This Appendix is a translation to the German Flughandbuch Anhang F 1 to the utilization of Ultramagic burner and baskets with Schroeder fire balloons envelopes.

1. General description

No changes

2. Limitations

2.1. Only baskets, burners and fuel cylinders mentioned in this appendix can be used for the combination (see table 1 and 2).

2.2. Every part of Ultramagic equipmnet must comply to and be utilized according to the limitations and requirements described in the latest manuals of the manufacturer. The operation limitations must comply with these of the Schroeder fire balloons flight manual. The loading condition is described in the particular loading matrix, (see table 2)

2.3. All pieces of equipment must be airworthy

2.4. The maintence tasks of the particular manufacturer is to be applied.

3. Emergency procedures

Unchanged;

A. Pilot light failure

Double- Triple- or Quadruple burner

1. Keep flying with the remaining burner(s) whilst trying to ignite the failed pilot light again. If further pilot lights fail, the following actions are to be taken:
   - slightly open the valve of the silent burner and ignite the burner. Adjust the flame of the silent burner in a manner so that it can be used as pilot light
   - Keep on using the main burner as usual and an extra attention to the silent burner, the valve might be block due to icing. In case of a frozen silent burner valve, proceed as described in the following subitem 2.
   - Land as soon as possible
2.
   - Shut off main valves of the corresponding cylinder
   - Completely open main the valve of the burner
   - Slightly open shut off valve of the cylinder so that only a little bit of gas can exit the burner
   - Ignite the burner flame and adjust the flame using the cylinder shut off valve. Make sure that the flame does not extinguish
   - Land as soon as possible

B. Valve Icing of vapour pilot lights

During the inflation of the envelope, the cylinders are in a horizontal position and the vapor take off valve is getting in contact with liquid Propane. If the time of inflation takes too long, the vapor valve might start icing and the pilot flame extinguishes. If that occurs, simply shut of the vapor valve and wait until the liquid fuel is burnt don and the icing has vanished. After the icing has vanished, open the vapor valve and reignite the pilot light.

C. Failure of a burner valve

In case of a main burner valve failure use the other burner(s) right away.

- If the main burner valve is open and not closing again, or there is a leak, shut off the liquid fuel cylinder valve and let the remaining liquid fuel in the fuel hose burn down. Use a different main valve after this occurrence.
- If the main burner valve is blocked in closed condition, use different main burner valve.
- Land as soon as possible

4. Standard procedures

No changes.

5. Calculation of load capacity

No changes

The indications of the Schroeder fire balloons Flight manual are applicable

6. Description of the Balloon- and equipment

6.1. Burner

Refer to latest UltraMagic manual.

6.2. Baskets

Refer to latest UltraMagic manual.

6.3. Fuel cylinders

Refer to latest UltraMagic and Schroeder fire balloons manual.

7. Maintenance, operation and care

No changes

Refer to the latest Ultramagic and Schroeder fire balloons Maintenance manual.

8. Equipment

Tables 1, 2 and 3 hold baskets, burners and fuel cylinders, that can be used for Schroeder fire balloons envelopes within the limits of this technical note.

