



USER MANUAL and PRODUCT INFORMATIONS

Pannon Wings Design Team

Zlín Z-142

for MS Flight Simulator X
and Prepar3D v2.3





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History

This series of two seat trainers and four seat light aircraft was initially developed to replacement for the successful Zlin Trener.

The initial Z 42 was developed during the mid 1960s and seats two side by side. It flew for the first time on October 17 1967. The improved Z 42M meanwhile introduced a constant speed propeller and the larger tail developed for the Z 43 four seater, and replaced the Z 42 in production in 1974.

Development of the two seat line continued with the further improved Z 142, which flew for the first time on December 29 1979. Changes introduced included a larger cockpit canopy and faired undercarriage. The Z 142 remained in production in Z 142C form to the mid 1990s. The latest two seater of this family to be developed is the 150kW (200hp) Textron Lycoming AEIO360 flat four powered Z 242 L.

Changes aside from the engine include a three blade constant speed prop and revised engine cowling profile. First flight was on February 14 1990.

Development of the four seat models, the Z 43 and Z 143, has followed that of the two seaters. The Z 43 appeared a year later than the Z 42, flying for the first time on December 10 1968. The Z 42 and Z 43 share the same basic airframe, but differ in that the Z 43 features a larger and wider cabin with seating for four, and a more powerful engine. The current Z 143 L flew for the first time on April 24 1992, and is similar in structure to the Z 242, but again differs in having a larger cabin with seating for four and a more powerful Textron Lycoming O-540 engine.

Powerplants

Z 142 - One 155kW (210hp) Avia M 337 six cylinder inline inverted piston engine driving a two blade propeller.

Performance

Max speed 235km/h (127kt), cruising speed 170km/h. Initial rate of climb 690ft/min. Range with max fuel 1100km (595nm).

Weights

Empty 730kg, max TO 1090kg.

Dimensions

Wing span 9.16m, length 7.33m, height 2.75m.
Wing area 13.15m².

Capacity

Seating for two in tandem in Z 42, Z 142 and Z 242.

Production

Total production includes more than 350 142s, approx 40 Z 242 Ls and 35 Z 143s, including military orders.



Installation

Unzip setup_pwdt_z142.exe to a temporary folder. Run the executable and follow the instructions.

When its done, the aircraft will be successfully installed onto your MS FSX folder.

Our product are compatible only with MS Flight Simulator X with Acceleration Service Pack. Previously versions not tested!

About FSX/P3D modell

The exterior model contains 85.129 polygons, lot of custom animations and special 3D modeled gauges.

Textures comes with specular and bump map features, his resolution trying to keep the high frame rates - but the quality remain as good as possible.

Custom sounds included, recorded from real Zlin aircrafts.

The flight model is very accurate, tested by real Z-142 pilots and instructors.

In this pack you can find 9 various paint versions, plus one fully white for the talented repainters.

LOD models are *not* included.

FS2004 version is *not* planned.

Known bugs

- Undefined yet.

Version

This is the V1.0 for FSX Acceleration / Prepar3D v2.3.





Cockpit familiarization (Model 1)



- | | |
|--------------------------------|--------------------------|
| 1. Airspeed indicator | 20. Clock |
| 2. Attitude indicator | 21. Tachometer |
| 3. Variometer (in m/s) | 22. Radio |
| 4. Altimeter (in meters) | 23. ADF |
| 5. Gyroscopic compass | 24. Ignition switch |
| 6. ADF gauge | 25. Main switch |
| 7. Combined gauge | 26. Throttle arms |
| 8. Cylinder temp | 27. Starter knob |
| 9. Manifold pressure | 28. Mixture knob |
| 10. Slip indicator | 29. Prop adjust |
| 11. Fuel tanks | 30. Compressor switch |
| 12. G-force gauge | 31. Parking brake |
| 13. Volt/Amper gauge | 32. Fairings ON/OFF |
| 14. Hour counter | 33. AZS switch table |
| 15. Magnetic compass | 34. Fuel switch |
| 16. Generator lamp | 35. Flaps arm |
| 17. Low fuel lamp (left tank) | 36. Elevator trimm wheel |
| 18. Low fuel lamp (right tank) | 37. Rudder trimm wheel |
| 19. Pitot heat control lamp | 38. Canopy latch |
| | 39. Curtain (L/R side) |

- | | | |
|----------------|------------------|-----------------------|
| A. Accumulator | E. Instruments | I. Strobe light |
| B. Generator | F. Pitot heat | J. Nav lights |
| C. Starter | G. Landing light | K. Attitude indicator |
| D. Radio | H. Taxi light | |





Cockpit familiarization (Model 2)



