

## Flight test report

**Manufacturer** Aerodyne Technologies  
**Address** 167 chemin de Verdun, Pas de l'echelle  
 74100 Etrembieres  
 France  
**Representative** none  
**Type of glider** Joy XS  
**Trimmer** not available

**Certification number** PG 094.2007  
**Date of flight test** 03/08/2007  
**Place of test** Villeneuve



|                         |
|-------------------------|
| <b>Classification B</b> |
|-------------------------|

|                                     |                     |
|-------------------------------------|---------------------|
| <b>Test Pilot</b> Seiko Fukuoka     | Claude Thurnheer    |
| <b>Harness</b> supair altitumu      | sup air light 42 cm |
| <b>Total weight in flight</b> 65 kg | 75 kg               |

|   | Min weight                                  |   | Max weight                                   |   |
|---|---|---|--|---|
| <b>1. Inflation/Take-off</b>  |   |   |  |   |
| Rising behaviour  | Smooth, easy and constant rising            | A | Smooth, easy and constant rising             | A |
| Special take off technique required   | No  | A | No   | A |
| <b>2. Landing</b>   |   |   |  |   |
| Special landing technique required  | No  | A | No   | A |
| <b>3. Speed in straight flight</b>  |   |   |  |   |
| Trim speed more than 30 km/h  | Yes   | A | Yes  | A |
| Speed range using the controls larger than 10 km/h                                    | Yes   | A | Yes  | A |
| Minimum speed   | Less than 25 km/h                           | A | Less than 25 km/h                            | A |
| <b>4. Control movement</b>  |   |   |  |   |
| <i>Max. weight in flight up to 80 kg</i><br>Symmetric control pressure/travel         | Increasing, Greater than 55 cm              | A | Increasing, Greater than 55 cm               | A |
| <i>Max. weight in flight 80 kg to 100 kg</i><br>Symmetric control pressure/travel     | not available                               | 0 | not available                                | 0 |
| <i>Max. weight in flight greater than 100 kg</i><br>Symmetric control pressure/travel | not available                               | 0 | not available                                | 0 |
| <b>5. Pitch stability exiting accelerated flight</b>                                  |   |   |  |   |
| Dive forward angle on exit  | Dive forward less than 30°                  | A | Dive forward less than 30°                   | A |
| Collapse occurs   | No  | A | No   | A |
| <b>6. Pitch stability operating controls during accelerated flight</b>                |   |   |  |   |
| Collapse occurs   | No  | A | No   | A |
| <b>7. Roll stability and damping</b>  |   |   |  |   |
| Oscillations  | Reducing                                    | A | Reducing                                     | A |
| <b>8. Stability in gentle spirals</b>   |   |   |  |   |
| Tendency to return to straight flight   | Spontaneous exit                            | A | Spontaneous exit                             | A |
| <b>9. Behaviour in a steeply banked turn</b>  |   |   |  |   |
| Sink rate after two turns   | 12 m/s to 14 m/s                            | A | More than 14 m/s                             | B |
| <b>10. Symmetric front collapse</b>   |   |   |  |   |
| Entry   | Rocking back less than 45°                  | A | Rocking back less than 45°                   | A |
| Recovery  | Spontaneous in less than 3 s                | A | Spontaneous in less than 3 s                 | A |
| Dive forward angle on exit  | Dive forward 0° to 30°, Keeping course      | A | Dive forward 0° to 30°, Keeping course       | A |
| Cascade occurs  | No  | A | No   | A |
| <i>With accelerator</i>   |   |   |  |   |
| Entry   | Rocking back less than 45°                  | A | Rocking back less than 45°                   | A |
| Recovery  | Spontaneous in less than 3 s                | A | Spontaneous in less than 3 s                 | A |
| Dive forward angle on exit  | Dive forward 0° to 30°, Keeping course      | A | Dive forward 0° to 30°, Keeping course       | A |
| Cascade occurs  | No  | A | No   | A |
| <b>11. Exiting deep stall (parachutal stall)</b>                                      |   |   |  |   |
| Deep stall achieved   | Yes   | A | Yes  | A |
| Recovery  | Spontaneous in less than 3 s                | A | Spontaneous in less than 3 s                 | A |
| Dive forward angle on exit  | Dive forward 0° to 30°                      | A | Dive forward 0° to 30°                       | A |
| Change of course  | Changing course less than 45°               | A | Changing course less than 45°                | A |
| Cascade occurs  | No  | A | No   | A |
| <b>12. High angle of attack recovery</b>  |   |   |  |   |
| Recovery  | Spontaneous in less than 3 s                | A | Spontaneous in less than 3 s                 | A |
| Cascade occurs  | No  | A | No   | A |
| <b>13. Recovery from a developed full stall</b>                                       |   |   |  |   |
| Dive forward angle on exit  | Dive forward 0° to 30°                      | A | Dive forward 0° to 30°                       | A |
| Collapse  | No collapse                                 | A | No collapse                                  | A |
| Cascade occurs (other than collapse)  | No  | A | No   | A |
| Rocking back  | Less than 45°                               | A | Less than 45°                                | A |
| Line tension  | Most line tight                             | A | Most line tight                              | A |
| <b>14. Asymmetric collapse</b>  |   |   |  |   |
| <i>With 50% collapse-Maximum dive forward or roll angle</i>                           |   |   |  |   |
| Change of course until re-inflation   | Less than 90°, Dive or roll angle 0° to 15° | A | Less than 90°, Dive or roll angle 0° to 15°  | A |
| Re-inflation behaviour  | Spontaneous re-inflation                    | A | Spontaneous re-inflation                     | A |
| Total change of course  | Less than 360°                              | A | Less than 360°                               | A |
| Collapse on the opposite side occurs  | No  | A | No   | A |
| Twist occurs  | No  | A | No   | A |
| Cascade occurs  | No  | A | No   | A |
| <i>With 75% collapse-Maximum dive forward or roll angle</i>                           |   |   |  |   |
| Change of course until re-inflation   | Less than 90°, Dive or roll angle 0° to 15° | A | Less than 90°, Dive or roll angle 15° to 45° | A |
| Re-inflation behaviour  | Spontaneous re-inflation                    | A | Spontaneous re-inflation                     | A |
| Total change of course  | Less than 360°                              | A | Less than 360°                               | A |
| Collapse on the opposite side occurs  | No  | A | No   | A |
| Twist occurs  | No  | A | No   | A |
| Cascade occurs  | No  | A | No   | A |
| <i>With 50% collapse and accelerator-Maximum dive forward or roll angle</i>           |   |   |  |   |
| Change of course until re-inflation   | Less than 90°, Dive or roll angle 0° to 15° | A | Less than 90°, Dive or roll angle 0° to 15°  | A |
| Re-inflation behaviour  | Spontaneous re-inflation                    | A | Spontaneous re-inflation                     | A |
| Total change of course  | Less than 360°                              | A | Less than 360°                               | A |
| Collapse on the opposite side occurs  | No  | A | No   | A |

