



TECNAM

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TECNAM

Cockpit and flying guide

FS2010

Bartolini Air

Plenty-ten

This Tecnam P2010 Cockpit and Flying guide has been produced to make getting acquainted with your new Tecnam, both simpler and more fun. To this end, this is not an “official” pilot’s manual and should not be considered such.

The Tecnam P2010 is one of the new generation light aircraft from Costruzioni Aeronautiche Tecnam and the drawing board of legendary designer, Luigi “Gino” Pascale. With typical Italian flair for design, this nimble, sleek performer has all the visual hallmarks of a thoroughbred sports GT car.

Built from Carbon Fibre composite materials, the fuselage is devoid of rivets and panels being a sleek, glossy masterpiece of flowing lines and shapes. This is married to strong, light metal wings and empennage to give an immensely strong, durable airframe. The empennage has an all-flying stabilator instead of the conventional elevator and tail-plane arrangement. This produces stability in flight and the handling of the P2010 is, as a result, very stable and predictable.

Ground handling is assisted by a fully-castoring nose-wheel that can be swung a full 90 degrees for maneuvering in tight spaces. The turning circle of the Tecnam is extremely small.

Up front is a powerful Lycoming 6 cylinder IO390-C3B6 engine developing 215 hp @ 2,700 r.p.m. This gives effortless climb and cruise performance while remaining extremely fuel efficient. The Lycoming IO390-C3B6 enables the P Twenty-Ten to climb at 1,100 ft/m and cruise on 75% power at 146 kts. The IO-390-C3B6 is coupled with a 3-blade, variable-pitch propeller.



TECNAM P2010

LEADING PARTICULARS

(details may change depending on year and modifications. Many examples were modified to bring them up to modern standard.)

Wings:

Wing span: 33ft. 10ins. (10.3m)

Wing area: 149.6 ft² (13.9 m²)

Fuselage:

Monocoque Composite/Alloy

Length: 26 ft 2 in (7.97 m).

Height: 8 ft 8 in (2.64m)

Airfoil:

NACA 63A

Fuel capacity 55.5 U.S. gallons (240 liters) in two tanks, one in each wing.

Power Plant:

One Lycoming IO-360 180-hp or IO-390 215-hp four-cylinder horizontally-opposed air-cooled engine driving 2-blade fixed pitch or 3-blade variable pitch propeller.

Performance IO-390 engine:

Maximum speed: 165 kts

Cruising speed: 148 kts

Landing speed: 65-70 kts

Rate of climb: 1,040 fpm

Service ceiling: 15,000ft (4,572 m)

Cruising range: 597 n/miles (1,106km)

Takeoff run: 1,083 ft (330m)

Landing run: 778ft. (237m)

Accommodation:

Enclosed cabin seating for Pilot and 3 passengers.

Entry doors both sides and one rear door on right side.

External Baggage compartment accessed through door or behind seats.

Baggage Allowance 40 kg

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Inside, the P2010 is all sports car. Beautifully designed Italian leather seats, flowing, one-piece panels and hardly a straight line anywhere. The instrument packages vary from full analogue panel with a choice option of 750 GTN (Flight 1 for those with the software) to a complete Garmin digital suite.

Controls are simple with a central pedestal housing the throttle, propeller and mixture controls and minor switches and levers. Night lighting is excellent with several different options available at a flick of a switch or two.

Everything about operating the P2010 is straightforward and because of this, it is an aircraft favoured by flight schools for training. It is also ideal for people wanting a fast, cost-effective cruiser.

The Tecnam P2010 is a viable competitor to the Cessna 172 and 180 series with very similar characteristics, size and equipment.

The Tecnam P2010 is a very simple aeroplane with few if any vices. With this simulation you have the opportunity to configure the P2010 in several ways. You can select from a variety of liveries of course, but more importantly, you can choose the configuration of the cockpit to suit your taste for traditional “analogue” gauges or the latest digital displays and navigation systems.

On the following page you will find a panel guide for the ANALOGUE panel. The Garmin and GTN750 suites are self explanatory and have their own guides.

Note: It is well-worthwhile obtaining copies of the real-world Garmin manuals to use with these units.



Please note: the Garmin cockpit is only available with certain models. Be sure to choose the correct model before you commence your flight!



ALWAYS REMEMBER TO HAVE YOUR BATTERY SWITCHED ON AND THE AVIONICS MASTER SWITCH KEY PRESSED TO ACTIVATE THE AVIONICS.



Press the small black button switch on the yoke arms to toggle between analogue gauges and the integrated GTN750. You have this option available IN-FLIGHT!



