

# SkyRider Airships – BA-2

Peter Lobner, 12 February 2022

## 1. Introduction

In the mid-1970s, Frank Rider formed a new company, SkyRider Airships, in Colorado where he designed the BA-2 single-seat blimp. In 1980, Rider moved to Boulder, CO and established Boulder Blimp Company (<https://boulderblimp.com>).

FAA records indicate that the BA-2 was built in 1988. The manufacturer was listed as Frank E. Rider. The BA-2, serial number 001 (originally intended to be the prototype), made its first flight on 11 May 1988, received an FAA experimental certificate on 5 April 1990 and was assigned tail number N25FR. The BA-2 subsequently was sold to Arnold Richard, in Nashville, TN, and ultimately was deregistered on 3 October 2012, more that 24 years after its first flight.

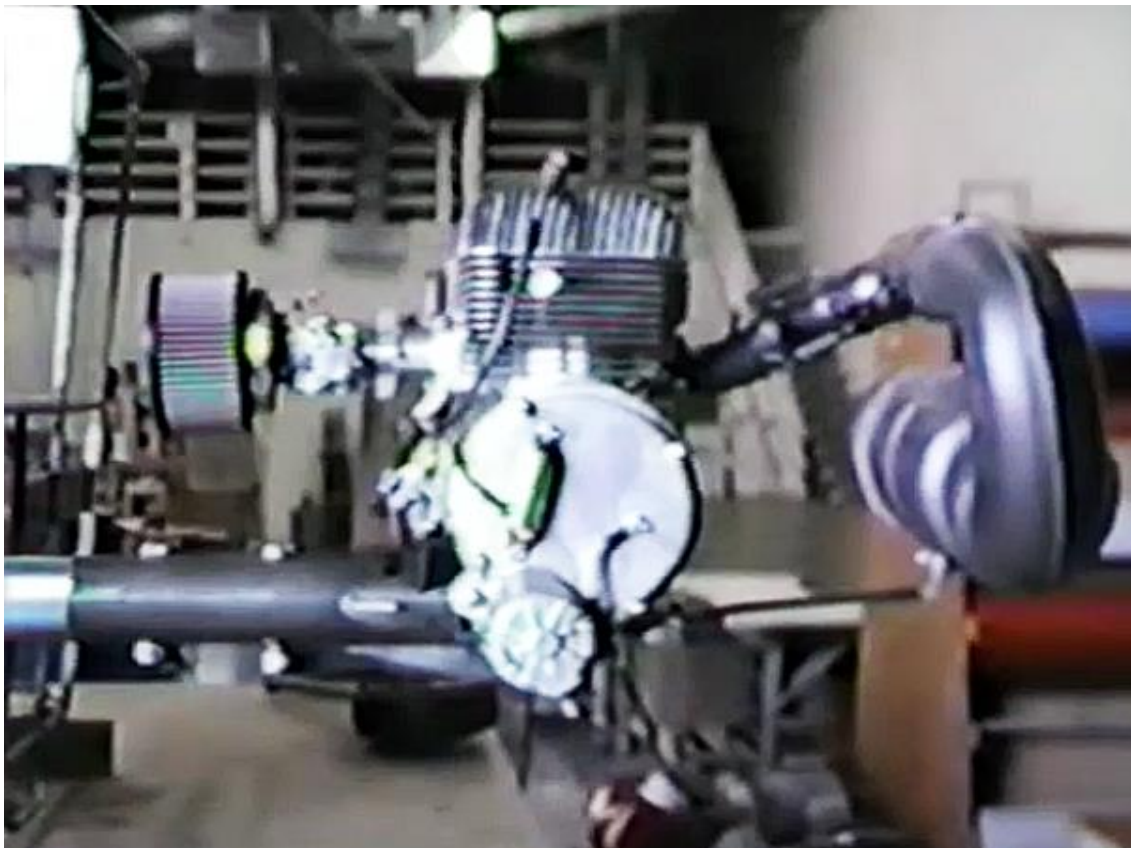


*BA-2 in flight. Source: Roland Escher, Airship and Blimp Resources*

## 2. BA-2 design

The BA-2 non-rigid airship was 29.3 m (96 feet) long, with an overall height of 9.1 m (30 feet) to the top of the cruciform tail fin. The gas envelope had two ballonets, fore and aft, for controlling pitch and lift gas pressure.

The BA-2 was powered by two single-cylinder, two-stroke, air-cooled Rotax 277 engines rated at about 19 kW (26 shp) each. The engines were rigidly installed at the ends of a transverse rotating tube that was installed through the aft end of the gondola. Electrical controls enabled the pilot to rotate the engines between 90° up and 45° down (relative to their horizontal position for cruise flight) to provide thrust vectoring during low speed flight and hover. The engines drove three-bladed propellers housed within a narrow shroud ring.



*Rotax 277 installation on the transverse tube that was electrically rotated to provide thrust vector control.  
Source: Screenshots from Frank Rider video circa 1988*



*BA-2 gondola with propellers in the cruise (horizontal) position*



*BA-2 gondola with propellers vectored partially up for a rolling takeoff.  
Source, both photos: Screenshots from Frank Rider video circa 1988*



*BA-2 in flight, bow quarter view.*



*BA-2 in flight, profile view. Source, both photos:  
Screenshots from Frank Rider video circa 1988*



*BA-2 in flight.*

*Source: Screenshot from Frank Rider video circa 1988*

### **3. For more information**

- Roland Escher, "SkyRider Airships," Airship and Blimp Resources, 2003:  
<http://www.myairship.com/database/skyrider.html>
- "Frank E. Rider," obituary, Highland News-Sun, 1 August 2021:  
[https://www.midfloridanewspapers.com/highlands\\_news-sun/obituaries/frank-e-rider/article\\_1bb2315c-f06c-11eb-b661-5b1e1bb32118.html](https://www.midfloridanewspapers.com/highlands_news-sun/obituaries/frank-e-rider/article_1bb2315c-f06c-11eb-b661-5b1e1bb32118.html)
- FAA Registry, N-Number Inquiry web page:  
<https://registry.faa.gov/aircraftinquiry/Search/NNumberInquiry>

## **Videos**

- "SkyRider BA-2, SkyRider Airships Construction Shots" (1 hour 31:42 minutes), 1987 – 1988 videos, Frank Rider, posted 11 August 2018: <https://www.youtube.com/watch?v=E5rYqjeuaQU>
- "SkyRider BA-2, SkyRider Airships" (49:38 minutes), 1987 video, Frank Rider, posted 10 August 2018: <https://www.youtube.com/watch?v=KmZ9gl7tiqA>
- "SkyRider BA-2, SkyRider Airships" (28:59 minutes), Some construction shots, first inflation and flights circa 1988, Frank Rider, posted 10 August 2018: <https://www.youtube.com/watch?v=rcQZYdCGpz4>

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