

Extra 300 Checkout & Training Program Contents/Options

APS Emergency Maneuver Training specializes in Extra 300 checkout programs and has over 10,000 hours of Extra 300 instructional flight hour experience. Courses can be custom designed to meet your needs. The next few bullet points provide an outline of services available to you as a new or experienced Extra owner. The first 5-hours of your training includes our entire 3-Day 5-Mission Emergency Maneuver Training Course. Emergency Maneuver Training provides the foundation of being a safe aerobatic pilot and being competent to recover from any in-flight upset or inadvertent maneuver. The Qualification Course included here has proven to be a comprehensive program to get the typical non-aerobatic pilot safely into an Extra 300. Aerobatic pilots may wish to customize our courses to meet specific needs. Please call 1-866-358-4273 or email info@apstraining.com to discuss customized programs.

Aircraft Operations

- Aircraft Operating Techniques
- Aircraft Systems

Safety Training and Emergency Maneuver Training

- Upset Recovery Training
- Stall Recovery (power off, power on, uncoordinated stalls, accelerated stalls)
- Unusual Attitude Recovery (nose high, nose low, over banks, wake turbulence)
- Spiral Dives and Dive Recoveries
- Power Off Approaches and Emergency Landings
- Control Loss Techniques

Spin Training

- Traffic Pattern and Inadvertent Spin Entries
- Incipient Spins
- Aggravated Spins (accelerated, flat and steep)
- Inverted Spins
- Aerobatic Spin Entries

- Inadvertent Aerobatic Entries and Recoveries
- Emergency Spin Recovery Techniques

Aerobatic Training (Can include, at your request:)

- Rolls
 - Aileron Roll
 - Slow Roll
 - Hesitation Roll
 - Snap Roll
 - Torque Roll
- Looping Maneuvers
 - Inside
 - Outside
 - Constant Radius versus Constant Rate Loops
- Other Basic Maneuvers
 - Inverted Flight
 - Cuban Eight
 - Reverse Cuban Eight
 - Vertical Lines
- Advanced Maneuvers
 - Tailslides
 - Vertical Rolls
 - Vertical Hesitation Rolls
 - Rolling Circles
- Gyroscopic Maneuvers
 - Lomcevak and Tumble Variants
 - Knife Edge Spins (Up and Down)
 - Precision Spins
 - Spiraling Tower (Zwibel Turn)

Air Show / Competition Preparation

- Learning New Maneuver Safely
- Energy Planning and Management
- Combinations and Sequences
- Box Training
- Showmanship

Checkout 1 / URT 1: Upset Recovery Training

TRAINEE WILL FLY FROM FRONTSEAT ON THIS MISSION ONLY

WARM UP AND NEW WORK

- 1 Dutch Rolls** (*no rudder 1st then rudder integrated*)
- 2 Steep Turns** (*Proper Bank, Back Pressure & Power to keep level turn*)
 - **45 ° Bank 360 ° Turn Left** (*1.4 G's*)
 - **60 ° Bank 360 ° Turn Right** (*2 G's*)
- 3 Slow Flight** (*@ 70 kts. Pitch to control A/S. Power to control Altitude – approx 13 in M.P. Rt Rudder to ctr ball*)
- 4 Standard Stalls** (**Push, Power, Rudder, Roll, Climb**)
 - **Power Off** (*Look over nose, and at wingtip to see AOA, multiple looking at nose, wingtip and tail*)
 - **Power On** (*About 22 in. MP. Slight bank to see horizon, right rudder to coordinate*)
 - **Secondary Stalls**
- 5 Full Stall Exercise (Falling Leaf)**
- 6 Zoom Maneuver (Flight Below 1G Stall Speed)** – *Note A/S well below Vs but not stalled*
- 7 Control Loss**
(**Push, Power, Rudder, Roll, Climb**)
 - **Aileron** – *120 kts, guard aileron and prevent turn, use rudder for skidding turns*
 - **Rudder** – *120 kts, slowly feed full rudder, slip to maintain alt/hdg, turn with aileron*
 - **Elevator** – *120 kts, guard elevator for no movement, use power for pitch*
- 8 Controllability check** – *fail either ail/rud, let them slow down and do the check*
- 9 Aerobatics**
 - **11: Aileron Roll** (*Check before rolling – very important*)
 - **12: Loop** (*Feel for G's, Where to Look for Horizon*)
 - **13: Inverted Flight** (*Note Push to fight trim*)
- 10 TRAFFIC PATTERN DEMO & PRACTICE**

Checkout 2 / URT 2: Upset Recovery Training

TRAINEE WILL FLY FROM REARSEAT FROM NOW ON

TRAFFIC PATTERN PRACTICE (10 – 15 MIN.)

