AVID AEROBAT MANUAL

INTRODUCTION:

THIS MANUAL IS NOT INTENDED TO TEACH AEROBATICS!! AVID STRONGLY RECOMMENDS YOU RECEIVE ADEQUATE DUAL INSTRUCTION BEFORE ATTEMPTING ANY AEROBATIC FLIGHT. THIS MANUAL IS DESIGNED TO GIVE YOU ENTRY SPEEDS AND BASIC TECHNIQUES TO INSURE SAFE AND FUN AEROBATIC FLIGHT IN YOUR AVID AEROBAT.

SPINS

ENTRY SPEED :	STALL
THROTTLE:	IDLE
PROCEDURE:	Retard the throttle to idle as you raise the nose. Continue applying back pressure until the aircraft stalls. As you feel the stall approaching quickly, pull the stick back full and depress the appropriate rudder pedal fully. The aircraft will drop a wing and enter the spin. You MUST hold full control input in until you wish to recover. To recover, release the back pressure and press opposite rudder then return to level flight. If you get confused while spinning, releasing all controls will allow the aircraft to recover on its own.
CAUTION:	Make certain that you keep the initial control inputs fully in until you wish to recover. If you allow the elevator to slip down the spin will quickly degrade into a spiral. If this occurs roll the wings level and recover straight ahead, being careful not to exceed 125 MPH. This aircraft doesn't really like to spin so you may have to try several times to get a good entry.

We hope this manual will give you the basics for enjoying any AVID AEROBAT. As was mentioned at the beginning AVID recommends you receive adequate dual aerobatic instruction before attempting aerobatics in your AVID.

SNAP ROLL

ENTRY SPEED:	75 MPH.
THROTTLE:	AS NEEDED TO MAINTAIN 75 MPH.
PROCEDURE:	Establish the airplane in level flight at 75 MPH. then swiftly pull the stick back fully while depressing the rudder pedal in the direction you wish to roll. The stick and rudder pedal MUST be held at their full travel all during this maneuver. As the aircraft returns to the upright, release all controls to neutral.
CAUTION:	Never snap roll an AVID above 75 MPH. and you must not release the initial control input until the maneuver has been completed.

WING OVER

ENTRY SPEED:	125 MPH.
THROTTLE:	FULL--OPEN
PROCEDURE:	Pull the nose up briskly to approximately 75 degrees as the speed slows to 75-80 MPH depress the appropriate rudder pedal. Watch as the nose travels across the horizon until it pointed down at approximately 75 degree. Level wings and return to level flight. (It may be necessary to use "top" aileron as the airplane goes over the top).
CAUTION:	Do not exceed 125 MPH in the recovery.

LOOP

ENTRY SPEED: 125 MPH.

THROTTLE: FULL-- OPEN

PROCEDURE: A slight dive may be necessary to achieve the entry speed. If a dive is necessary, bring the airplane to level flight, insure that the wings are level as well. Pause, then increase back pressure to maintain approximately 3.5 to 4.0 G's. It may be necessary to release a little back pressure at the top of the loop. As the airplane flies down the back side of the loop, make sure the airspeed stays below 125 and the engine RPM does not exceed 6400.

CAUTION: There are two things to watch for as you loop your aerobat.

1. You need to apply enough back pressure on the stick. To little back pressure will cause the airplane to "fall out" of the top of the loop. If this occurs, chop the throttle, regain flying speed and recover normally.
2. The other problem is not making sure your wings are level before beginning the loop.

BARREL ROLL

ENTRY SPEED: 125 MPH.

THROTTLE POSITION: FULL--OPEN

Rotate the nose up approximately 10 degrees then release back pressure on stick to neutral. Apply full rudder and aileron in the direction decided for the roll. Slight "top" rudder may be required at the 3/4 point to maintain the nose on the horizon. When the aircraft returns to straight and level, neutralize the controls.

CAUTION: It is common for new aerobatic pilots to not raise the nose of the aircraft adequately or not to release the back pressure once the approximate 10 degrees has been achieved. In either case the airplane will dish out of the maneuver. If this should happen, chop the throttle continue rolling to the upright. Do not exceed 125 MPH.

AEROBATIC SPEEDWING
(MANEUVERS TO +6 -3G)

WING SPAN	23 FT 11.5 IN
WING AREA	97.31 SQ FT
WING CHORD	42 IN
WING CHORD INCLUDING FLAPERONS	51 IN
ASPECT RATIO	5.50
WING LOADING @ GROSS WEIGHT	9.36 LBS 911÷97.31
LENGTH	17 FT 11 IN
LENGTH WITH WINGS FOLDED	17 FT 11 IN
WIDTH WITH WINGS FOLDED	7 FT 9.5 IN
HEIGHT	71 IN
EMPTY WEIGHT	510 LBS
GROSS WEIGHT	1,150 LBS
USEFUL LOAD	640+ LBS
FUEL CAPACITY	18 GAL
FUEL CONSUMPTION	3.5 GAL/HR
RANGE	566 MI (NO RESERVE)
PROPELLER (WOOD)	68 IN 3-BLADE GROUND ADJUSTABLE

	SOLO	GROSS
WEIGHT	580 LBS	911 LBS
CRUISE SPEED	120 MPH	120 MPH
STALL SPEED	42 MPH	46 MPH
NEVER EXCEED SPEED (VNE)	150 MPH	150 MPH
RATE OF CLIMB	1,200 FPM	850 FPM
CLIMB ANGLE	N/A	N/A
BEST RATE OF CLIMB SPEED (VY)	57 MPH	60 MPH
BEST ANGLE OF CLIMB SPEED (VX)	52 MPH	55 MPH
TAKE-OFF DISTANCE	125 FT	300 FT
OVER 50 FT OBSTACLE	250 FT	500 FT
LANDING DISTANCE	500 FT	600 FT
SERVICE CEILING	12,500 + FT	12,500+ FT

AVID FLYER AEROBATIC SPEEDWING IS RESTRICTED TO 911 GROSS WEIGHT DURING AEROBATIC MANEUVERS. ALL OTHER FLIGHT MODELS, 1,150 LBS GROSS PERMISSIBLE.

From: "avidman46" <jriordan@r...>
Date: Wed Jul 2, 2003 1:58 pm
Subject: Acro in Avids

Steve, Falling out of maneuvers can be ugly, but with all due respect, I have my low altitude aerobatic competency waiver to perform airshows and thankfully stopped falling out of maneuvers about 20 years ago. I fell out of plenty of them as a student. Now, I teach aerobatics and I would also instruct any student to adhere strictly to published entry speeds for their own safety. Entering an aileron roll at a speed lower than published will not over stress the aircraft, it simply results in ending up with a nose low exit. Entering a loop or other similar inside and outside maneuvers is a different story as the plane can inadvertantly tail slide and if that happens, you need to instantly center all the control surfaces, to avoid tearing them off, and hold on tight until the plane recovers and flops over forward or backward. That can be a REAL eye opener and can be dangerous. I will let you all know how the rest of the maneuvers work out as I perfect them in this plane. Best regards, Jim Riordan