Your Tecnam P2010 comes complete with a fire extinguisher concealed in the floor, under a special panel. Just click the panel to reveal it.

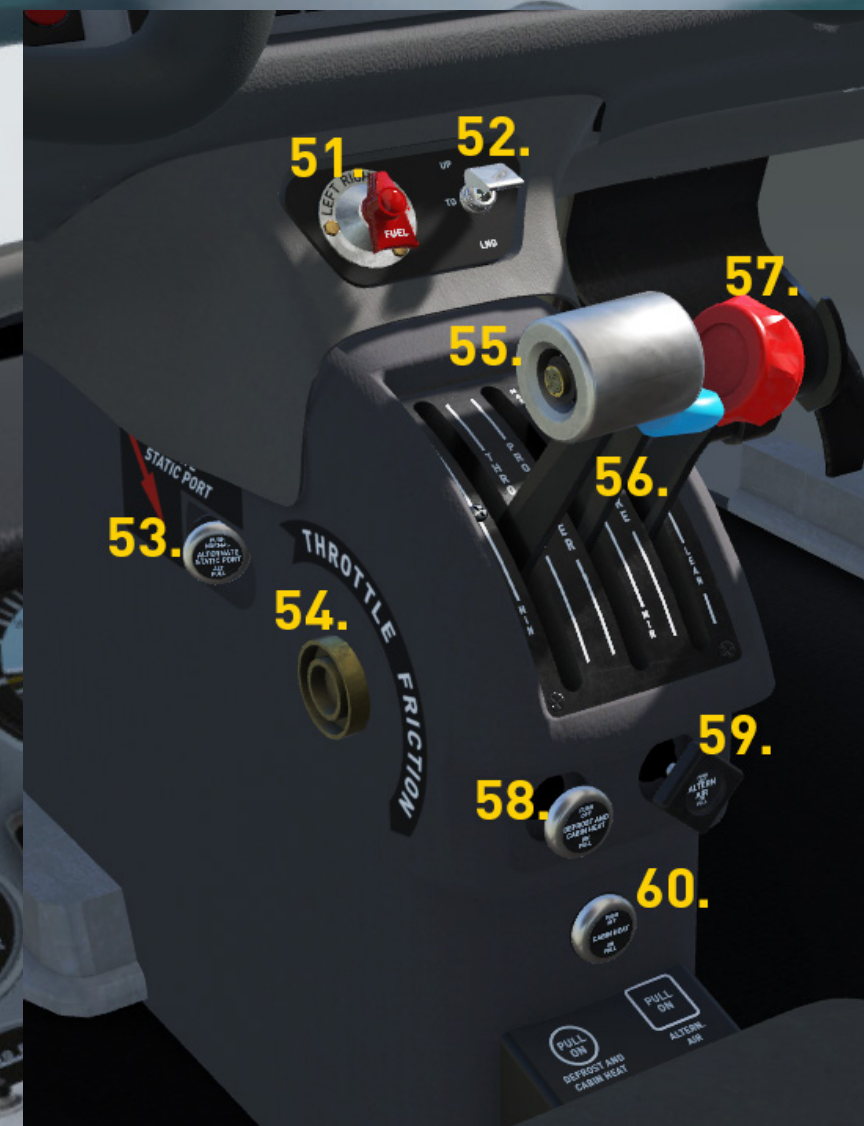


- 41. GNS 430 GPS
- 42. SL30 RADIO
- 43. KR87 ADF RECEIVER
- 44. COMMS/NAV RADIO
- 45. GTX328 TRANSPONDER
- 46. GMA340 AUDIO PANEL
- 47. STECH 55 AUTOPILOT
- 48. AUTOPILOT SWITCH
- 49. GTN750 TOGGLE
- 50. TRIM CONTROL

CLICK ON THE FERRULE AT THE BASE OF THE PILOT'S YOKE SHAFT TO HIDE THE YOKE FOR A BETTER VIEW OF THE INSTRUMENTS AND SWITCHES

1. Compass 2. NAV/GPS Switch 3. Airspeed Indicator 4. Artificial Horizon 5. Altimeter (VSI) 6. OBS 7. Tachometer 8. Manifold Pressure 9. Trim Indicator 10. Chronometer 11. Turn/Slip 12. HSI 13. Gyro Compass 14. RMI (NAV1) 15. Circuit Breakers 16. Generator Amps 17. Flap position Indicator 18. Radio Compass (ADF) 19. Climb/Fall Indicator (VSI) 20. Fuel Contents 21. Cylinder Head Temp. 22. Oil Temp. 23. Oil Pressure 24. Magneto/Starter 25. Master Battery 26. Generator 27. Fuel Pump 28. Avionics Master 29. Toggle Yoke Vis. 30. AutoPilot Master Switch 31. Secure Aircraft (Chocks etc.) 32. Pitot Heat 33. Strobe Lights 34. Nav. Lights 35. Taxi Light 36. Landing Light 37. Instrument Light Dimmer 38. Panel Lights 39. (hidden) Pilot Removal 40. Cabin Lights





