FLIGHT LEVEL ENGINEERING

Surfaces Aircraft Design Software

Features:	**Professional**	**Homebuilder**	**Student**
Number of Surfaces	Unlim	Unlim	12
Number of panels per surface	X	(16 x 16) Max	(8 x 8) Max
Stability derivatives - static (CLa, Cma, Cnb, Clb etc.)	X	X	X
Retrieve forces and moments in Body, Stability, or Wind Coordinate systems	X	X	X
Symbolic solver	X	X	X
Update of all properties with geometry	X	X	X
Plots and simulates Phugoid	X	X	X
Plots and simulates Short Period	X	X	X
Plots and simulates Spiral Stability	X	X	X
Plots and simulates Rolling Convergence	X	X	X
Plots and simulates Dutch Roll	X	X	X
Calculates and displays surface pressures	X	X	X
Calculates and displays Force and Moments	X	X	X
Calculates and displays Force and Moment Coefficents	X	X	X
Calculates and displays Distributed Loads	X	X	X
Calculates and displays Section Lift Coefficients	X	X	X
Calculates and displays Shear, Moment and Torsion diagrams directly on the model!	X	X	X
Simple Wing Design Wizard	X	X	X
Automatic Generation of Stability and Control Reports	X	X	X
Automatic Generation of Load Reports	X	X	X
Determines Neutral Point in one click	X	X	X
Library of many common airfoils	X	X	X
Tutorial Videos	X	X	X
Trims aircraft about Y-axis (pitch)	X	X	X
New - One Click Panel Creation	X	X	X
New - Node Linking - When model geometry changes, all linked points will also change	X	X	X
Stability derivatives - dynamic (p, q, r derivatives)	X	X	
Virtual Wind Tunnel	X	X	
Flow Visualization - Streamlines (3D)	X	X	
Determine shear and moments about any user defined coordinate system i.e. the wing	X	X	
Creates movies of dynamic motion for insertion into presentations	X	X	
Calculates and displays Hinge Moments	X	X	
Easily compare your model to similar airplanes to gain a competitive edge	X	X	
Built in inertia modeler	X	X	

Imports airfoil geometry	X	X	
Multiple VWT sweeps (alpha, beta, p, q, r, etc.)	X	X	
Ability to view and hide various wing, tail and fuselage designs under one model.	X	X	
Accepts equations for power effects	X	X	
Trims aircraft about all three axes, for user selected altitude and speed or power settings, using incorporated flaps, slats, ailerons, elevators and rudders	X	X	
Trims aircraft about X- and Z-axis (roll and yaw)	X	X	
Custom Airfoil Creation	X	X	
Stability derivatives - control surface deflection derivatives	X		
Flow Visualization - Airflow vectors in the flow field (3D)	X		
Exports airfoil geometry	X		
Create lookup tables and export them to other programs or even fly your model by exporting tables to a flight simulator.	X		
Ground Effect Modeling	X		
File Export (Plot3D)	X		
File Import (.SRF, .UND, .DXF, .SHP)	X