0 Revisions

0.1 Record of revisions

Any revision of the present manual, except actual weighing data, must be recorded in the following table and in case of approved sections endorsed by the responsible airworthiness authority.

The new or amended text in the revised page will be indicated by a black vertical line in the right hand margin, and the Revision No. and the date will be shown on the bottom left hand of the page.

Rev. No.	Affected Pages/ section	Description	Issue Date	LBA Approval Date	Inserted Date Signature
1	0.3-0.5, 2.1, 2.9, 2.11, 4.5, 5.4, 6.3, 6.5, 6.10, 7.10	Manual revision TN 413/2	September 2003	Sept. 25. 2003	
	0.3, 2.12, 3.2, 4.3	Manual revision TN 413/3	May 2004	May 10. 2004	

0.2 List of effective pages

Section		page	issued	replaced/	replaced/
0		0.0	March 2002		
		0.1	see manual amendments		
		0.2	"		
		0.3	"		
		0.4	"		
		0.5	"		
		0.6	March 2002		
1		1.1	"		
		1.2	"		
		1.3	"		
		1.4	"		
		1.5	"		
		1.6	"		
2	App.	2.1	March 2002	Sept. 2003	
	"	2.2	"		
	"	2.3	"		
	"	2.4	"		
	"	2.5	"		
	"	2.6	"		
	"	2.7	"		
	"	2.8	"		
	"	2.9	"	Sept. 2003	
	"	2.10	"		
	"	2.11	"	Sept. 2003	
	"	2.12	"	May 2004	
3	"	3.1	March 2002		
	"	3.2	"	May 2004	
	"	3.3	"		
	"	3.4	"		
	"	3.5	"		
4	"	4.1	March 2002		
	"	4.2	"		
	"	4.3	"	May 2004	
	"	4.4	"		
	"	4.5	"	Sept. 2003	

2.17 Limitations placards

DG Flugzeugbau GmbH
Type: DG – 1000S Serial No.: 10- S
Year of construction:

Maximum airspeeds	km/h	kts.
Winch launching	150	81
Aero-tow	185	100
Manoeuvring V_A	185	100
Rough air	185	100
Maximum speed V_{NE}	270	146

Approved aerobatic manoeuvres, only without waterballast:
Pos. Loop, Chandelle, Spin, Stall turn
In addition Category A:
Only with 18 m span without waterballast:
Half loop and half roll, half roll and half loop, slow roll, inverted flight, half positive flick roll from normal flight with half loop, half negative flick roll from inverted flight
Maximum mass:

Category A and Category U with fixed main wheel	630 kg	1389 lbs.
Category U	750 kg	1653 lbs.
Category U without waterballast	kg	lbs.

Loading chart

Cockpit load	front seat		rear seat		(Parachute
maximum	110 kg	242 lbs.	90 kg	198 lbs.	included)
or maximum	105 kg	231 lbs.	105 kg	231 lbs.	
minimum	kg	lbs.	/	/	

With lower pilot weight necessary ballast must be added.

Cockpit Check

1. Lead ballast (for under weight pilot)?
2. Parachute worn properly?
3. Safety harness buckled?
4. Front seat: pedals adjusted?
   Rear seat: seating height adjusted?
5. All controls and knobs in reach?
6. Altimeter?
7. Dive brakes cycled and locked?
8. Positive control check ? (One person at the control surfaces).
9. Fin ballast tank emptied or correct amount filled in?
10. Trim ballast box in the fin, correct amount filled in? Locking device completely engaged?
11. Trim?
12. Both canopies locked?
13. Runway free?

limits for use of the waterballast tank

minimum	°C	13.5	17	24	31	38
ground temperature	°F	56	63	75	88	100
maximum flight	m	1500	2000	3000	4000	5000
altitude above GND	ft.	5000	6500	10000	13000	16500

Altitude in [m]	0-3000	4000	5000	6000	7000	8000
V_{NE} IAS km/h	270	256	243	230	217	205
Altitude in [ft]	0-10000	13000	16000	20000	23000	26000
V_{NE} IAS kts.	146	138	131	124	117	111

Other cockpit placards see section 7

Gepäck max. 15 kg
baggage max. 33 lbs.

Sollbruchstelle 10000 N
rated load 2200 lbs.

Reifendruck 4 bar
Tyre pressure 58 psi
Tail wheel

Reifendruck 2,5 bar
Tyre pressure 36 psi
Main wheel

Reifendruck 2,5 bar
Tyre pressure 36 psi
Nose wheel (if installed)

Ballast box in the fin
Min. load in the front seat
kg **box empty** kg **box filled**

At the control-light in the front instrument panel

Warning:
Rigging of the horizontal tailplane is only permitted with nose down trim-setting!

at the upper left hand side of the fin

3.1 Introduction

Section 3 provides a checklist and amplification for coping with emergencies that may occur. Emergency situations can be minimized by proper pre-flight inspections and maintenance.
Caution: Canopy jettison and bailing out should be trained several times on the ground before flying the aircraft.

3.2 Canopy jettison

To bail out the white-red canopy opening handle (left) has to be operated with your right hand. Open the canopy as far as possible.
If the canopy doesn't stay open (or is not blown away by the oncoming air), but is closed by the air pressure, you have to release the canopy in it's closed position by operating the red emergency release handle (right) with your left hand, then push the canopy upwards.
The retaining lines will tear off.

3.3 Bailing out

First jettison both canopies, then open the safety harness and bail out.
The low walls of the front cockpit allow for a quick push-off exit.

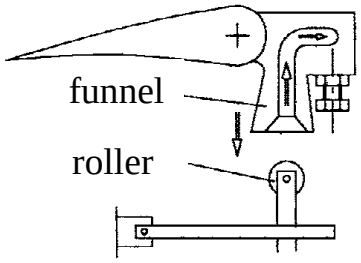
3.4 Stall recovery

Easing the stick forward and picking up a dropping wing with sufficient opposite rudder the glider can be recovered from the stall.
To recognize and prevent the stall, please refer to section 4.5.2.

4. Rigging of the stabilizer
   Install the battery Z110 or a ballast weight of 5.5kg (12.1 lbs.) in the battery box in the fin, connect the battery.
   Warning: Rigging of the horizontal tailplane is only permitted with **nose down** trim-setting. Therefore operate the trim release lever and push the control stick forward, then release the lever to engage the trim (don't operate the trim control knob, the trim should not be pushed to the most nose down position).

   Screw the tool W 38/2 into the securing plate (near the top of the left surface of the fin). Pull out the securing plate with the tool, move it downwards to engage in the rigging position. Set the stabilizer on, so that the roller at the fuselage side push rod is inserted into the funnel at the elevator.

   Watch carefully the procedure!

   When the stabilizer is set down and laying on the fin, push it aft. The roller will engage and slide forward in the funnel if you hold the elevator in the pertinent position.

   Release the securing device by pulling out with the tool and engage the securing device by lifting the tool. The securing plate must be flush with the surface of the fin. Screw out the tool.

   Check for correct elevator connection by looking from the rear into the gap at the right hand side of the rudder.

5. Rigging of the outboard wing panels (20m wing extensions or 18 m wing tips): Insert the wing tip extensions into the wing. Press in the locking pin with your finger.
   Insert the wing tip as far as the aileron connector starts to slide onto the aileron.
   Strike firmly with the palm of your hand on to the wing tip to lock in the wing tip extension.

6. Tape the gaps of the wing-fuselage junction and at the wing joint.

7. Execute a positive control check, one helper to hold firmly the control surfaces is needed.