

Armstrong Whitworth A.W.15

ATALANTA Class

Airliner of Imperial Airways 1932-1942

Modelled for Flight Simulator 2004 by

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Armstrong Whitworth A.W.15 Atalanta

Introduction

The Atalanta class airliners of Imperial Airways entered service in 1932, and served until 1941 , when the surviving aircraft were taken over by the Royal Air Force and used as transports until 1942.

For its time, the Atalanta was a large, modern airliner. A short specification says:

Max speed, 156 mph (251 km/h) at 3,000 ft (914 m). Gross weight, 21,000 lb (9,525 kg). Span, 90ft 0 in (27.43 m). Length, 71 ft 6 in (21.79m).

Typical cruising speed was 110-118 mph (about 100 kts) at 1000-3000 ft, range 640 miles, approx. 570 n.m.

The engines were 4 Armstrong Siddeley Serval III 's of 340 hp.

The Atalanta had room for a maximum of 17 passengers. Imperial Airways, however, had its aircraft fitted with seats for 11 passengers on the African route, and 9 passengers on the India route.



The Atalantas were used mainly on the routes Kenya-South Africa and Karachi-Singapore. The routes were flown in short stages to serve most major towns along the way.

Imperial Airways had 8 Atalantas, two of them were transferred to the associated company Indian Trans-Continental Airways.

Names and registration numbers

| | | | |
|-----------|--------|----------|--------|
| Atalanta | G-ABTI | Astraea | G-ABTL |
| Andromeda | G-ABTH | Athena | G-ABTK |
| Arethusa | VT-AEF | Aurora | VT-AEG |
| Artemis | G-ABTJ | Amalthea | G-ABTG |

“Arethusa” was originally registered as G-APBI and is shown on some photos carrying the name “Atalanta” that belonged to G-ABTI.

The long trips from London to South Africa and India were flown in many, stages. The passengers slept in hotels on the way, and changed aircraft a couple of times. Until about 1936 the trip from Paris to Brindisi in Italy was by train.

Using the panel

The main panel



I have found lots of pictures of the Atalanta on the internet and on the Imperial Airways CD issued by the Royal Aeronautical Society, but not a single photo of the flight deck. This panel includes the instruments you would expect to find in an airliner of the time, and most of the gauges are from the FS2004 DH-88 Comet, the Ford Trimotor or the Lockheed Vega. Only the eight main engine instruments, the two fuel gauges and the ADF tuner are freeware gauges from various sources.

To the right are the main engine instruments: Rpm and Boost (manifold pressure) and a Sperry autopilot. I'm not sure that an autopilot was installed in the real Atalanta, but it is convenient on long flights. The autopilot is that of the FS2004 Lockheed Vega, so you can probably find instructions in the FS2004 Learning Center. The autopilot defaults to 'heading hold', so the best way to engage it is to press CTRL+SHIFT+H followed by CTRL+H.

The propellers have fixed pitch, so the RPM gauges are for reference only. You cannot control RPM directly, only with the throttle.

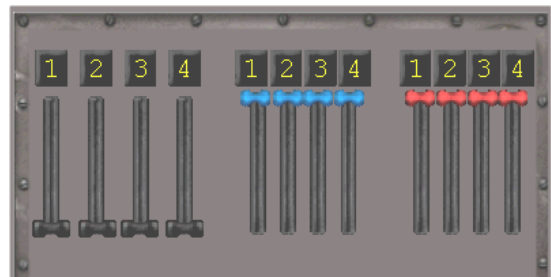
In the middle we have the other instrument in the panel that I'm not certain about: The ADF Radio Compass. I simply do not know what kind of Radio Navigation the Atalanta had installed, if any. You will find the ADF convenient on the African and Indian routes of Imperial Airways, there are many NDB's to navigate by.

The basic instruments need no explanation, I hope. There were actually six fuel tanks (three in each wing), but FS2004 empties three of them first and the other three after that, so the 'aux' and 'main' gauges give you correct information about the fuel consumption.

Auxiliary panels

SHIFT+2: The GPS map. Of course, GPS did not exist in 1932, and you can only use it as a convenient real-time map. You cannot use it for automatic navigation. Think of the GPS window as a substitute for the maps and instruction you would get from your second pilot and the Wireless Operator.

SHIFT+3: A throttle quadrant for controlling the engines one at a time. Note that the blue levers in the middle (the prop levers) have no effect because the propellers of the Atalanta are fixed-pitch.



Throttles (propeller) Mixture

Flying instructions

This information is available during your flight, just press F10 to call up the electronic kneeboard, and select the reference tab.

Before Takeoff

Elevator trim $\frac{1}{2}$ division up. Rudder trim $\frac{1}{2}$ division left.
These trim settings are important, especially the rudder.



Takeoff and initial climb

Full throttle (boost $2\frac{1}{2}$ lb/sq.in.). The tail lifts by itself at 56-60 mph (50-52 kts).
Takeoff at 75-80 mph (67-71 kts).

When safely airborne reduce boost to 2 lb/sq.in. Let the aircraft accelerate to 95 mph (84 kts) and begin to climb, initially at 600-800 fpm (depending on weight)



En route climb

Reduce boost to 1.5 lb/sq.in. Keep speed at 95 mph (84 kts), climb rate will be 400-600 fpm.



Cruise

Boost about 0 lb/sq. in, adjust until the speed is 110-115 mph (97-102 kts).

Airliners of 1932 did not fly very high, altitudes of 1000-3000 ft above ground were the most common.



Descent and landing

The Atalanta does not have flaps for landing, so you should not reduce speed by much until you are close to the runway.

