



## Flight test report: EN

Manufacturer	<b>Gin Gliders Inc.</b>	Certification number	PG_0639.2012
Address	285-1 Galdam-Ri, Mohyun-Myun, 449-855 YongIn-City, Kyunggi-Do Korea	Date of flight test	06. 12. 2012
Representative	Gin Soek Song	Place of test	Iseo / Italy
Glider model	<b>Boomerang 9 M</b>	<b>Classification</b>	<b>D</b>
Trimmer	no		

<b>Test pilot</b>	Thurnheer Claude	Zoller Alain
<b>Harness</b>	Gin Gliders - Gingo M	Gin Gliders - Gingo 2 L
<b>Total weight in flight (kg)</b>	95	115

1. Inflation/Take-off	C			
Rising behaviour	Overshoots, shall be slowed down to avoid a front collapse	C	Overshoots, shall be slowed down to avoid a front collapse	C
Special take off technique required	No	A	No	A
2. Landing	A			
Special landing technique required	No	A	No	A
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	25 km/h to 30 km/h	B	25 km/h to 30 km/h	B
4. Control movement	D			
<i>Max. weight in flight up to 80 kg</i>				
Symmetric control pressure / travel	not available	0	not available	0
<i>Max. weight in flight 80 kg to 100 kg</i>				
Symmetric control pressure / travel	Increasing / 35 cm to 45 cm	D	not available	0
<i>Max. weight in flight greater than 100 kg</i>				
Symmetric control pressure / travel	not available	0	Increasing / 35 cm to 50 cm	D
5. Pitch stability exiting accelerated flight	A			
Dive forward angle on exit	Dive forward less than 30°	A	Dive forward less than 30°	A
Collapse occurs	No	A	No	A
6. Pitch stability operating controls during accelerated flight	A			
Collapse occurs	No	A	No	A
7. Roll stability and damping	A			
Oscillations	Reducing	A	Reducing	A
8. Stability in gentle spirals	A			
Tendency to return to straight flight	Spontaneous exit	A	Spontaneous exit	A
9. Behaviour in a steeply banked turn	B			
Sink rate after two turns	More than 14 m/s	B	More than 14 m/s	B
10. Symmetric front collapse	D			
Entry	Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery	Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Entering a turn of less than 90°	A	Dive forward 0° to 30° / Entering a turn of 90° to 180°	C
Cascade occurs	No	A	No	A

<i>With accelerator</i>				
Entry	Rocking back greater than 45°	C	Rocking back greater than 45°	C
Recovery	Recovery through pilot action in less than a further 3 s	D	Recovery through pilot action in less than a further 3 s	D
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 30° to 60° / Entering a turn of less than 90°	B
Cascade occurs	No	A	No	A
<b>11. Exiting deep stall (parachutal stall)</b>				
<b>D</b>				
Deep stall achieved	Yes	A	Yes	A
Recovery	Spontaneous in 3 s to 5 s	C	Recovery through pilot action in less than a further 5 s	D
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>				
<b>D</b>				
Recovery	Spontaneous in 3 s to 5 s	C	Recovery through pilot action in less than a further 3 s	D
Cascade occurs	No	A	No	A
<b>13. Recovery from a developed full stall</b>				
<b>C</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 collapses)	No	A	No	A
Rocking back	Greater than 45°	C	Greater than 45°	C
Line tension	Most lines tight	A	Most lines tight	A
<b>14. Asymmetric collapse</b>				
<b>D</b>				
<i>With 50% collapse</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 15° to 45°	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</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 45° to 60°	C	90° to 180° / Dive or roll angle 60° to 90°	C
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</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	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
<i>With 75% collapse and accelerator</i>				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 45° to 60°	C	180° to 360° / Dive or roll angle 45° to 60°	C
Re-inflation behaviour	Spontaneous re-inflation	A	Inflates in 3 s to 5 s from start of pilot action	D
Total change of course	Less than 360°	A	Less than 360°	A
Collapse on the opposite side occurs	Yes, no turn reversal	C	No	A
Twist occurs	No	A	No	A
Cascade occurs	No	A	No	A

<b>15. Directional control with a maintained asymmetric collapse</b>	<b>A</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>	<b>A</b>			
Spin occurs	No	A	No	A
<b>17. Low speed spin tendency</b>	<b>D</b>			
Spin occurs	Yes	D	Yes	D
<b>18. Recovery from a developed spin</b>	<b>D</b>			
Spin rotation angle after release	Stops spinning in 180° to 360°	D	Stops spinning in 180° to 360°	D
Cascade occurs	No	A	No	A
<b>19. B-line stall</b>	<b>0</b>			
Change of course before release	not available	0	not available	0
Behaviour before release	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Cascade occurs	not available	0	not available	0
<b>20. Big ears</b>	<b>0</b>			
Entry procedure	not available	0	not available	0
Behaviour during big ears	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
<b>21. Big ears in accelerated flight</b>	<b>0</b>			
Entry procedure	not available	0	not available	0
Behaviour during big ears	not available	0	not available	0
Recovery	not available	0	not available	0
Dive forward angle on exit	not available	0	not available	0
Behaviour immediately after releasing the accelerator while maintaining big ears	not available	0	not available	0
<b>22. Behaviour exiting a steep spiral</b>	<b>A</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]	16		20	
<b>23. Alternative means of directional control</b>	<b>A</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>	<b>A</b>			
Procedure works as described	Yes	A	Yes	A
Procedure suitable for novice pilots	Yes	A	Yes	A
Cascade occurs	No	A	No	A
<b>25. Comments of test pilot</b>				
Comments	Dieser Gleitschirm erfüllt die Mindestanforderungen von EN/LTF D. Nach Auskunft des Herstellers und bestätigt durch unsere Testflüge richtet sich dieser Schirm ausschließlich an sehr erfahrene Wettkampfpiloten (PWC-Niveau) und ersetzt nicht das Klasse D Standard-Gleitschirmmodell des selben Herstellers Getestet mit "Folding Lines" Manöver 24 = Big Ohren mit B3 gemacht		This glider meets the minimum requirements of EN/LTF class D. According to the manufacturer and confirmed by our own testing this glider addresses highly experienced comp-pilots (PWC level) exclusively and is no replacement for the standard D-class-glider of the same manufacturer Tested with "Folding Lines" Manoeuvre 24 = Big ears made with B3	