

P2002JF



**SPECIFICATION AND DESCRIPTION**



# SPECIFICATION AND DESCRIPTION

## P2002JF

This document applies only to the Tecnam P2002JF and is published for the purpose of providing general information for the evaluation of design, powerplant, performance and equipment.



Pascale Museum at Tecnam Headquarter Capua

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# GENERAL DESCRIPTION

## P2002JF

### Low Wing High Pleasure

#### Construction

The P2002JF is a two-seater side by side, low wing aircraft. The P2002JF features superlative performance and flying qualities, now confirmed by hundreds of P2002 ultralights, Light Sport and VLA aircraft sold throughout the world and validated in 15 countries other than Europe. The ease of piloting and maintenance make this aircraft an excellent solution for training in flight schools. It is also an ideal platform for surveillance and as well as, of course, for pure recreational and private use. The option to use 100LL AVGAS or unleaded automotive fuel (with up to 10% ethanol content) makes this aircraft even more flexible and cost effective. The P2002JF encompasses the latest developments of Tecnam aircraft. The use of advanced software for design, structural and fluidynamics analysis, and experience in building aeroplanes with all types of materials results in continuous aircraft improvement. Due to the tapered laminar aerofoil and the slotted flaps the P2002JF is an outstanding aircraft, a perfect mix of aerodynamics, performance, and structural efficiency.

Many flight schools in Europe and all over the world rely on P2002JF (certified according to the CS-VLA and validated in several foreign countries) for students initial training. Many of them continue their training up to the ATPL with the Tecnam P2006T twin making Tecnam the ideal one-stop-shop for flight training aircraft all over the world.

The Tecnam P2002JF structure is based on a steel tubing cabin truss covered by aluminium sheets. The wing is all aluminium made and built with a single spar and full metal torsion box. The wing's leading edges are easily detachable for repairs and also incorporate the fuel tanks (50 Lt - 13.2 US gallons each). They are separated from the cabin in order to maximize passive protection. The sliding canopy allows 360° of vision in the cockpit and has full rollover protection tested via inverted drop tests.

The stabilator, horizontal tail design, provides remarkable longitudinal hands-off stability along with minimum drag and weight penalty. This provides balanced two finger flight control. The wide slotted flaps, electrically activated, allow stall speed lower than 40 Kts and allows the aircraft to perform steep approaches and easier landings.

The all aluminium ailerons are effective and ensure a quick roll rate without being overly sensitive. All control surfaces are made out of aluminium and all of them, except for flaps and tab, are mass-balanced.

#### Landing Gear

The main landing gear are constructed of spring steel. This provides a main gear that is robust enough for unimproved landing strips and requires no service. The trailing link nose gear uses a rubber shock absorber system that was designed for the rigours of the training environment. The main landing gear wheels and brakes are 5.00x5 providing ability to use multiple different tyre brands that can be chosen in relation with the mission-type and expected landings per hour. The brake control is activated by a single central lever located between the seats or, alternatively, by toe brakes which are also available as an option. A parking brake valve is located on the console between the seats.

## Powerplant and Propeller

The top and bottom engine cowls are quickly and easily removable making any maintenance procedure faster to accomplish. The top cowl has 2 large hinged gull-wing style doors for easy access and effective pre-flight inspections of the entire engine compartment.

The engine is set low and the cowling slopes down from the windshield, so forward visibility is outstanding even with a fully equipped instrument panel. The steel firewall is soundproofed.

The power plant is a Rotax 912S2 series four-cylinder, four-stroke engine. The engine is liquid and air cooled with an integrated 1:2.4286 reduction gear. The use of liquid cooled heads and air cooled cylinders allows the engine to maintain safe operating temperatures even if a rapid descent is performed immediately after a prolonged climb.

A fixed pitch wood, composite wrapped Hoffmann propeller comes standard while the hydraulic variable pitch propeller from Hoffman is also available as an option. An electrical fuel pump is installed to provide an effective back-up to the mechanical one. Circuit breakers are standard. The battery is located in the rear of the fuselage with easy access through an external hinged door. An external power socket allows for engine start, tests, and avionics management/training without the use of internal battery.

## Avionics

The largest selection of avionics choices are available on the P2002JF in order to allow almost any type of operations: basic VFR-DAY equipment, VFR-NIGHT equipment and glass cockpits are available. With an extremely wide choice of rack-mounted avionics, such as the latest Garmin radios and GPS, IFR training procedures (not in IMC conditions) can be possible via dual VOR indicators and radios, ADF and DME options.

