

The Czech Chipmunk

The Zlin Trener 6 had many virtues and a few quirks, but it made life too easy for the student says David Ogilvy



Taking second place in the British Lockheed Trophy aerobatic contest at Coventry in 1956, the Zlin 226 Trener 6 from Czechoslovakia made quite an impact in the UK and I was fortunate to be invited to fly it shortly after that success. The opportunity came through the then Association of British Aero Clubs and Centres (one of the two organisations that joined forces to form today's UK AOPA) when I was CFI at Elstree. I was introduced to the machine by Jiri Blaha, who had flown OK-JEB so effectively in the competition.

The Trener 6 was one of a long series of

similar designs, with increased power and several internal refinements compared with its predecessors. The engine was the Walter Minor 6-111, an inverted six-cylinder in-line that generated 160hp at 2500rpm, which gave a smarter climb performance than that of its British contemporary – the DHC-1 Chipmunk. The Czech's airframe was relatively straightforward, of metal construction, with stressed-skin wings but, surprisingly, a fabric-covered fuselage. Access to all parts for inspection purposes was easy.

The pre-flight walk-around revealed

several useful features, including the cantilever oleo undercarriage units with oil and grit-protecting rubber hose over the extendable parts. The ailerons had adjustable mass balances and all flying controls possessed ground-set trim tabs. The anti-shim tailwheel steered with the rudder.

Access to the tandem cockpits was via walkways on both sides; the Zlin was flown from the rear seat. Once aboard, the layout appeared reasonably conventional, with throttle and mixture controls on the left wall, below which was an elevator trimmer that subsequently proved to be too small, very



Photos via Phillip Jarrett

Left: the Zlin was flown solo from the rear seat and could not be started from the front
 Above: Zlin 126 – the only visible difference from the 226 was the lack of a tow hook
 Below: OK-JEB, the Zlin Trener 6 used by the author for this flight test in 1956



restricted in travel and too sensitive – one of the machine's few adverse qualities. By contrast, on the bonus side there was a lever on the left for seat adjustment. The instrument panel was neat and well damped, but smaller than its standard British counterpart, as were the instruments themselves; not surprisingly these were graduated in metric figures. A small but clear American-style floating compass had a grid ring for easy comparison between the reading selected and the one actually maintained. Under the coaming on the left side the fuel selector control was marked

'Shut', 'Tank' and 'Reserve', to control a capacity varying between versions from 115 litres (25 gallons) to 80 litres (17.6 gallons). The cruise consumption of seven gallons per hour provided a worthwhile range and endurance.

It was possible to start the Trener from the rear seat only and the procedure was more complicated than seemed necessary on a basic trainer. There was no parking brake, so the toe pedals needed to be kept depressed even if chocks were used. The electrics master switch was kicked on with the right foot, fuel was selected 'on' and pumped by

hand from the tank to the engine, followed by two or three shots injected with the primer before switching on the US-style ignition key. By this stage, before opening half-an-inch of throttle and pressing the starter button, the need for a third hand had become apparent – to deal with the wobble pump and energising switch, all of which seemed mildly absurd when comparing with the straightforward procedure that gets the Chipmunk into action.

Here the complaints cease. The engine idled at only 400rpm without wanting to stall and taxiing was pleasantly simple, with the



steerable tailwheel doing most of the work. Take-off acceleration was rapid, with 160 horses pulling 818kg (1800lbs) quickly into the air. Following an unstick at about 85km/hr (53mph) the Zlin of the time was soon at the recommended climb speed of 120 (75) with a surprisingly nose-up angle producing a very creditable 1350 feet per minute.

A very pleasant quality was the responsiveness of the ailerons, calling for only the minimum of pressure to generate rapid results. Control harmonisation, though, was not perfect, for the elevators were not quite so lively and in normal turns the large rudder led to a tendency to over-control the back.

At a reasonable height I stalled the Zlin. Full control remained on duty all the way down the

speed range to 78km/hr (48mph) IAS, when a slight dropping of the nose was the only indication that something had gone slightly amiss. If a wing goes down too (and it is reluctant to do so), one had the choice of either rudder or aileron to put matters right. This is a good point aerodynamically and one reflecting sound qualities of design, but bad for a trainer, which should demand both positive and correct action at this stage.

With flaps lowered the stall was delayed down to an indicated speed of 65km/hr (40mph) and again any form of gesture with any convenient control would solve the student's most pressing problem. The spin, too, was not quite as honest as it might have been, for I was recommended to heave the

controls into opposite corners at an airspeed as high as 110km. From this condition the result was most effective and the rate of rotation high, but again the effect was spoiled, for I had barely considered taking recovery action before everything was straight and level. To cut criticism quickly, the Trener not only allowed the pupil to live after misusing the controls at low speeds, but barely made him feel embarrassed; which is bad.

I spent very little time cruising, for there were other things to do. Nevertheless, I found that figures varied between 160km/hr (100mph) at 1900rpm and 200km/hr (125mph) at 2,200 revs. Anywhere within this recommended range the aircraft would sit in position very happily, and the ease of control coupled with an excellent degree of visibility could make lengthy cross-country flights an attractive occupation for anyone.

