

## LESSON #1

### **Recommended Preparation:**

#### **Objective:**

Familiarize student with the training sailplane, its servicing, operations, instrument systems, preflight procedures, weight and balance, ground handling and use of checklists. Acquaint student with sensations of flight and the effect and use of controls. Familiarization of student with local flying area.

#### **Content:**

### **Preflight Discussion**

#### **Introduction**

- \_\_\_ sailplane servicing
- \_\_\_ purpose of preflight checks
- \_\_\_ visual inspection (incl. positive control check)
- \_\_\_ importance of checklist
- \_\_\_ weight and balance
- \_\_\_ ground handling
- \_\_\_ tow signals (ground/air)
- \_\_\_ cockpit take-off checklist
- \_\_\_ take-off
- \_\_\_ tow position
- \_\_\_ tow release and procedure
- \_\_\_ straight and level
- \_\_\_ shallow banked turns
- \_\_\_ local area familiarization
- \_\_\_ collision avoidance
- \_\_\_ traffic pattern entry, approach, landing, and mooring of sailplane

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

Lesson completed when student can service, preflight (including weight and balance), use checklists, safely ground handle, and show knowledge of effect and use of controls. Reasonable familiarity with local flying area.

## LESSON #2

### **Recommended Preparation:**

#### **Objective:**

To develop student's skill in the performance of basic flight maneuvers (tow position, descents, turns, straight and level flight).

#### **Content:**

#### **Preflight Discussion**

#### **Review**

- \_\_\_ servicing
- \_\_\_ preflight inspection, weight and balance
- \_\_\_ tow signals (ground/air)
- \_\_\_ ground handling
- \_\_\_ take-off checklist
- \_\_\_ take-off
- \_\_\_ tow position
- \_\_\_ straight-and-level
- \_\_\_ shallow bank turns
- \_\_\_ traffic pattern entry, approach, landing, and mooring
- \_\_\_ collision avoidance

#### **Introduction**

- \_\_\_ use of spoilers
- \_\_\_ coordination of controls
- \_\_\_ airspeed control
- \_\_\_ landing checklist

#### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

Lesson will have been successfully completed when student shows familiarity and understanding of basic concepts behind aircraft response to control input. Student should be able to successfully use checklists with little instructor input.

## LESSON #3

### **Recommended Preparation:**

#### **Objective:**

Review lessons one and two; develop proficiency in performance of basic flight maneuvers; introduce stalls

#### **Content:**

### **Preflight Discussion**

#### **Review**

- \_\_\_ Preflight including weight and balance
- \_\_\_ ground handling
- \_\_\_ take-off checklist
- \_\_\_ take-off and tow position
- \_\_\_ straight and level, shallow bank turns (stressing the need for coordination)
- \_\_\_ use of spoilers
- \_\_\_ airspeed control
- \_\_\_ landing checklist
- \_\_\_ traffic pattern; entry, approach, landing, and mooring.

#### **Introduction**

- \_\_\_ Stall recoveries (imminent and full)
  - \_\_\_ straight ahead
  - \_\_\_ in turns
  - \_\_\_ dive-brakes open
  - \_\_\_ slips/skids
- \_\_\_ spiral descent (spoilers)

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

Lesson successfully completed when student can display reasonable proficiency in performance of tow release and turning flight. During this and subsequent lessons, student should be able to perform: preflight inspection (including weight and balance), supervise ground handling, T/O checklist, and mooring without assistance. Recognize and react properly to collision threats, ground and airborne.

## LESSON #4

### **Recommended Preparation:**

#### **Objective:**

Continue reviewing material in previous lessons. Continue developing proficiency in airspeed control and heading control. Continuing to develop student proficiency in recovering from imminent and full stalls.

#### **Content:**

### **Preflight Discussion**

#### **Review**

- take-off
- tow position
- airspeed control
- heading control
- stalls (imminent and full)
- landing checklist followed by or in conjunction with traffic pattern entry, approach, and landing.

#### **Introduction**

- slips/skids
- “boxing-the-wash”
- medium turns
- glide slope control with spoilers
- speeds-to-fly in the pattern

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

Student will have successfully completed this lesson when he can follow landing instructions from the instructor and follow the guidelines as established in the landing checklist. Reasonable proficiency should be demonstrated in airspeed and heading control.

## LESSON #5

### **Recommended Preparation:**

#### **Objective:**

To develop student's skill in flying the aircraft at minimum controllable airspeed. Continue to work at developing student's skill in aero-tow procedures.

#### **Content:**

### **Preflight Discussion**

#### **Review**

- \_\_\_ take-off, tow positions
- \_\_\_ airspeed control
- \_\_\_ "boxing-the-wash"
- \_\_\_ slips/skids
- \_\_\_ medium turns
- \_\_\_ glide path control

#### **Introduction**

- \_\_\_ flight at minimum controllable airspeed
- \_\_\_ recovery from unusual attitudes
- \_\_\_ recovery from spirals
- \_\_\_ steep turns

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

The lesson will successfully have been completed when the student can demonstrate flight at minimum controllable airspeed...maintaining airspeed at +/-10 KTS and maintaining assigned heading to +/-10 degrees. Also student should be able to bring aircraft back to normal flight configuration/attitude from unusual attitudes safely. Student should be able to complete 360/720 steep turns to within 10 degrees of assigned heading. (Coordination now being maintained during all maneuvers except when slips/skids are to be used).

## LESSON #6

### **Recommended Preparation:**

#### **Objective:**

Continued refinement of flying techniques and the continued introduction of aero-tow procedures and applications. The introduction of soaring speeds is made during this lesson.