## Special Hand Controls version

On March, 27th, 2014, the P2002JF aeroplane was approved by EASA to incorporate full integrated hand control kits for disabled pilots. This makes the P2002JF the first worldwide factory-built VLA certified aircraft equipped with hand controls. This version of the Tecnam P2002JF aircraft architecture is very simple and flexible. Flight instruction will be allowed by a third throttle control and second slip indicator on the RH side, while whomever is seated on the left side (student or disabled pilot flying solo) will:

- control the stick (pitch and roll) and the brakes with the left hand;
- control the rudder, throttle and flap with the right hand on the central control.

No flight control operations other than the radio and altimeter settings, will need to separate the

hands from controls making this solution safe and ergonomic.

In addition to the flight control modifications, several improvements have been made to make the access to disabled pilots easier: strengthened leading edges (both LH and RH), four additional grab handles to help step inside and outside the cabin and, finally, an increased canopy opening.

## Certification

The Tecnam P2002JF is delivered in full compliance with the requirements of EASA CS-VLA.

P2002-JF hand controls



## INTERIOR AND EXTERIOR

Seats are adjustable in flight and increase in height as they are moved forward.

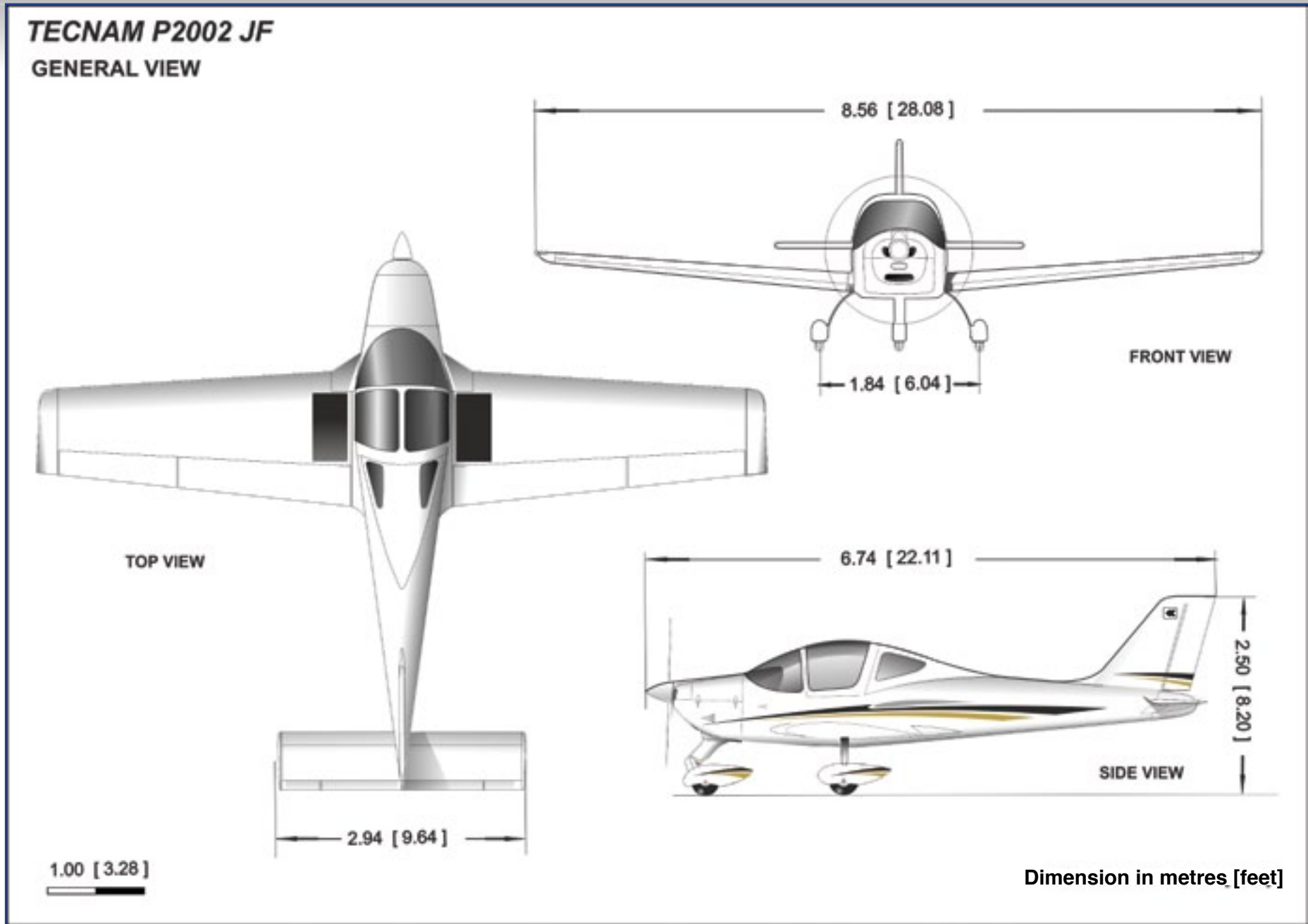
The luggage area allowing for 44 pounds/20 kg of weight is located behind the seats with ample room for several travel bags. The interior is spacious, ergonomic and comfortable.