Table 1: Overview envelopes, burners and baskets

Envelope size [m³] fire balloons	Basket type	Inner meassures [m]	max. occupants	basket empty mass kg	Burer types MK-2, MK-2 Super; MK-10; MK-21, Silent	burner [kg]
1200 – 1800	C0	0,7 x 0,8	1	45	double	19-24
	C2	1,0 x 1,0	1/2	50		
1400 - 2200	C1	1,0 x 1,2	2/3	56	double	19-24
	C2	1,0 x 1,0	1/2	50		
	C3	1,1 x 1,3	3/4	76		
1600 – 3000	C1	1,0 x 1,2	2/3	56	double	19-24
	C2	1,0 x 1,0	1/2	50		
	C3	1,1 x 1,3	3/4	76		
	C10	1,15 x 1,45	4/5	85		
3000 - 3600	C3	1,1 x 1,3	3/4	76	double	19-24
	C4	1,2 x 1,6	5/6	95		
	C6	1,3 x 1,8	7/8	106		
	C10	1,15 x 1,45	4/5	85		
4000 - 4250	C3	1,1 x 1,3	3/4	76	double or triple	19-24 25-34
	C4	1,2 x 1,6	5/6	95		
	C6	1,3 x 1,8	7/8	106		
	C7	1,4 x 2,0	8/9	122		
	C10	1,15 x 1,45	4/5	85		
4500	C4	1,2 x 1,6	5/6	95	double or triple	19-24 25-34
	C5	1,4 x 2,2	10/12	160		
	C6	1,3 x 1,8	7/8	106		
	C7	1,4 x 2,0	8/9	122		
	C10	1,15 x 1,45	4/5	85		
5000	C5	1,4 x 2,2	10/12	160	triple or quadruple	25-34 36-43
	C6	1,3 x 1,8	7/8	106		
	C7	1,4 x 2,0	8/9	122		
	C8	1,5 x 2,6	11/13	175		
6000	C5	1,4 x 2,2	10/12	160	triple or quadruple	25-34 36-43
	C7	1,4 x 2,0	8/9	122		
	C8	1,5 x 2,6	11/13	175		
	C9	1,6 x 3,0	13/17	250		
7000	C5	1,4 x 2,2	10/12	160	triple or quadruple	25-34 36-43
	C8	1,5 x 2,6	11/13	175		
	C9	1,6 x 3,0	13/17	250		
8500	C5	1,4 x 2,2	10/12	160	triple (MK21 only) or quadruple	25-34 36-43
	C8	1,5 x 2,6	11/13	175		
	C9	1,6 x 3,0	13/17	250		

For actual basket and burner weights view weighing report.

Table 2: Minimum basket sizes

The following table holds the number of occupants considering the number of fuel cylinders used in flight for the relevant baskets.
The listed basket numbers are UltraMagic denotations. If a basket is equipped with a separate Pilot compartment, additional occupants to the pilot can also find place in this compartment. The number of occupants that can be added to the pilot compartment depends on the number of cylinders inside the basket.
Example:
The number of occupants for a basket size C7 with 2 fuel cylinders is 2 occupants inside the pilot compartment and 6 in the occupant compartment. The number of occupants depends on the space available in the basket (0,3 m² per Peron and 0,1 m² per fuel cylinder).

Basket size	fuel cylinders	occupants
C0	2	1
C2	2	2
	3	2
	4	2
	5	1
	6	1
C1	2	3
	3	3
	4	2
	5	2
	6	2
C3	2	4
	3	3
	4	3
	5	3
	6	2
C10	2	4
	3	4
	4	4
	5	3
	6	3
	7	3
	8	2
C4	2	5
	3	5
	4	5
	5	4
	6	4
	7	4
	8	3

Basket size	fuel cylinders Pilot comparment	occupants	occupants
C7*	2	2	6
	3	2	6
	4	2	6
	5	1	6
	6	1	6
	7	1	6
	8	-	6
C5	2	3	6
	3	2	6
	4	2	6
	5	1	6
	6	1	6
	7	1	6
	8	-	6
C8	2	2	8
	3	2	8
	4	2	8
	5	1	8
	6	1	8
	7	1	8
	8	-	8
C9	2	2	12
	3	2	12
	4	2	12
	5	1	12
	6	1	12
	7	1	12
	8	-	12
C6*	2	1	6
	3	-	6
	4	-	6
	5	-	6
	6	-	5
	7	-	5
	8	-	5

* Baskets with Pilot compartment = occupants plus passengers in the pilot compartment
* If the removable dividing wall is not in the basket for the C6 and C7: max. = 6 occupants

Table 3: Fuel cylinders

Cylinder type	Empty mass [kg]	content [kg]	all over mass [kg]
VA 50	15	21	36
VA 70	18	29	47
V 20	14	20	34
V 30	19	27	46
V 30, high	18	29	47
Worthington, Alu	14	18	32
M20 or M20D	15	20	35
M30 or M30D	20	30	50
M40 or M40D	24	40	64

9. Relation between basket size measures, numbers of cylinders and number of occupants

Annotation:

1. Basket measures may vary up to ± 0,075 m:
2. For each burner unit with independent fuel supply, one cylinder must be installed in the basket for each flight.
3. -Calculations are based on 0,1 m² per fuel cylinder and 0,3 m² per occupant.

   The number of fuel cylinders is restricted by the number of fasteners inside the basket.