SebArt *professional line*

PC-21 50E 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 50E*** *ARF scale,* was designed by the 13 times Italian Champion Sebastiano Silvestri, vice-European Champion and 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 many small aerodinamical tricks give the ***PC-21 50E*** an impressive precision and easy control at any airspeed and flight condition.

The ***PC-21 50E*** can do it all… it can start and land very easy on grass surface and with the factory installed doors and landing gears it looks very scale on ground and in the air.
The ***PC-21 50E*** is ready for any pattern manouvers as for unbelievable easy knifeedge flights, loops, rolling circles, torque rolls... 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:……..…….....151 cm
Length:….....…….....…166 cm
Wing Area:…….....46 dm2
Weight:…….....3.000g. RTF less battery
Radio:.....5-Channel with 2 standard + 2 low profile servos

Recommended power set up:

Motor:..... Hacker A50-14S
ESC:….....Hacker Master Basic 70 SB

Propeller: ….....…….....APC 16x8E
Battery: ….....…4000-5S or 4500-5S
Required radio, motor and battery

Radio equipment:
- Minimum 6-channel radio system
- 2 standard servos for elevator and rudder (JR PROPO DS8301)
- 2 low profile wing servos for ailerons (JR PROPO DS9511)
- 2 servo extension 400mm, for rudder and elevator servos
- 2 servo extension 100mm, for aileron's servos

Recommended electric motor for best performance:
- Hacker A50-14S + X70 SBec-Pro controller + APC 16x8E

Recommended Li-Po battery pack for best performance:
- 4000mAh 5S or 4500mAh 5S

Additional required item, tools and adhesives

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

Adhesives:
- thin CA
- medium CA

Warning

This RC aircraft is not a toy!

If misused, it can cause serius 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 assebly, 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 garantees 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

Electric landing gear

The factory assembled doors, landing gears and steering wheel servo are ready for use.

- ✧ Connect the 3 landing gear leads with the hardware provided triple "Y"
- ✧ Let gears work with channel 5-GEAR on your favorite switch on your radio.
- ✧ Use a standard setting Travel Adjust on gear channel (+100% to -100%).

- ✧ Connect the steering wheel servo lead with an “Y” with rudder servo, or (better) use an extra channel just for the steering wheel function mixed with rudder, that will activate only with landing gear out.

Flapperon

We recommend this function to do your starts and landings shorter and easier.

- ✧ Activate the FLAPPERON function in your radio.
- ✧ Use two separate channels to let work the two aileron servos , as per your radio’s instruction manual.
- ✧ Use flaps 60% down, both ailerons 20mm down.
- ✧ Combine with flaps down an aileron differential of 60% (more up).

Control throws

 For the AILERON we recommend the following throws:

High rate:	30° left & right	
Normal flight:	D/R: 40%	Expo: 40%
Snap, knife edge loop:	D/R: 100%	Expo: 70%
Start & landing:	D/R: 100%	Expo: 20%

 For the ELEVATOR we recommend the following throws:

High rate:	30° up & down	
Normal flight:	D/R: 40%	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:	30° left & right	
Normal flight:	D/R: 80%	Expo: 40%
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. 12%
full rudder to the left, the elevator have to go up (positive) approx. 14%

- ***Use 30% aileron differential*** (more up) for normal flight.

Recommended Center of Gravity

The recommended CG is **150mm** 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, 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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