Do not use FS2004 IFR flight plans – the Air traffic Control (ATC) will order you to follow an approach suitable for a modern aircraft. Approach the airport 1000 ft above ground, start your final descent 4-5 n.m. before the runway. When you are close to the runway, idle your engines and land.

Routes to fly!

The aircraft used in 1933

| | |
|---------------------|--------------------------------|
| London-Paris | Handley Page 42W Heracles |
| Brindisi-Alexandria | Short S.17 Scipio flying boats |

African route

| | |
|--------------------|---------------------------------------|
| Alexandria-Nairobi | Handley Page 42E Hannibal |
| Nairobi-Cape Town | AW.15 Atalanta (11 passengers) |

Indian route

| | |
|-------------------|--------------------------------------|
| Cairo-Karachi | Handley Page 42E Hannibal |
| Karachi-Singapore | AW.15 Atalanta (9 passengers) |

There are at least two good models of the HP.42 available for FS2004 at the time of writing (march 2004). My favourite is by Derek Palmer, you can get it by downloading hp42ew1.zip from the major download sites.

The HP.42 (and the Atalanta) can handle the Brindisi-Athens-Alexandria stages if you have no flying boat for the job.

London-Cairo

| City | Remarks |
|------------|---|
| London | HP.42W Heracles airliner. Croydon Airport does not exist today. Croydon is in southern London, so Gatwick is a better substitute than Heathrow. |
| Paris | Le Bourget is the airport to use. <i>Sleep at your hotel.</i> |
| Brindisi | Paris-Brindisi by train. <i>Sleep in the train.</i> Brindisi-Cairo by flying boat. |
| Athens | |
| Alexandria | <i>Sleep at your hotel.</i> |

Cairo-Cape Town

Stops in *italics* are in a timetable of 1935 described as optional, and the stop at Atbara was omitted.

| City | New name (if different) | Remarks |
|-----------------------------------|-----------------------------------|--|
| Alexandria (Egypt) | | HP.42 E “Hannibal” class airliner |
| Cairo | | |
| <i>Assiut</i> | <i>Asyut</i> | |
| <i>Luxor</i> | | <i>Return trip only</i> |
| <i>Assuan</i> | <i>Aswan</i> | |
| Wadi-Halfi (Anglo-Egyptian Sudan) | Wadi-Halfi (Sudan) | <i>Sleep at your hotel.</i> |
| Atbara | | Not included in the timetable of 1935 |
| Khartoum | | |
| <i>Kosti</i> | | <i>This airfield does not exist today. Fly straight to Malakal or Juba</i> |
| <i>Malakal</i> | | |
| Juba | | |
| Entebbe (Uganda) | | |
| Kisumi (Kenya) | | |
| Nairobi | | <i>Sleep at your hotel.</i> Shift to the AW.15 Atalanta airliner for the rest of the trip. |
| <i>Moshi (Tanganyika terr.)</i> | <i>Moshi (Tanzania)</i> | <i>Kilimanjaro Intl (HTKJ) is close.</i> |
| Dodoma | | |
| Mbeya | | <i>Sleep at your hotel.</i> |
| <i>Mpika (N. Rhodesia)</i> | <i>Mpika (Zambia)</i> | |
| Broken Hill | Kabwe | |
| Salisbury (S. Rhodesia) | Harare (Zimbabwe) | <i>Sleep at your hotel.</i> |
| Bulawayo | | |
| <i>Pietersburg (Transvaal)</i> | <i>Pietersburg (South Africa)</i> | |
| Johannesburg | | <i>Sleep at your hotel.</i> |
| Kimberley (Cape province) | Kimberley (South Africa) | |
| <i>Victoria West</i> | | |
| Cape Town | | |

If you want complete detail of departure times etc. please consult www.imperial-airways.com or the Imperial Airways CD

Cairo-Singapore

Stops in *italics* are in a timetable of 1936 described as optional

| City | New name (if different) | Remarks |
|------------------------------|---|---|
| Alexandria (Egypt) | | HP.42E "Hannibal" airliner |
| Cairo | | |
| Gaza (Palestine) | | |
| Rutbah Wells (Arabia) | Ar Rutbah (Iraq) – but there is no airfield today | Nearest airfield in FS2004 is H2 (OR11) |
| Baghdad (Iraq) | | <i>Sleep at your hotel.</i> |
| Basra | | |
| <i>Koweit (Persian Gulf)</i> | <i>Kuweit (Kuweit)</i> | |
| Bahrein | Bahrain (Bahrain) | |
| Sharjah | Sharjah (United Arab Emirates) | <i>Sleep at your hotel.</i> |
| <i>Gwadar (Muscat)</i> | <i>Gwadar (Pakistan)</i> | |
| Karachi (India) | Karachi (Pakistan) | Change to your AW.15 Atalanta airliner for the rest of the trip. |
| Jodhpur (India) | Jodhpur (India) | <i>Sleep at your hotel.</i> |
| Delhi | | |
| Cawnpore | Kanpur | |
| Allahabad | | |
| Calcutta | Kolkata | <i>Sleep at your hotel.</i> |
| Akyab (Burma) | Sittwe (Myanmar) | . |
| Rangoon | Yangon | |
| Bangkok (Siam) | Bangkok (Thailand) | <i>Sleep at your hotel.</i> |
| Alor Star (Malaya) | Alor Setar (Malaysia) | |
| Singapore (Malaya) | Singapore (Singapore) | The big airport today is Changi (WSSS) |

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References

Much of this material is based on information found on the internet:

www.imperial-airways.com

and on a CD-ROM available from www.archivebritain.com:

“Imperial Airways (Royal Aeronautical Society Archive Series Vol.3)”