Cabin	ft	m
Height	3	0,91
Width	3.6	1,1

### Baggage Compartment

Width	2.62 ft	0,80 m
Length	1.48 ft	0,45 m
Volume	5.74cu.ft	162lt
Max. permissible load	44lb	20kg





## P2002JF

### DIMENSIONS

	ft	m
Overall Height	7.9	2,4
Overall Length	21.7	6,63

### DESIGN WEIGHT AND LOADING

	P2002-JF FP	
	kg	lb
Maximum Take Off Weight	620	1,367
Empty Weight, VFR Standard	380	838
Useful Load	240	906
Baggage allowance	20	44

### WING

	ft	m
Span (overall)	28.2	8,6
Area	123.8 ft <sup>2</sup>	11,5 sqm
Dihedral	5°	
Aspect ratio	6.4	

### PERFORMANCE

	P2002-JF			
	Fixed Pitch Propeller		Variable Pitch Propeller	
Max Cruise Speed KTAS	122 kts	226 km/h	128 kts	237 km/h
Stall Speed (Flaps Down Power Off) KCAS	41 kts	76 km/h	41 kts	76 km/h
Practical ceiling	14000 ft	4267 m	14000 ft	4267 m
Take off run	777 ft	237 m	630 ft	192 m
Take off distance	1286 ft	392 m	1083 ft	330 m
Landing run	538 ft	164 m	446 ft	136 m
Landing distance	1056 ft	322 m	1099 ft	335 m
Rate of climb	874 ft/min	4,4 m/sec	950 ft/min	4,8 m/sec
Range	568 NM	1502 km	568 NM	1502 km

All estimated performance data are based on aeroplane weights at MTOW; standard atmospheric conditions; level, hard surface, dry runways, no wind.

## POWERPLANT & ACCESSORIES

The top and bottom engine cowls are quickly and easily removable making any maintenance procedure faster to accomplish. The top cowl has 2 large hinged gull-wing style doors for easy access and effective pre-flight inspections of the entire engine compartment.

The engine is set low and the cowling slopes down from the windshield, so forward visibility is outstanding even with a fully equipped instrument panel. The steel firewall is soundproofed. The power plant is a Rotax 912S2 series four-cylinder, four-stroke engine.

The engine is liquid and air cooled with an integrated 1:2.4286 reduction gear. The use of liquid cooled heads and air cooled cylinders allows the engine to maintain safe operating temperatures.

### ROTAX 912 S2/3

**ROTAX**<sup>®</sup>  
AIRCRAFT ENGINES



- 4-cylinders
- 4-stroke liquid-/air-cooled engine with opposed cylinders
- Dry sump forced lubrication with separate oil tank, automatic adjustment by hydraulic valve tappet
- Mechanical fuel pump
- Dual electronic ignition
- Propeller speed reduction unit
- Air intake system
- Gearbox Reduction Ratio 2.43:1





# STANDARD EQUIPMENT

## FLIGHT INSTRUMENTS AND INDICATORS

Magnetic Compass  
 Airspeed Ind., Kts  
 Altimeter (In)  
 Vertical Speed  
 Attitude Gyro  
 Directional Gyro  
 Turn And Bank Indicator  
 Flaps Indicator  
 Pitot System  
 Static System  
 Stabilator Trim Position Indicator

## ENGINE INSTRUMENTS

RPM Indicator  
 Hour Recorder  
 Oil Press  
 Oil Temp.  
 Head Temp.  
 Fuel Press.  
 Voltmeter  
 Ammeter  
 LH + RH Fuel Qty

## OTHER INSTRUMENTS / WARNING

Chronometer  
 O.A.T. Indicator  
 Generator Warning Light  
 Vacuum Suction Gauge

