Man

powered flight
advances
The series of competitions organised by the Royal Aero-nautical Society for the Henry Kremer prizes are generating new standards of low-speed efficiency. Ron Moulton reports.

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his summer, German air show spectators can again look forward
to a novel treat. It is silent, comparatively slow, and never lifts above 25ft altitude. Last year each roar of applause that greeted its finale was more for the athleticism of the pilot than for the remarkable achievement in low-speed manoeuvrability, but the public demon-strations of Musculair by Holger Rochelt represented another breakthrough in the design progress of man powered aircraft. Typically, Rochelt lifts from a hard-board strip laid over the grass. He flies Musculair, the machine he and his father made in three months, out over the airfield, makes a 180° turn and returns to the parking area, freewheeling to the softest and slowest of landings. So impressive and seemingly effortless are these public displays that, last October, Holger was persuaded to fly his young sister Katrin as the world's first MPA passenger. Her weight was equal to that of the empty airframe, 621b. Musculair has also collected the £10,000 Kremer prize for completion of the figure of eight chal-lenge, and currently awaits confirmation of a claim for a £5,000 Kremer Speed Competition prize as world record holder in FAI class IC. All this from a standing start in April 1984, and not entirely with-out incident or competition.

Since the first successful man powered flight 50 years ago at Frankfurt by Junkers engineers Haessler and Villmger with their "Mufli", more than 40 diverse MPA designs have become airborne. Among those which have made news in the UK are the Southampton University Sumpac, the Hatfield Puffin, the Roper/ RAF Jupiter, and the HPA Toucan.

Bionic Bat's concentric pusher propeller is driven at a ratio of 2 • 7:1 for an average of 245 r.p.m. The 55ft-span aircraft weighs 72ib

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