|   |  |   |  |   |
|---|--|---|--|---|
| Twist occurs  | No   | A | No   | A |
| Cascade occurs  | No   | A | No   | A |
| <i>With 75% collapse and accelerator-Maximum dive forward or roll angle</i>               |  |   |  |   |
| Change of course until re-inflation   | Less than 90°, Dive or roll angle 15° to 45°             | A | Less than 90°, Dive or roll angle 15° to 45°   | A |
| Re-inflation behaviour  | Spontaneous re-inflation                                 | A | Spontaneous re-inflation                       | A |
| Total change of course  | Less than 360°   | A | Less than 360°                                 | A |
| Collapse on the opposite side occurs  | No   | A | No   | A |
| Twist occurs  | No   | A | No   | A |
| Cascade occurs  | No   | A | No   | A |
| <b>15. Directional control with a maintained asymmetric collapse</b>                      |  |   |  |   |
| Able to keep course   | Yes  | A | Yes  | A |
| 180° turn away from the collapsed side possible in 10 s                                   | Yes  | A | Yes  | A |
| Amount of control range between turn and stall or spin                                    | More than 50 % of the symmetric control travel           | A | More than 50 % of the symmetric control travel | A |
| <b>16. Trim speed spin tendency</b>   |  |   |  |   |
| Spin occurs   | No   | A | No   | A |
| <b>17. Low speed spin tendency</b>  |  |   |  |   |
| Spin occurs   | No   | A | No   | A |
| <b>18. Recovery from a developed spin</b>   |  |   |  |   |
| Spin rotation angle after release   | Stops spinning in less than 90°                          | A | Stops spinning in less than 90°                | A |
| Cascade occurs  | No   | A | No   | A |
| <b>19. B-line stall</b>   |  |   |  |   |
| Change of course before release   | Change of course less than 45°                           | A | Change of course less than 45°                 | A |
| Behaviour before release  | Remains stable with straight span                        | A | Remains stable with straight span              | A |
| Recovery  | Spontaneous in less than 3 s                             | A | Spontaneous in less than 3 s                   | A |
| Dive forward angle on exit  | Dive forward 0° to 30°                                   | A | Dive forward 0° to 30°                         | A |
| Cascade occurs  | No   | A | No   | A |
| <b>20. Big ears</b>   |  |   |  |   |
| Entry procedure   | Dedicated controls                                       | A | Dedicated controls                             | A |
| Behaviour during big ears   | Stable flight  | A | Stable flight                                  | A |
| Recovery  | Spontaneous in less than 3 s                             | A | Spontaneous in less than 3 s                   | A |
| Dive forward angle on exit  | Dive forward 0° to 30°                                   | A | Dive forward 0° to 30°                         | A |
| <b>21. Big ears in accelerated flight</b>   |  |   |  |   |
| Entry procedure   | Dedicated controls                                       | A | Dedicated controls                             | A |
| Behaviour during big ears   | Stable flight  | A | Stable flight                                  | A |
| Recovery  | Recovery through pilot action in less than a further 3 s | B | Spontaneous in less than 3 s                   | A |
| Dive forward angle on exit  | Dive forward 0° to 30°                                   | A | Dive forward 0° to 30°                         | A |
| Behaviour immediately after releasing the accelerator while                               | Stable flight  | A | Stable flight                                  | A |
| <b>22. Behaviour exiting a steep spiral</b>   |  |   |  |   |
| Tendency to return to straight flight   | Spontaneous exit   | A | Spontaneous exit                               | A |
| Turn angle to recover normal flight   | Less than 720°,spontaneous recovery                      | A | Less than 720°,spontaneous recovery            | A |
| Sink rate when evaluating spiral stability [m/s]  | 14 m/s   |   | 18 m/s   |   |
| <b>23. Alternative means of directional control</b>                                       |  |   |  |   |
| 180° turn achievable in 20 s  | Yes  | A | Yes  | A |
| Stall or spin occurs  | No   | A | No   | A |
| <b>24. Any other flight procedure and/or configuration described in the user's manual</b> |  |   |  |   |
| Procedure works as described  | not available  | 0 | not available                                  | 0 |
| Procedure suitable for novice pilots  | not available  | 0 | not available                                  | 0 |
| Cascade occurs  | not available  | 0 | not available                                  | 0 |
| <b>Comments of test pilot</b>   |  |   |  |   |
| Comments  | no   |   | no   |   |



### Air Turquoise

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