## FLIGHT CONTROLS

Hydraulic Brakes  
 Parking Brake  
 Electrical Flaps  
 Dual Flight Controls  
 Steerable Nose Wheel  
 Stabilator Trim (electric actuated from stick)  
 Engine Controls  
 \_ Throttle, Two  
 \_ Carburettor Heat  
 \_ Choke  
 Flight Trim Controls  
 \_ Stabilator With Indicator  
 Fuel Control Selector with On/Off  
 Panel Switches:  
 \_ Starter  
 \_ Fuel Pump  
 \_ Engine LH And RH Ignition Switches

## ELECTRICAL SYSTEM

12 VOLT 18AMP. Battery  
 12 VOLT Alternator 20 AMP.  
 Switches  
 \_ Nav. Lights  
 \_ Landing Light  
 \_ Strobe Light  
 External Power Supply Receptable  
 Circuit Breaker Panel

## FUEL SYSTEM

Two Integral Fuel Tanks with 100 litres total capacity  
  
 Engine Driven Fuel Pump  
 Auxiliary Fuel Pumps, electric  
 Fuel Quick Drain  
 1 X Shut Off And Fuel Selector Valve ANDAIR

## INTERIOR

Pilot And Copilot Seats  
 \_ adjustable fore and aft  
 Seat Belts & Shoulder Harness, all seats  
 Wall To Wall Carpeting  
 Luggage Compartments  
 Fire Extinguisher  
 Radio Call Plate  
 Soundproofing  
 First Aid Kit  
 Emergency Hammer

## EXTERIOR

Epoxy Corrosion Proofing, all structure  
 Sliding Canopy with Lock And Key  
 Rear Window  
 Tie Down Rings  
 Main Wheels, 5,00 X 5 Cleveland  
 Nose Wheel, 5,00 X 5

**EXTERIOR LIGHTS**

Nav. Lights LED with strobe AVEO Full LED TSO  
Taxi Light LED

**CABIN CONFORT SYSTEM**

Windshield Defroster  
Ventilator Adjustable, 2 Place  
Heating System

**POWERPLANT AND PROPELLER**

Engine - 1 ROTAX 912S2 100 HP, 4 Cylinders  
Liquid/air cooled, integrated reduction gear  
Dual Ignition System  
Throttle Control LH/RH  
Tubular Steel Engine Mount

Propeller - Hoffmann, 2 Blade Fixed Pitch  
Propeller Spinner  
Air Filter  
Oil Filter  
Oil And Water Coolers  
Carburettor Heat with Manual Control  
Thermostat Valves Oil and Water

**PRODUCT SUPPORT/DOCUMENTS**

Manufacturer Full Two Year Limited Warranty  
Pilots Operation Handbook  
Maintenance Manual  
Parts Catalog  
Aircraft Log Book  
Engine Log Book

**STANDARD GARMIN AVIONIC PACKAGE**

GMA 340 Audio Panel  
GNC 255A COM/NAV  
GTX 335 Transponder ADS-B OUT  
ELT 406 Mhz KANNAD

## Antennas:

- Transponder
- VHF
- Marker Beacon
- ELT

## Speakers

Microphone

Stick Push-To-Talk Switch-Pilot/Copilot

Mic &amp; Phone Jacks-Pilot/Copilot



AVIONICS OPTIONS

## STANDARD AVIONICS



### STANDARD GARMIN AVIONIC PACKAGE

- GMA 340 Audio Panel
- GNC 255A COM/NAV
- GTX 335 Transponder ADS-B OUT
- ELT 406 Mhz KANNAD
- Antennas:
  - Transponder
  - VHF
  - Marker Beacon
  - ELT
- Speakers
- Microphone
- Stick Push-To-Talk Switch-Pilot/Copilot
- Mic & Phone Jacks-Pilot/Copilot

## AVIONICS OPTION 1



### VFR NIGHT VERSION

*Includes the following equipment:*

- Heated Pitot
- GILL 25A Battery
- Instrument Light
- Map Light
- Dimmer
- Aux Alternator

*Non-Additive. Replaces all Standard Avionics*

## AVIONICS OPTION 2



### GLASS COCKPIT G500

*Includes the following equipment:*

- GARMIN G500 PFD
- GTN 650 Com/Nav/Gps with Antennas and installation - exchange GNC225A
- Airspeed Indicator and Altimeter back up TSO
- Aux Alternator