#### **Content:**

#### **Preflight Discussion**

##### **Review**

- \_\_\_ take-off
- \_\_\_ tow position, “box-the-wash”
- \_\_\_ slips/skids
- \_\_\_ turns (shallow-steep)
- \_\_\_ stalls (imminent and full)
- \_\_\_ landing procedures
- \_\_\_ speeds-to-fly in pattern

##### **Introduction**

- \_\_\_ slack lines
- \_\_\_ steering turns/tow speeds
- \_\_\_ soaring “speeds-to-fly” lift/sink/turbulence

#### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

At the completion of this lesson, the student will be able to safely aero-tow, demonstrating that he can maneuver behind the tow plane. Through the use of standard signals, communicate with the tow pilot. The student now has a working knowledge of speeds for soaring and their application in the course of the flight.

## LESSON #7

### **Recommended Preparation:**

#### **Objective:**

The continued refinement of the student's landing technique and the introduction of crosswind techniques. With the student now looking at low as well as high approaches, the introduction of simulated ropebreaks is made.

#### **Content:**

### **Preflight Discussion**

#### **Review**

- \_\_\_ take-off, tow position and "boxing-the-wash"
- \_\_\_ slips/skids
- \_\_\_ flight at minimum control airspeed
- \_\_\_ pattern work
- \_\_\_ glide-slope control with spoilers

#### **Introduction**

- \_\_\_ low approach
- \_\_\_ high approach
  - \_\_\_ using spoilers and/or slips
- \_\_\_ crosswind take-off/landings
- \_\_\_ 500' rope break and abbreviated patterns

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

This lesson will be satisfactorily completed when the student understands the fundamentals of aircraft glide path control by using either spoilers, slips or both. A safe landing should never be in doubt due to an abbreviated pattern caused by an emergency at or above 500 AGL.

## LESSON #8

### **Recommended Preparation:**

#### **Objective:**

To provide more experience for the student on landing judgment. In addition, the introduction of ground reference maneuvers and emergency procedures for altitudes of 200 FT AGL or more.

#### **Content:**

### **Preflight Discussion**

#### **Review**

- \_\_\_ take-off/tow position
- \_\_\_ turns (medium-steep)
- \_\_\_ low/high approaches on landing
- \_\_\_ crosswind take-offs/landings
- \_\_\_ rope breaks (abbreviated pattern)
- \_\_\_ minimum control airspeed

#### **Introduction**

- \_\_\_ ground reference
  - \_\_\_ rectangular course
  - \_\_\_ turns about a point
  - \_\_\_ S-turns across a road
- \_\_\_ rope break (200 FT AGL)
  - \_\_\_ downwind landing
- \_\_\_ flight planning - importance of staying upwind

### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

The student will have completed this lesson upon demonstrating that the safe outcome of an emergency and subsequent landing downwind is never in doubt. Flying technique beginning to reflect the level of proficiency required for the private/commercial standards with very little improvement/polish on those maneuvers already introduced and practiced to go. The fundamentals of soaring speeds and the knowledge of glider penetration against a headwind conveyed satisfactorily upon questioning.

## LESSON #9

### **Recommended Preparation:**

#### **Objective:**

This lesson is to further develop the student's ability to land the sailplane in closer quarters in preparation for cross-country flying and/or emergency landings. Also, further polishing of the students's skills in preparation for flight checks is to be done.

#### **Content:**

#### **Preflight Discussion**

##### **Review**

- \_\_\_ take-off/tow work including "boxing-the-wash"
- \_\_\_ turns (medium to steep) to a pre-selected heading
- \_\_\_ stalls (various phases/configurations of flight as well as incipient)
- \_\_\_ soaring speeds-to-fly
- \_\_\_ prelanding and landing (crosswind)
- \_\_\_ rope breaks

##### **Introduction**

- \_\_\_ short field landing (TD and stop in 500')
- \_\_\_ spot landing and stop within 200' of point
- \_\_\_ landing over obstacles

#### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

This lesson will be completed when the student safely demonstrates his ability to take-off/land in a crosswind. In addition, he can safely bring his aircraft to a halt within the prescribed distance to a selected point. The student will have also demonstrated his ability to do a short field landing as well as land after simulating or demonstrating an approach over obstacles. Reactions are correct to emergency rope breaks.

## LESSON #10

### **Recommended Preparation:**

#### **Objective:**

This lesson will introduce the student to soaring techniques for different meteorological conditions. The four types of lift phenomena will be explained and hopefully experienced. Techniques for finding good off-field landing sites will be discussed.

#### **Content:**

#### **Preflight Discussion**

##### **Review**

- \_\_\_ soaring speeds-to-fly
- \_\_\_ flight at minimum control a/s
- \_\_\_ steep turns

##### **Introduction**

- \_\_\_ thermalling
  - \_\_\_ very steep turns
- \_\_\_ ridge soaring
- \_\_\_ wave/mountain flying
- \_\_\_ convergence zones/sea breeze fronts
- \_\_\_ off-field landings (simulated)

#### **Postflight Critique and Preview of Next Lesson**

#### **Completion Standards:**

This lesson will be completed when the student understands what must be looked for to find lift and the correct technique to stay within that lift. Also, as part of the technique, he must safely demonstrate very steep turns. For off-field landing, good judgment in the selection and good execution in landing off-field must be accomplished.

LESSON(S) 11, 12, 13, 14

(INCLEMENT WEATHER DAY UTILIZATION)

LESSON #11

Content      Obtaining Weather Information  
                 Meteorological Applications

LESSON #12

Content      Flight Instruments and Systems

LESSON #13

Content      Flight Preparation and Planning  
                 Cross-Country Go/No-Go

LESSON #14

Content      Federal Aviation Regulations (FAR)