

Stetson Ground School 101, 2013

Welcome

Introduction

Modules

Aircraft parts

- Introduce a trainer.
- Describe aircraft types.
- Starting at the spinner, walk through every part & include function where appropriate.
 - For each part describe variations in material, function & any other relevant point.

Balance and straightness

- What is (static) balance and straightness?
- What happens when you don't have it?
- How do you balance an aircraft (C of G)?
- How do you straighten an aircraft?
- What is the effect of weight?
- Propeller balancing

Assembly and controls

- Introduce field assembly of a trainer (ARF).
- Describe wing fixings.
- Describe each of the control surfaces in detail.
 - Pitch
 - Yaw
 - Roll
- Introduce servos
- Describe methods of controlling a surface
 - Pushrods
 - Pull-pull
- Explain control surface geometry
 - Servo horn versus control horn length
 - Servo horn clevis position – close or far
- Introduce radio controls
 - Briefly describe modes
 - Describe the basics of radio control
 - Introduce the buddy-box system
 - Describe the difference between 72MHz & 2.4GHz
 - Mention batteries and refer to the batteries section
- If in doubt about anything... ASK!

Batteries and fuel

- Introduce radio and receiver batteries
- Describe the various chemistries
 - NiCad
 - NiMH
 - A123
 - Lipo
- Briefly describe charging
 - Mention monitoring capacity and refer to Pre-flight checks section
- Introduce fuel
- Describe the various types
 - Glow
 - Gas
- Describe safe handling of fuels
- Introduce fuel decanting devices

Frequency board and club rules

- What is the frequency board and what does it do?
- Where is it?
- How and when do I use it?
 - Describe the pin

Pre-flight checks

- Why do I have to pre-flight check my plane?
- What do I check?
 - General airframe condition
 - Flight surfaces/hinges
 - Pushrods & clevises
 - Wing fixings
 - Propeller condition
 - Battery levels
 - Centre of Gravity
 - Wheels
- Range check
 - What is range checking?
 - When should I do it?
 - What do I do if something is not right?

Safety

- Safety is a big deal!
 - Outline personal safety
 - Outline club safety
 - MAAC & insurance
 - Mention the club rules are included in the hand-out

Engine starting and handling procedures

- Filling the fuel tank
- Priming the engine
- Glow plug drivers
- Hand flipping/Chicken sticks & electric starters
- Basic tuning (glow)

Spotters

- What is a spotter and what do they do?
- When should I use one?

The flight line

- Describe the flight line
 - Pilot stations
 - Safety fence
 - Entry points onto the field
 - The actual flight line & runway centerline
 - The taxiway

Calling your intentions

- Why do I have to call my intentions?
- When do I have to call?
- What do I say?
 - *On the field*
 - *Takeoff*
 - *Low pass*
 - *Touch & go*
 - *Dead stick*
 - *Landing*

Taxi

- How to taxi your aircraft
- Where to position your aircraft for takeoff
- Things to be aware of:
 - The windsock/wind direction
 - Other aircraft on the ground
 - Aircraft in the air/landing/deadstick

Takeoff

- Check the windsock
- Check the air is clear
- Call your intention to takeoff
- Control during takeoff:
 - Throttle
 - Rudder
- First turn & circuit

Q & A

Question time