- 51. Fuel Tank Selector
- 52. Flap selector switch
- 53. Alternate Static Source
- 54. Throttle friction control
- 55. Throttle
- 56. Propeller Pitch control
- 57. Mixture Control
- 58. Cabin Defrost
- 59. Alternate Air control
- 60. Cabin Heat



REMEMBER TO MAKE SURE THE DOOR LOCK IS MOVED TO "OPEN". OTHERWISE YOU WILL NOT BE ABLE TO OPEN THE DOORS.

UNDER THE HOOD

Your shiny new Tecnam is fitted with a very powerful Lycoming IO-390 series flat-four engine. This thoroughly modern powerplant develops 215 hp - more than enough to give the P2010 true "sports performance" whilst achieving excellent fuel economy for distance cruising.

We have included a highly detailed model of this engine with the exterior model, for a little more fun on the ground. Just touch the engine cover to lift it and reveal that beautiful engine.



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Flying the Tecnam P2010

We are going to make the assumption that you have some hours time, flying in flight simulators like P3D. Also, it is not our intention to teach you how to fly, real or virtual.

Right, having got the disclaimers out of the way, let's have some fun.

We'll begin by going through the procedures for a "cold-dark" start. That is, all switches are off and all knobs, levers and controls are at their minimums. This is the best way to get maximum immersion from a simulation like the Tecnam P2010.

So, the only switches that should be ON at this time are the "Secure Aircraft" (31) to show chocks, tiedowns etc. and the "Remove/Add Pilot" (39) to board the pilot and his off-sider.

You'll need some power. Switch ON the Battery Master Switch and also the Generator switch. These two are coloured bright red and sit alongside the magneto switch.

Turn on the Avionics Master Switch (28) to get power to the instrument panel.

The real Tecnam does not have a parking brake lever as such, it uses the brake pedals. So use the keystroke to ensure that your parking brake is set.

Select left or right tank for starting. The control (51) uses left and right click. Turn on the fuel pump (27) and set your Mixture Lever to full rich (forward).

Now, turn the Magneto key through RIGHT, LEFT and settle at BOTH. When you are set, turn the key once more to the right to START. The engine should roar into life and gauges should show some signs of life.

Push the Prop Pitch Control full forward to MAX RPM. Run up the engine to around 1500 RPM and do a mag-check. You do this by turning the Magneto key back, first to LEFT, then to RIGHT, noting a drop in RPM of no more than maybe 100 RPM. This indicates correct operation of the magneto. Quickly return the key to BOTH and throttle back to idle.

Time to tune your radios for NAV, COMMS, and ADF etc., once you have acquired the correct frequencies.

If you are running with the GNS, switch it on and check that the GPS display is working properly. If you are selecting the GTN750, turn it on and check that it is running correctly. For Garmins, follow the guide to set them up for your flight.

You are now ready to go, so hit the "Secure Aircraft" switch and remove the tiedowns, chocks etc.

Taxying is a very pleasant thing in a Tecnam due to the 90 degree travel of the nosewheel. You will find that the P2010 can turn in very tight circles.

Apply a small amount of power and release the brakes. Small adjustments using differential braking with the rudder is the way you steer a Tecnam on the ground. Taxi out to the hold and check all your gauges.

The Flap switch (52) has a setting for takeoff.

With all that power under the hood, you can be airborne in no time. Your takeoff, with a normal load will take only little over 1000 ft, clearing 50 by 1640ft.

At around 60 knots, she'll be wanting to lift off. Hold her down with a small amount of forward stick and lift at around 65-70knots. This sets her up beautifully for a fast climb out at 85 knots once you have retracted your flaps.

She'll climb at a little over 1000 ft per minute. Trim is made a lot easier with the all-flying stabilator.

In the Tecnam you "lead" turns with the rudder, following with the ailerons.

The design of this airframe is highly aerodynamically efficient so you will need a little rudder trim to centre the ball when cruising above 120 kts.

Landing is a breeze but allow plenty of time, with flap she'll float for ages and just wants to keep flying. Slow and safe is the way to go for a landing and she'll pull up in around 700 ft. or less.