*Non-Additive. Replaces all Standard Avionics.*

## AVIONICS OPTION 3



### GLASS COCKPIT G500 + VFR NIGHT

*Includes the following equipment:*

- GARMIN G500 PFD
- GTN 650 Com/Nav/Gps with Antennas and installation - exchange GNC225A
- Airspeed Ind. and Altimeter back up TSO
- Heated Pitot
- GILL 25A Battery
- Instrument Light
- Map Light
- Dimmer
- Aux Alternator

*Non-Additive. Replaces all Standard Avionics.*

## VP OPTION 1



### P2002 JF VP CS/VLA

*Includes the following equipment:*

- Rotax 912 S3 100 hp Engine with Governor
- Central Quadrant with single throttle and pitch lever
- Hoffmann Variable Pitch Propeller
- Manifold Pressure Indicator
- Attitude and Directional Electric

*Non-Additive. Replaces all Standard Avionics.*



## PAINT SCHEMES

### Standard



**St1.1** \_\_ Colour Stripes



521 INTENSE BLUE  
546 SILVER  
521 INTENSE BLUE

**St1.2** \_\_ Colour Stripes



502 BLACK  
546 SILVER  
547 GOLD

**St1.3** \_\_ Colour Stripes



519 MEDIUM RED  
546 SILVER  
502 BLACK



**St2.1** \_\_ Colour Stripes



528 INTENSE BLUE  
546 SILVER  
519 RED

**St2.2** \_\_ Colour Stripes



502 BLACK  
547 GOLD  
546 SILVER

**St2.3** \_\_ Colour Stripes

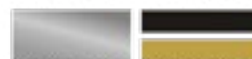


519 RED  
502 BLACK  
546 SILVER

### Special Paints



**Sp1.1** \_\_ Paints \_\_ Stripes



LIGHT GRAY 502 BLACK  
547 GOLD

**Sp1.2** \_\_ Paints \_\_ Stripes



RED 528 VIVID BLUE  
546 SILVER

**Sp1.3** \_\_ Paints \_\_ Stripes



NAVY BLUE 547 GOLD  
546 SILVER



**Sp2.1** \_\_ Paints \_\_ Stripes



LIGHT GRAY 502 BLACK

**Sp2.2** \_\_ Paints \_\_ Stripes



RED 502 BLACK

**Sp2.3** \_\_ Paints \_\_ Stripes



NAVY BLUE 546 SILVER

# OPTIONS

Code	Description
<b>SPECIAL CONTROLS</b>	
1006	Rudder, throttle and brakes hand controls
<b>INSTRUMENTS</b>	
114/A	Turn & Slip Ind. 2 1/4"
<b>RADIO &amp; NAVIGATION EQUIPMENT</b>	
<b>GARMIN-COM/NAV/GPS</b>	
120/A	GTR225 COM 25 Mhz with Antenna and Installation
120/B	GTR225A COM 8.33 Khz with Antenna and Installation
119	MD200 VOR Indicator Only for GNC255A
121	GTN 650 Com/Nav/Gps with Antennas, Triplex & Installation with GI106A Indicator
121/A	GTN 650 Com/Nav/Gps with Antennas, Triplex & Installation with GI106A Indicator (Exch. for Std. GNC255A)
122	GTN 750 Com/Nav/Gps with Antennas, Triplex & Installation with GI106A Indicator.
122/A	GTN 750 Com/Nav/Gps with Antennas, Triplex & Installation with GI106A Indicator (Exch for Std. GNC255A)
<b>GARMIN-GPS</b>	
128	AERA 500 with Antenna, Panel Support and Installation
132	795 with Antenna, Panel Support and Installation
<b>BENDIX KING</b>	
137	KR 87 ADF with KI227 Indicator
139	DME KN63-14 with KDI 572 Indicator
<b>OTHERS</b>	
157	Head Sets, Two
157/A	BOSE A 20 Head Sets, Two

Code	Description
<b>AIRCRAFT EQUIPMENT</b>	
174	Tinted Windows
176	Toe Brakes (see note # 1)
178	Central Quadrant with single throttle lever
182	Fuselage Cover
185	Battery Gill G25 (Exchange for standard battery)
209	Control Lock
210	Towing Bar
<b>EXTERIOR</b>	
201/A (JF)	Special Paint Two Colours
<b>ENGINE and PROPELLER EQUIPMENT</b>	
187	Aux. Alternator

### #1 - 176 TOE BRAKES

includes:

- New Pedals
- 4 Brake Pumps
- Parking Brake Selector



P2002-JF trainer for Argentinian Air Force

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