

## An aeromodelling pioneer paved the way

Manned aeroplanes with electric propulsion are taking off

Heimo Stadlbauer

**Fred Militky, a name that older aeromodellers will surely still be familiar with, designed the free-flying, electric-powered "Silentius" back in the late 1950s, and in 1973, Graupner introduced the "HI FLY" radio-controlled electric glider designed by Militky.**

But Fred Militky was also working on manned flying. His school friend, Heinrich Brditschka, ran a company in Haid near Linz an der Donau, Austria that was involved in the construction of single-engine aeroplanes (the company now goes under the name HB-Flugtechnik). In 1973, Militky and Brditschka carried out a feasibility study and enlisted the collaboration of companies Bosch (propulsion motor) and Varta (nickel cadmium battery technology). The result was the **MB-E1** (**M**ilitky-**B**rditschka **E**lektroflieger No. 1) with a wingspan of 12 m. On 21<sup>st</sup> October 1973, this first electric-powered manned aircraft took to the skies in Wels, Austria. Its maiden flight lasted for

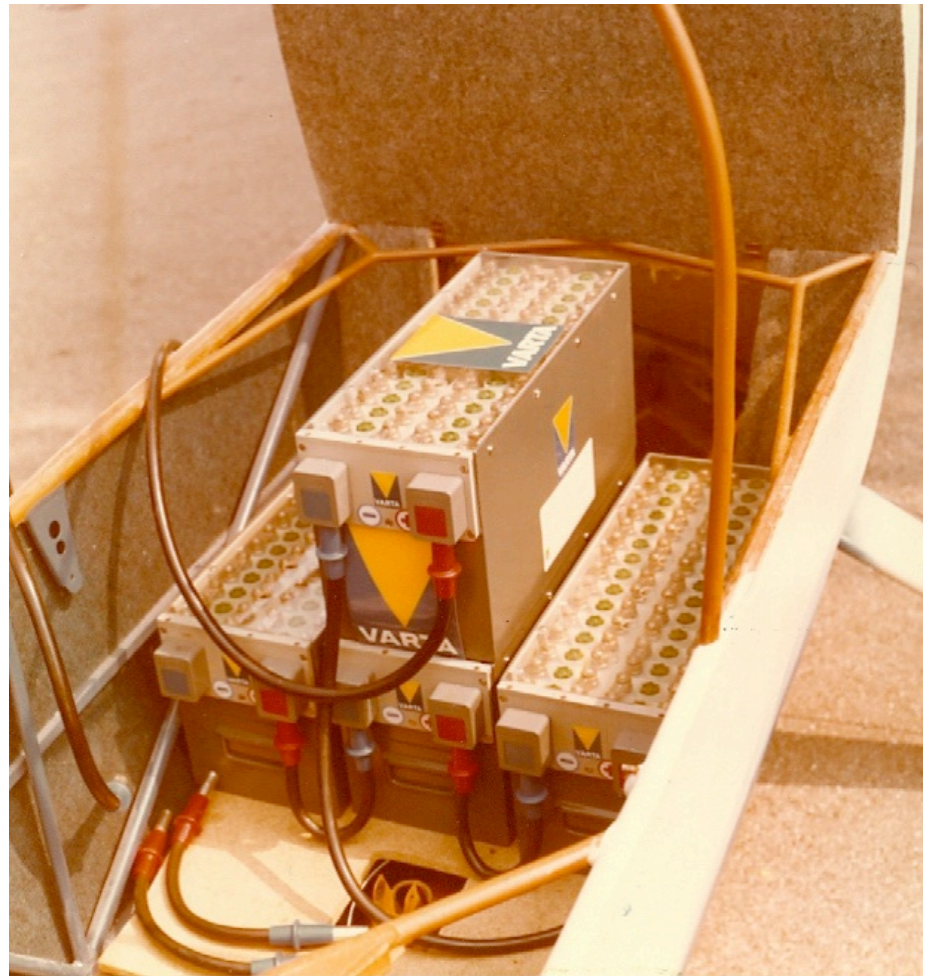


**Original Photo 1973**



With the support of the Aviation section at the FH-Johanneum University of Applied Sciences in Graz, Austria, the MB-E1 was reconstructed and restored in 2017. It is anticipated that the aeroplane will be exhibited at the Austrian Aviation Museum Graz-Thalerhof ([www.luftfahrtmuseum.at](http://www.luftfahrtmuseum.at)) from May 2018.

about 9 minutes and achieved an altitude of 300 metres. Several flights of approx. 15 min duration followed. This trial demonstrated, even then, that manned electric flight is possible. While electric model flying continued to progress due to constant new developments with the models themselves, batteries and motors, the increased weight and short achievable flying times meant large planes failed to catch on in the following years.



**Original battery pack**



**Team of Aviation section at the FH-Johanneum University of Applied Sciences in Graz, Austria, restored the MB-E1**



After his successful first flight on 21<sup>st</sup> October 1973, Fred Militky wrote:

*"With the accomplishment of the MB-E1 project, it was possible to prove that an aircraft heavier than air can be flown while carrying electric energy. It is up to battery manufacturers whether they will be able to produce even better batteries that are also lighter and will make electric flying accessible to a wider public, at least in the field of amateur flying".*

## Specifications

Type:	HB-3A
Wingspan:	12 m
Length:	7 m
Wing area:	14.22 m <sup>2</sup>
Aspect ratio:	10.11
Flying weight:	440 kg
Surface load:	31 kg/m <sup>2</sup>
Power unit:	Bosch series motor
Voltage:	80 V
Power:	8000 Watts
Motor speed:	2400 rpm
Power unit weight:	33 kg
Battery:	VARTA, steel battery with sintered plates (120 cells)
Static thrust	28 kp

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<https://www.fai.org/commission/ciam>

Electric manned flying 1973

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**MB E1 Heinrich Brditschka AUT**  
**Author Heimo Stadlbauer with Hi-FLY**  
**designed by Fred Militky 1972**