We sincerely hope you get as much pleasure from flying this beautiful little machine as we did building her.

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CHECKLISTS

PRE-START

PARKING BRAKE	ON
BATTERY	ON
GENERATOR	ON
THROTTLE	1/2 INCH CRACKED
FUEL SELECTOR	LEFT OR RIGHT TANK WITH LEAST FUEL
FUEL PUMP	ON
MIXTURE	FULL RICH
IGNITION	TO BOTH

STARTING

IGNITION	TO START
THROTTLE	1000-1200 RPM
CHECK OIL PRESSURE, TEMPERATURE	
NAV LIGHTS	ON
STROBE LIGHTS	AS REQUIRED

TAXY

PITOT HEAT	ON
ALTIMETER	SET
PARKING BRAKE	OFF

CHECKLISTS

PRE-TAKEOFF

PARKING BRAKE	ON
ENGINE	CHECK INSTRUMENTS
FUEL PUMP	ON
FUEL SELECTOR	LEFT OR RIGHT TANK WITH MOST FUEL
THROTTLE	1500 RPM THEN 2100 RPM
MIXTURE	FULL RICH
PROPELLER	MAX RPM
PROPELLER	REDUCE TO 500 RPM AND THEN BACK TO MAX REPEAT 3 X
IGNITION	MAGNETO CHECK LEFT-BOTH THEN RIGHT-BOTH. MAX DROP - 175 RPM MAX DIFFERENCE SHOULD BE 50 RPM
THROTTLE	IDLE
FLAPS	TO T/O SETTING
TRIM	ALL NEUTRAL
DOORS	CLOSED AND LOCKED
LANDING LIGHT	ON
XPDR	TUNED AND ON
TAKEOFF	
PARKING BRAKE	RELEASE
THROTTLE	MAX RPM
ROTATION	60 -65 KIAS
ABOVE SAFE HEIGHT	
PROPELLER	2600 RPM

CLIMB

ENGINE	CHECK INSTRUMENTS
FUEL PUMP	OFF
THROTTLE	FULL
MIXTURE	FULL RICH TO 5,000FT. THEN EASE BACK
PROPELLER	MAX RPM
FLAPS	UP
TRIM	ESTABLISH CLIMB @ 82 KTS IAS

CRUISE

PARKING BRAKE	RELEASE
THROTTLE	AS REQUIRED
FUEL TANKS	BALANCE FOR LEVEL TRIM
PROPELLER	1800 -2400 RPM

DESCENT

MIXTURE	PROGRESSIVELY RETURN TO FULL RICH
THROTTLE	REDUCE AS REQUIRED

PRE-LANDING

FUEL PUMP	ON
FUEL TANKS	FULLEST TANK
LANDING LIGHT	ON
FLAPS	T/O SETTING
MIXTURE	FULL RICH
PROPELLER	MAX RPM

LANDING

FLAPS	LAND SETTING
FUEL PUMP	ON
THROTTLE	TO ACHIEVE 75 KTS IAS
MIXTURE	FULL RICH
PROPELLER	MAX RPM
THROTTLE	TO ACHIEVE 60 KTS TOUCHDOWN (OPTIMAL)

AFTER LANDING

BRAKES	AS REQUIRED
THROTTLE	IDLE
PITOT HEAT	OFF
FLAPS	UP
FUEL PUMP	OFF
XPDR	OFF
LANDING LIGHT	OFF

SHUT-DOWN

PARKING BRAKE	ON
THROTTLE	1200 RPM FOR SHORT PERIOD
AVIONICS	OFF
THROTTLE	IDLE
MAGNETOS	OFF
MIXTURE	CLOSED
ALL SWITCHES	OFF
FUEL SELECTOR	OFF

ANALOGUE/GTN750



ANALOGUE/GTN750



GARMIN



ANALOGUE/GTN750



GARMIN



GARMIN



ANALOGUE/GTN750



GARMIN



AVIONICS

These are the aircraft included in your Tecnam P2010 package and the avionics fitted. If you prefer a change of avionics in the livery of your choice, it is simple to do. Just navigate to the entry for your choice in the Aircraft CFG file. Alongside the entry "model=" copy/paste either GARMIN or ANADIG to suit. When you next load up that particular aircraft it will be fitted with your choice of avionics.

PILOT ONLY



CABIN LIGHT



INSTRUMENTS ONLY (DIMMABLE)



CO-PILOT CHARTLIGHT



CLICK ON THE VARIOUS LIGHT SWITCHES AND DIMMERS TO CREATE YOUR DESIRED NIGHT LIGHTING SET.



PANEL LIGHT



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