

Thunder & Colt - GA-42 small helium blimp

Peter Lobner, 24 August 2021

In 1983, shortly after the death of Dick Wirth, partner in the UK firm Thunder Balloons, Thunder merged with Colt to become Thunder & Colt, where Per Lindstrand held the Managing Director position for the next decade. In addition to their well-known hot air balloons, T&C also produced thermal airships and the two-seat GA-42 non-rigid helium airship. When it was first introduced in the 1980s, the GA-42 broke new ground by making helium airships affordable to a wider customer base. With two seats for the pilot and one passenger, it was suitable for pilot training.

The GA-42 was the first airship to use electrical fly-by-wire (FBW) flight controls. There were no mechanical connections between the side stick controller and the fin-mounted control surface actuators. Instead the side-stick controller operated simple linear DC actuators with twin analog circuits to send electrical commands to the control surface actuators. The FBW controls considerably enhanced airship flying qualities and reduced the pilot's workload. The GA-42 received FAA type certificate AS3EU and became the world's first certified civil aircraft with FBW controls with no mechanical back-up.

T&C built nine GA-42 airships.



T&C GA-42 helium blimp. Source: The Big Black Bird

General characteristics of the GA-42

Parameter	GA-42
Length	90 ft (27.4 m)
Diameter, max	30 ft (9.1 m)
Height, overall	37 ft (11.3 m)
Envelope volume	42,000 ft ³ (1,189 m ³)
Ballonet volume	26% of envelope
Engine	1 x Teledyne Continental O-200-B @ 100 hp (74.6 kW) max continuous
Weight, max	3,000 lb (1,361 kg)
Max static heaviness	220 lb (100 kg)
Accommodations	Pilot + 1
Speed, max cruise	40 knots
Altitude, pressure height	9,500 ft (2,895 m)
Range	650 miles (1,046 km)



GA-42. Source: Leo via Flickr



GA-42 in flight. Source: Flying, May 1991



GA-42. Source: *Flying*, May 1991



GA-42. Source: *Flickriver*

After the acquisition of Thunder & Colt by Cameron Balloons Ltd. in 1995, American Blimp Corporation (ABC) acquired the manufacturing rights and type certificate AS3EU for the GA-42. ABC subsequently transferred GA-42 manufacturing rights to Lindstrand Technologies.

For more information

- “Type Certificate Data Sheet No. AS3EU” Revision 2, Model GA-42, 21 November 2000:
[https://rgl.faa.gov/regulatory_and_guidance_library/rgMakeModel.nsf/0/6c9e5d3010da375386256b7d0051145d/\\$FILE/AS3EU.pdf](https://rgl.faa.gov/regulatory_and_guidance_library/rgMakeModel.nsf/0/6c9e5d3010da375386256b7d0051145d/$FILE/AS3EU.pdf)
- “Thunder-Colt Balloons,” The Big Black Bird, Scottsdale, AZ:
<https://www.thebigblackbird.com/thunder-colt-balloons>
- Nigel Moll, “Blimp on a Diet - The smallest blimp is still pretty big, and it sure is slow,” Flying, pp. 71 – 78, May 1991:
https://books.google.com/books?id=OR79ggVlbvUC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

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- American Blimp Corp. - Lightships
- Lindstrand Technologies - GA-42 and GA-22 small blimps