

SebArt professional line

PC-21 XL 2.2m ARF scale

ASSEMBLY MANUAL

The real plane

Pilatus developed the next generation trainer the PC-21 to train the next generation of military pilots.

The new PC-21 provides a low-cost and effective training platform for pilots destined to fly jet fighters. Pilatus expanded the design and performance envelope to take this single engine turboprop into an area that was previously the domain of jet aircraft.

The PC-21 far surpasses all other turboprop trainers in terms of aerodynamic performance, cockpit equipment, flexibility and ease of maintenance. The use of state-of-the-art technologies increases both the efficiency and quality of training.

Specifications:

Year Built: 2002

Primary Function: next generation military trainer

Length: 11,23 m (36' 11")

Wingspan: 9,10 m (29' 11")

Weight Empty: 2.280 kg (5,026 lbs.)

Max. Speed: 624 km/h (337 mph)

Engine: Pratt & Whitney PT6A-68B turboprop engine

Horsepower: 1,600 hp

The model

The ***PC-21 XL 2.2m ARF scale***, was designed by the 15 times Italian Champion Sebastiano Silvestri, vice-European Champion and two times F.A.I World Cup winner F3A.

This professional ARF kit is the result of Sebastiano's long research, experience in F3A and his passion for scale planes. This combined with an extremely light weight structure and with some aerodinamical tricks give the ***PC-21 XL 2.2m*** an impressive precision and easy control at any airspeed and flight condition.

The ***PC-21 XL 2.2m*** can do it all... it can start and land very easy on grass surface and with the factory installed light system, doors and landing gears it looks very scale on ground and in the air.

The ***PC-21 XL 2.2m*** is ready for any pattern manouvers as for unbelievable easy knifeedge flights, loops, rolling circles, spins... and almost anything else you can dream up from a scale plane are waiting you!

.....the only aerobatic-fun limit is your fantasy!

Specifications:

Wing Span:.....210 cm
Length (with spinner):.....236 cm
Wing Area:.....90 dm²
Weight (electric version):.....9.500g. RTF less power battery
Radio:.....9-Channel with 8 servo digital MG + 2 mini servos

Recommended power set up:

Motor:..... Hacker Q80-8M
ESC:.....Hacker Jeti spin pro 175 opto
Propeller:APC 22x12WE
Battery:(12S) 2 lipo pack 5000-6S

Required radio, motor and battery

Radio equipment:

- Minimum 9-channel radio system
- 6 standard servos for elevators, ailerons, rudder, steering (JR PROPO DS8411)
- 2 servo for flaps (JR PROPO DS8911)
- 2 mini servo for front gear doors (JR PROPO DS3401)
- set extension for Pilatus XL / Avanti S 2.2m

Recommended electric motor for best performance:

- Hacker Q80-8M + JETI Spin 175 OPTO controller + APC 22X12WE

Recommended Li-Po battery pack for best performance:

- (12S) 2 lipo packs 5000mAh 6S or 5800mAh 6S

Additional required tools:

- Drill
- Drill bits: 1,5mm
- Phillips screwdriver
- Hobby knife
- Sanding paper
- Masking tape
- Soldering iron

Additional required adhesives:

- thin CA
- medium CA
- epoxy 5minutes
- epoxy 20 minutes
- silicon

Warning

This RC aircraft is not a toy!

If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably in official flying sites, following all instructions included with your radio and motor.

Before starting assembly

Before starting the assembly, remove each part from its bag and protection for a prior inspection. Closely inspect the fuselage, wing panels, rudder, and stabilizer for damage. If you find any damage or missing parts, contact the place of purchase.

If you find any wrinkles in the covering, use a heat gun or covering iron to remove them. Use caution while working around areas where the covering material overlap to prevent separating the covers.

Warranty information

SebArt guarantees this kit to be free from defects in both material and workmanship at the date of purchase.

This warranty does not cover any parts damage by use or modification, and in no case shall SebArt's liability exceed the original cost of the purchased kit.

Further, SebArt reserve the right to change or modify this warranty without notice. In that SebArt has no control over the final assembly or material used for the final assembly, no liability shall be assumed or accepted for any damage of the final user-assembled product. By the act of using the product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

RADIO SET UP

We recommend to use and install the **Power Box Cockpit SRS** combined with the **I-GIRO Power Box** and 2 lipo battery packs at least of 2800-2S for receiver.

Flaps:

We recommend to use flaps down for starts and landings to make them shorter and easier.

- ✧ Activate the FLAP function in your radio.
- ✧ For start use approx. 30° flaps down and mix 10% elevator down
- ✧ For landing use approx. 60° full flap down and mix 20% elevator down

Control throws

- **For the AILERON** we recommend the following throws:

Use approx. 10% aileron differential (more up) for normal flight.

High rate:	30° left & right	
Normal flight:	D/R: 60%	Expo: 10%
Snap, knife edge loop:	D/R: 100%	Expo: 40%
Start & landing:	D/R: 100%	Expo: 40%

- **For the ELEVATOR** we recommend the following throws:

High rate:	35° up & down	
Normal flight:	D/R: 50%	Expo: 40%
Snap, knife edge loop:	D/R: 100%	Expo: 80%
Start & landing:	D/R: 100%	Expo: 80%

- **For the RUDDER** we recommend the following throws:

High rate:	35° left & right	
Normal flight:	D/R: 80%	Expo: 20%
Snap, knife edge loop:	D/R: 100%	Expo: 60%
Start & landing:	D/R: 100%	Expo: 60%

Note: the Expo is (+) for JR systems, and (-) for Futaba systems.

Mixing

We recommend the following mix (if you have a programmable computer radio):

- ***Rudder → Elevator UP***

full rudder to the right, the elevator have to go up (positive) approx. 14%

full rudder to the left, the elevator have to go up (positive) approx. 14%

- ***Rudder → Ailerons***

full rudder to the right, the ailerons have to go left approx. 8%

full rudder to the left, the ailerons have to go right approx. 8%

Recommended Center of Gravity

The recommended CG is **210mm** behind the leading edge of wing.

Pre-flight

Never attempt to make full throttle dives! This model have to be flown like a full-scale airplane. If the airframe goes too fast, such as in a high throttle dive, it may fail. Throttle management is absolutely necessary.

Range test your radio

- ✓ Before fly, be sure to range check your radio as manufacturer's instruction manual of you radio-system recommend.
- ✓ Double-check all controls (aileron, flaps, elevator, rudder and throttle) move in the correct direction.
- ✓ Be sure that your motor battery pack is fully charged, as per the instructions included with your batteries and that your radio is fully charged as per its instructions.

Finally... have nice flights!

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