- 3-Point Landing | Stop & Go | Go Around | Short field Take-off

WARM UP

- 1 Coordination Exercise (Dutch Rolls)**
- 2 Steep Turns (G Warm-Up)**

REVIEW

- 3 Practice 1 X Power Off Stall**
(*Look over nose, and at wingtip to see AOA*)

NEW WORK

- 4 Roll Damping Exercise (Uneven Lift)**
 - *Level cruise, Bump Stick, notice roll stops*
 - *Hold in Power-Off stall, pop rudder, notice roll continues until break AOA*

Stalls (**Push, Power, Rudder, Roll, Climb**)

- 5 Mini-Maxi Turn** (*Suggest 110 kts & no more than 3 Gs! May need to descend slightly to hold A/S – show small radius & high rate.*)
- 6 Accelerated** (*90 kts, full power*)
- 7 Slipping Turn Tfc Ptn** (*Idle pwr, 80 kts on downwind, 30° bank base turn*)
- 8 Skidding Turn Tfc Ptn** (*Idle pwr, 80 kts on downwind, 30° bank base turn*)

Aerobatics

- 9 Split S** (*100 kts, idle, roll & pull, note alt lost*)
- 10 Cuban 8** (*std, emphasize push and roll*)

DEMONSTRATION

- 11 Power-Off Approach Demo** (*Ovhd and Departure*)

Checkout 3 / URT 3: Upset Recovery Training

TRAFFIC PATTERN PRACTICE (10 – 15 MIN.)

- 3-Point Landing | Stop & Go | Go Around | Short field Take-off

WARM-UP

- 1 Steep Turns (G Warm-Up)

REVIEW

Push – Power – Rudder – Roll - Climb

- 2 Stalls (One or two each)
 - Slipping Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn*)
 - Skidding Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn*)

NEW WORK

Push – Power – Rudder – Roll - Climb

- 3 Overbanks (Spiral Dive) – (*120 kts, 60° 2G steep turn, increase bank 10 degrees*)
- 4 Unusual Attitudes
 - Overbank Nose Low (*demo X2, then do X2*)
 - Nose Low (*demo X2, then do X2, easy to difficult*)
 - Nose High (*demo X2, then do X2, easy to difficult*)
 - Random High/Low
 - EYES CLOSED RECOVERIES AS REQ
- 5 Wake Turbulence Recoveries (*100kts on final, roll to inverted, Power, Push, Roll*)

AEROBATICS

- 6 Hammerhead (*std, emphasize vertical zero G, no stall*)
Emphasize correlation of rudder usage in the recovery stage of the hammerhead to both Stall and Spin Recoveries
- 7 Immelmann (*std, emphasize push and roll*)

ON RTB

- 8 Power Off Approach

OTHER PRACTICE (Time Permitting)

- 9 Aerobatics (Loop, Roll, Hammerhead, Split-S)

Checkout 4 / SPIN 1: Spin Recovery Training

TRAFFIC PATTERN PRACTICE (10 – 15 MIN.)

- 3-Point Landing | Stop & Go | Touch & Go | Short Field Landing

WARM-UP

- 1 Dutch Roll Exercise
- 2 Steep Turns (G Warm-Up)

REVIEW

Push – Power – Rudder – Roll - Climb

- 3 Stalls (One each)
 - Slipping Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn*)
 - Skidding Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn*)
- 4 Unusual Attitude Review
 - Various
 - Nose Low, Over Bank Nose Low
 - Nose High, Over Bank Nose High
 - Wake Turbulence Upset

NEW WORK

- 5 Incipient Spin Entries – (*stall recov. able to stop rotation*)
 - Slipping Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn, hold controls for one turn, normal stall recovery*)
 - Skidding Turn Tfc Ptn (*Idle pwr, 80 kts on downwind , 30° bank base turn, hold controls for one turn, normal stall recovery*)
- 6 Normal Upright Spin Entries
 - Left & Right (*Idle pwr, stick and rudder at first stall indication*)
 - P.A.R.E. (*Power-off, Ailerons-neutral, Rudder-opposite yaw direction, Elevator-past neutral*)

OTHER PRACTICE (Time Permitting)

- 7 Aerobatics (Loop, Roll, Hammerhead, Split-S)
- 8 Power Off Approaches

Checkout 5 / SPIN 2: Spin Recovery Training

TRAFFIC PATTERN PRACTICE (10 – 15 MIN.)

- Wheel Landing | Touch & Go | Crosswind | Soft Field Take-off

WARM-UP

- 1 Dutch Roll Exercise**
- 2 Steep Turns (G Warm Up)**

REVIEW

Push – Power – Rudder – Roll - Climb

- 3 Unusual Attitude Recovery Review**
 - **Nose High / Over Bank Nose Low**
 - **Wake Turbulence Setup**
- 4 Stalls**
 - **Skidding Turn Tfc Ptn** (*Idle pwr, 80 kts on downwind, 30° bank base turn*)
- 5 Incipient Spin Entry** – (*stall recov. able to stop rotation*)
 - **Slipping Turn Tfc Ptn** (*Idle pwr, 80 kts on downwind, 30° bank base turn, hold controls for one turn, normal stall recovery*)
- 6 Normal Upright Spin Entries**
 - **1 x Left** (*Idle pwr, stick and rudder at first stall indication*) (*PARE recovery*)

