radio functional tests and field procedures were taught. These procedures will be followed before any future flights are attempted.

Student Pilot: \_\_\_\_\_

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

### Lesson 3. Flight Familiarization

Objective: To allow student to get familiar with their model.

The student pilot has been able to determine and execute proper control inputs to achieve desired changes in the model's attitude. Proficiency and accuracy of control was not a criteria of this lesson.

Student Pilot: \_\_\_\_\_

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

## FLIGHT TRAINING LOG

### Lesson 4. Flight Maneuvers

**Objective:** To teach student how to properly control a model.

The student pilot demonstrated their ability to perform the required maneuvers without assistance. Each maneuver was done with a reasonable amount of accuracy.

**Student Pilot:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

### Lesson 5. Accuracy of Maneuvers

**Objective:** To develop skill and the ability to control a model in a specific manner.

The student pilot demonstrated their ability to maneuver a model at the instructor's direction and did demonstrate the ability to control the model in an accurate manner.

**Student Pilot:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

### Lesson 6. Orientation Maneuvers

**Objective:** To teach the student how to control a model without regard for its heading or direction relative to oneself.

The student pilot performed a figure 8 and traffic patterns which were consistent and accurate.

**Student Pilot:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_ **Date:** \_\_\_\_\_



## FLIGHT TRAINING LOG

### Lesson 7. Stalls

Objective: To teach the student how to recognize and recover from stalls.

The student understands the cause of stalls and has demonstrated proper recovery procedures.

Student Pilot: \_\_\_\_\_

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

### Lesson 8. Take-off

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

The student pilot has successfully taken off and established a normal climb with adequate airspeed. The student pilot has also maintained good directional control during take-off.

Student Pilot: \_\_\_\_\_

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

### Lesson 9. Approaches to Landing

Objective: To prepare the student for their first landing.

The student pilot has performed several landings and take-offs in a satisfactory manner and is comfortable with the maneuver.

Student Pilot: \_\_\_\_\_

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

## FLIGHT TRAINING LOG

### Lesson 10. Solo Flight (with Chief Instructor)

**Objective:** The student must demonstrate the knowledge and skill objectives of the previous 9 lessons to the chief instructor.

The student pilot has demonstrated a practical knowledge of all safety and field operating rules and all course objectives and has successfully flown and landed their model unassisted.

Student Pilot: \_\_\_\_\_

Chief Instructor: \_\_\_\_\_ Date: \_\_\_\_\_

### Lesson 11. Emergency Procedures (Discussion)

**Objective:** To prepare the student pilot for the unexpected. To acquaint the student pilot with safe procedures to be used in emergencies.

This lesson will provide the student pilot with insights that will help with safe procedures in emergency situations. A dead stick landing may be accomplished.

Student Pilot: \_\_\_\_\_

Chief Instructor: \_\_\_\_\_ Date: \_\_\_\_\_

### NOTES:

The chief instructor may at times check the in flight progress of a student and that student's completed lessons.

The Flying Electrons wish to thank the Bayside Model Club of Sturgeon Bay, WI and extend special thanks to Larry Huber for their assistance in writing this training manual.