For the aerobically inclined, the Z.226 came into its own. The plain loop was straightforward, but compared unfavourably with that of the Chipmunk. This surprised me, for although a dive to the recommended IAS of 230km/hr (143mph) produced the right feel initially, some appreciable stick-load was required just before reaching the inverted position. I use the word 'appreciable' only by comparison, for control forces were light at all times, but this seemed to be the least light of all. An additional 20-25km/hr (12-16mph) sufficed for a roll-off, and here one started to benefit from the snappiness of the ailerons, which in themselves were the aeroplane's most praiseworthy possession. One could roll off gently with full feel of control all the way, or with the stick tucked into the cockpit corner the result must have appeared almost like a flick manoeuvre. Again, I fear, the rudder seemed to give me a minor spot of trouble, but I was prepared to accept this as my personal shortcoming.

Very few light aeroplanes roll pleasantly, and until making friends with the Zlin Trener I had always considered the Chipmunk to be almost alone in its ability to go all the way round in ease and comfort. However, here we really have something, for the Zlin's ailerons are the nicest that I had ever used and any form of rolling evolution could be carried out with a full degree of positive response under any conditions. For something really slow, or of the hesitation variety, the ample supply of rudder that I criticised in earlier manoeuvres enabled the nose to be placed anywhere in relation to the horizon, and this was well demonstrated by Mr Blaha when he flew the Trener across Elstree aerodrome along the length of the runway but with about seventy degrees of bank.

If the human race had been intended to spend anything more than the shortest portions of its life inverted, I am certain that we would have been equipped with something other than a form of gravity-fed blood-pressure systems, while our eyeball attachments would be stressed for tension as well as compression loads. Perhaps Mr Blaha had been 'modded' accordingly, for after take-off on one demonstration he casually rolled the Zlin onto its back and climbed round the circuit that way to nearly two thousand feet. There he stayed for a while before rolling out, then giving the impression that he was testing the machine to find out whether it would work the right way up, too.

After a high pressure session of aerobatics that could be continued *ad infinitum* without any loss of height, I lowered OK-JEB a few feet into the circuit and prepared for landing. The

Above: excellent undercarriage damped shocks before they reached the cockpit
Below: large rudder and effective ailerons made roll control a dream



split four-section flaps were extended at about 130 km/hr (80 mph) and the speed over the fence maintained at 120 (75 mph) IAS. This seemed a trifle fast, especially when the stall occurred at little over half this figure, but perhaps my adviser had decided that I should play safe with his valuable possession.

The use of flap caused only a very minor trim-change and the approach, like that of the Chipmunk, was not quite as steep as it should have been. Again, like so many other light types, the trim range was not quite adequate, for a slight backward stick pressure was required all the way in.

Landing was quite easy. The comparatively flat approach and the well-extended tailwheel made the round-out to the three-point attitude a comparatively gentle exercise, and the movement required was about the same as on a Magister when not using flaps. The touchdown, like the unstick, was not as solid as I would have liked, but against this one must credit the undercarriage with damping all shocks long before they reached the cockpit. This applied even on really rough and uneven ground.

Conclusions

Any assessment of an aeroplane must be a critical one, and intentionally I have not spared the words when harsh ones were needed. I hope the impression gained of my feelings is not in any way derogatory, for from a purist's flying angle I enjoyed every second from the time I entered the cockpit to the time I stepped out. It is from the operator's viewpoint, considering the Zlin as a training aeroplane, that any guns were fired; for, as always seems to be the case, the most pleasant aeroplanes to handle are frequently not the best for their specific jobs.

To be quite frank, I was very impressed by the Z.226 as a flying machine but (as with so many elementary trainers) it was too easy to fly. I place our Chipmunk in the same category, for both suffer from an innocuous stall, both are too easy to land, and both could easily



Above: Jiri Blaha rolled inverted on take-off and climbed through the Elstree circuit to 2,000 feet brown-side-up before casually turning the Zlin wheels earthwards

temperature gauge. On the credit side, however, the cockpit was much neater and more comfortable than the Chipmunk, the view was better, the controllable tailwheel saved considerable use of brakes, and the excellent power/weight ratio made 'time to height' something virtually to be ignored when planning the length of a lesson. The main feature, of course, was the ability

to continue functioning when inverted. On the whole though, I prefer the home product, although it may be unfair to compare impressions from one flight with those gained during a few hundred hours on another.

I have used the past tense throughout this attempt to analyse the pros and cons of this interesting machine, for, as far as I have established, no specimen of the Zlin Z.226 has survived – but memory has remained alive. ■



lead to over-confidence with certain types of student. The tendency to put even an inexperienced pilot into an aerobic attitude of mind may well be a good one, but how much more a student appreciates his limitations when struggling to roll a Tiger Moth.

Functionally I liked the Zlin. Quite inexcusable, however, was the absence of a parking brake; starting was unnecessarily complicated and could not be carried out by both instructor and pupil, and I should have given preference to either an artificial horizon or directional gyro rather than an oil

Stylish brochure for the Z326, which appeared in 1956; it differed from the 226 by having a slightly increased wingspan, fewer cockpit canopy frames, a slightly larger rudder and an electrically operated undercarriage