NEW WORK

- 7 Aggravated Upright Spin Entries**
 - **1 x Left: Stick Fwd** (*Full fwd to show incr rotation rate*) (*PARE recovery*)
 - **1 X Left: In/Out Spin Aileron; Full Pwr (Flat Spin)** (*Intro Beggs-Mueller*)
- 8 Normal Inverted Spin Entries**
 - **1 x Left Demo:** (*Customer: Beggs-Mueller recov*)
 - **1 x Left Do:** (*Beggs-Mueller recov*)
- 9 Inadvertent / Unintentional Spin Entries**
Various entries w/ various pwr settings

Checkout 6: Traffic Patterns

TRAFFIC PATTERN PRACTICE

GROUND OPERATIONS

- Preflight Inspection
- Taxi Techniques
- Shutdown procedures
- Securing the Aircraft

TAKE-OFF

- Normal Take-off
- Short Field Take-off
- Soft Field Take-off
- Combined Soft/Short Field Take-off
- Crosswinds

TRAFFIC PATTERNS

- Flying the numbers
 - Speeds
 - Altitude
 - Power Settings
 - Positioning
- Standard Pattern
- Closed Pattern

LANDINGS

- Normal Landing
 - 3-Point Landing
 - Wheel Landing
- Short Field Landing
- Soft Field Landing
- Missed Approach / Go-Around
- Crosswinds

Checkout 7: Vertical Aerobatics

1. **Short Field T/O**
2. **G Warm-up**
 - *Aileron Roll*
 - *Loop*
 - *Cuban Eight*
 - *Hammerhead*
 - *Vertical Line Warm Up*
3. **Aerobatics**
 - *Slow Roll*
 - *Hammerhead with ½ Roll Up & ½ Roll Down*
 - *Tail slide*
 - *Vertical Roll*
4. **Botched Aerobatics from the maneuvers above**
5. **RTB**
 - **Short Field Landing**

Checkout 8: Gyroscopic Aerobatics

1. **Short Field T/O**
2. **G Warm-up**
 - *Aileron Roll*
 - *Loop*
 - *Cuban Eight*
 - *Hammerhead*
 - *Vertical Line Warm Up*
3. **New Aerobatics**
 - *Knife Edge Spin Up*
 - *Tumble*
4. **Review Aerobatics**
 - *Slow Roll*
 - *Hammerhead with ½ Roll Up & ½ Roll Down*
 - *Tail slide*
 - *Vertical Roll*
5. **RTB**
 - **Three Point Landing**

Checkout 9: Aerobatics

1. **Soft Field T/O**
2. **G Warm-up**
 - *Aileron Roll*
 - *Loop*
 - *Cuban Eight*
 - *Hammerhead*
 - *Vertical Line Warm Up*
3. **New Aerobatics**
 - *Snap Rolls*
 - *Horizontal Hesitation Rolls*
 - *Outside Loop*
4. **Review Aerobatics**
 - *Slow Roll*
 - *Hammerhead with ½ Roll Up & ½ Roll Down*
 - *Tail slide*
 - *Vertical Roll*
 - *Knife Edge Spin Up*
 - *Tumble*
5. **RTB**
 - **Three Point Landing**

Checkout 10: Flight Test / Free Planning

1. **Endorsements Flight Test (as required)**
 - Tailwheel Endorsement
 - High Performance Endorsement
2. **Aerobatics**
 - Instructor's Discretion based on Student Input
3. **Suggested Content:**
 - Aerobatic Warm-Up
 - Basic Aerobatic Review
 - Aileron Roll (left & right)
 - Inside Loop
 - Slow Roll
 - Inverted Flight
 - Hammerhead
 - Hammerhead with ½ Rolls
 - Sequences:
 - Combinations
 - Energy Management
 - Spin Training / Botched Maneuver Review
 - Unusual Attitudes
 - Cross-Controlled Stalls
 - Aerobatic Entries to Incipient Spins
 - Spins:
 - Inadvertent Entry
 - Aggravated Spins
 - Flat
 - Accelerated
 - Flat & Accelerated
 - Inverted Spins

Supplementary Ground Training Topics

1. **Extra 300/L preflight procedures**
2. **Thorough Review of Front cockpit controls, instruments, and procedures to include:**
 - *Rudder Pedal Interference*
 - *Throttle and stick switches*
 - *Fuel selector*
 - *Elevator Trim*
 - *Communications*
 - *Intercom System*
3. **Canopy considerations**
4. **Parachute fitting and adjustments**
5. **Harness system/bailout considerations and passenger briefing**
6. **Thorough Review of Rear cockpit controls, instruments, and procedures to include:**
 - *Seat Adjustment and feet positioning*
 - *Rudder Pedal Adjustment*
 - *Engine controls (starter, throttle, propeller control, mixture, boost pump)*
 - *Engine Instruments (including Digital Tachometer, Oil Temp/Press, Manifold Press/Fuel Flow,)*
 - *Throttle and stick switches*
 - *Fuel selector*
 - *Elevator Trim*
 - *Communications (Recommended Set-Up)*
 - *Intercom System*
 - *GPS (Communications)*