

flight conditions being equal it will out distance the pilots flying on such gliders as the Brege-905, K-6 Mukha-Standard.

The geometric dimensions are given in fig. 3. Its flight weight is 260 kg. The pilot is provided with a series pack parachute PNI-45. Permissible towing speed: behind an aircraft — 140 km/hr., and with the aid of an auto-winch — 100 km/hr. Maximum speed of flight by strength conditions — 250 km/hr. Reserve of strength — 9. Most convenient speed: without brake flaps — 84 km/hr., with brake flaps — 69.3 km/hr. Minimum speed — 65.2 km/hr., landing speed — 61.5 km/hr.

Structurally the glider represents an all metal cantilever high-wing monoplane. The laminary wing has air brakes, assuring limitation of maximum speed of gliding, narrowed down calculation for landing and reduced run.

Fuselage is of full monocoque type. The form of the fuselage and its combination with the wing are selected with consideration of obtaining minimum drag.

The canopy of the cockpit is made entirely of organic glass sheet, without joints, which aids in retaining the laminary boundary layer in the forward part of the fuselage. Cockpit ventilation assures the canopy from sweating in flight at low temperatures.

The glider has a wheel with tire situated in front of the CG. The wheel has no shock absorbers and is provided with an outer brake arrangement controlled by the air brake handle. Such combination of simultaneous brake effect in an aerodynamic mechanical manner frees the pilots from necessity of concentrating his attention during the landing in manipulating with two brake handles.

The glider constructors have very originally solved the problem of trimmer effect without trimmers on the rudders. This arrangement assures balancing of the glider by the force applied to the control handle at speeds ranging from 70 to 150 km/hr, i.e. in the entire range of operational flight speeds. Furthermore, this arrangement offers the possibility to an insufficiently experienced pilot to avoid entry into greater instantaneous overloads. The mechanism is mounted in the control handle and its utilization in flight will create no difficulties to the pilot.

Empennage of the glider is V-shaped. It has a fastening, assuring its rapid assembly and disassembly (folding).

The cumulative control mechanism is structurally simple, exploitation accesses to it are convenient.

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Technologically the wing is divided into five sections, its construction allows it to have a minimum number of difficulty accessible places.

The aileron and control of same are made so, that at maximum deviations its front section doesn't go beyond the contour of the wing. Aileron suspension is realized in three points, of which two can be shifted in direction of rotation of aileron shaft, and one the root one is stationary.

Control of ailerons and aerodynamic brakes is made in such a manner, that during the disassembly and assembly of the glider its control is not disturbed.

The towing hook is situated in the nose section of the glider, self release (unhooking) is realized in case of applying a force under an angle of 60°.

The canopy is opened from inside and outside and also has an emergency release.

The instrument board calls for the mounting of the following equipment: speed indicator US-250, climb indicators VR-5 and VR-10, electric small scale gyro-horizon, Magnetic compass KI-13, oxygen indicator IK-18, altimeter VD-10.

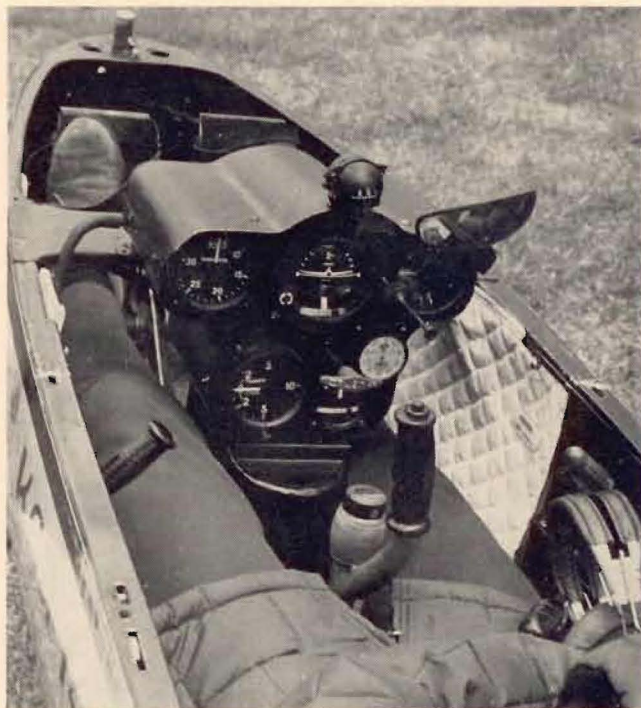


Photo by Werner Huebner

Cockpit of the KAI-14 showing instrument console.

In the center part of the glider behind pilot seat are situated the following units of equipment: storage battery consisting of two blocks, put together of STSS-15 type batteries, transformer PAG-Ig, barograph AD-2, oxygen instrument KP-18, 0.7 liter capacity oxygen balloon, thermos for feeding the pilot with feeder tube running in cockpit.

Mounting of a small scale ultrashortwave radio station is possible.

The cockpit has pockets for sanitary equipment.

KAI-17 GLIDER

The KAI-17 glider is a twin seater of all metal construction. It is intended for use in glider circles and at glider stations for initial training. The employment of this glider assures young sportsmen with an easy change over into piloting of gliders of more complex type.

Starting of the glider is possible by a motor winch or by towing behind an aircraft. This glider can execute deep spirals and spins.

General view of the glider is given in fig. 4 and the geometrical dimensions in fig. 5. The glider is equipped with the necessary instruments for soaring under simple meteorological conditions. The instrument board is situated only in the forward cockpit and is easily viewed from the rear cabin, where the instructor is situated. The instrument board accommodates the following equipment: speed indicator US-250 climb indicator VR-10.

Cabin construction provides for the possibility of seating the pilots with series pack parachutes. The