- | | |
|--------------------------------|--------------------------|
| 1. Airspeed indicator | 20. Clock |
| 2. Attitude indicator | 21. Garmin GPS |
| 3. Variometer (in m/s) | 22. Bendix/King Radio |
| 4. Altimeter (in meters) | 23. Transponder |
| 5. Gyroscopic compass | 24. Ignition switch |
| 6. Tachometer | 25. Main switch |
| 7. Combined gauge | 26. Throttle arms |
| 8. Cylinder temp | 27. Starter knob |
| 9. Manifold pressure | 28. Mixture knob |
| 10. Slip indicator | 29. Prop adjust |
| 11. Fuel tanks | 30. Compressor switch |
| 12. G-force gauge | 31. Parking brake |
| 13. Volt/Amper gauge | 32. Fairings ON/OFF |
| 14. Hour counter | 33. AZS switch table |
| 15. Magnetic compass | 34. Fuel switch |
| 16. Generator lamp | 35. Flaps arm |
| 17. Low fuel lamp (left tank) | 36. Elevator trimm wheel |
| 18. Low fuel lamp (right tank) | 37. Rudder trimm wheel |
| 19. Pitot heat control lamp | 38. Canopy latch |
| | 39. Curtain (L/R side) |

A. Accumulator	E. Instruments	I. Strobe light
B. Generator	F. Pitot heat	J. Nav lights
C. Starter	G. Landing light	K. Attitude indicator
D. Radio	H. Taxi light	





Standard Procedures

Before engine start:

- Check fuel quantity
- Check METAR datas
- Close the canopy
- Check all switches and arms in OFF position
- Check control stick free moving
- Pull control stick fully back

Engine start:

- Toe brakes PUSH
- Fuel switch ON (1.L) **(33)**
- Switch ON these AZS **(32)**
 - Accumulator **(A)**
 - Generator **(B)**
 - Starter **(C)**
 - Flight Instruments **(E)**
- Compressor ON (fully forward) **(30)**
- Prop minimum (fully forward) **(29)**
- Main switch ON **(25)**
- Ignition ON - 1+2 **(24)**
- Throttle push forward ~4-6 cm **(26)**
- Starting knob PUSH **(27)**
- Radio AZS switch ON **(32 - D)**
- Strobe & Nav lights - as required **(32 - I, J)**
- Set altimeter QNH or QFE **(4)**

Taxi:

- Control stick fully backward
- Do not taxi over 20km/h

Take off:

- Set flaps to position 1. (Take off) **(34)**
- Check Compressor ON (fully forward) **(30)**
- Check prop at minimum (fully forward) **(29)**
- Throttle slowly forward to maximum **(26)**
- Take off at ~90-95km/h

Climb:

- Set throttle to 1,0 kPa **(26) (9)**
- Set RPM to 2500 **(29)**
- Set flaps to neutral **(34)**
- Climbing speed at 140 km/h

Cruising:

- Set throttle to 0,8 kPa **(26) (9)**
- Set RPM to 2350 **(29)**
- Set Compressor OFF **(30)**
- Cruising speed at 170-175 km/h

Landing:

- Set throttle to minimum **(26)**
- Reduce speed to 140 km/h
- Open flaps to position 2. (Landing) **(34)**
- Set prop to minimum (fully forward) **(29)**
- Set Compressor ON **(30)**

Engine stop:

- Switch Radio, Nav lights and Strobe OFF **(32 - D, I, J)**
- Set ignition switch to 0 (OFF) **(24)**
- All remain arms and knobs set OFF



Aerobatic manoeuvres

About permitted aerobatic manoeuvres you'll find a table with corresponding speed limits above your head on the canopy.



Climbing turns	220 km/h (119 Kts)
Side-slipping	130 km/h (70 Kts)
Dive.....	140 km/h (76 Kts)
Spin	110 km/h (59 Kts)
Looping	240 km/h (130 Kts)
Roll.....	180 km/h (97 Kts)
Immelmann turn.....	250 km/h (135 Kts)
Half roll & dive out.....	150 km/h (81 Kts)
Stalled turn.....	180 km/h (97 Kts)
Inverted flight	200 km/h (108 Kts)
Inverted turn.....	200 km/h (108 Kts)
Inverted loop (inverted).....	260 km/h (140 Kts)
Inverted loop (normal).....	110 km/h (59 Kts)
Inverted spin	140 km/h (76 Kts)

WARNING!

Aerobatic permitted only with 1. L (Left) fuel tank selector!

Maximum G-load during aerobatics flying +6 / -4 G

Aerobatics prohibited if auxiliary tank filled!



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Flight dynamics: Bence Benedek & Tibor Kókai

Sounds: Tibor Kókai

Documentation: Tibor Kókai

We would like to thank to all of our friends, supporters and everybody whom helped us for make this aircraft available in Flight Simulator X / P3D.

Licence agreement

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