BRISBANE VALLEY FLYER

April - 2017

www.wattsbridge.com.au
www.bvsac.org.au

Watts Bridge Memorial Airfield, Cressbrook-Caboonbah Road, Toogoolawah, Q'ld 4313.

Gyrocopter landing at Watts.

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Richard Faint(President)	0412 317 754	Peter Biddle (Secretary)	0402 403 469
Priscilla Smith (Treasurer)	07 3206 3548	Rob Knight (Editor)	0400 89 3632

Whether to Fly. Part 2 – Reading TAFs and METARS

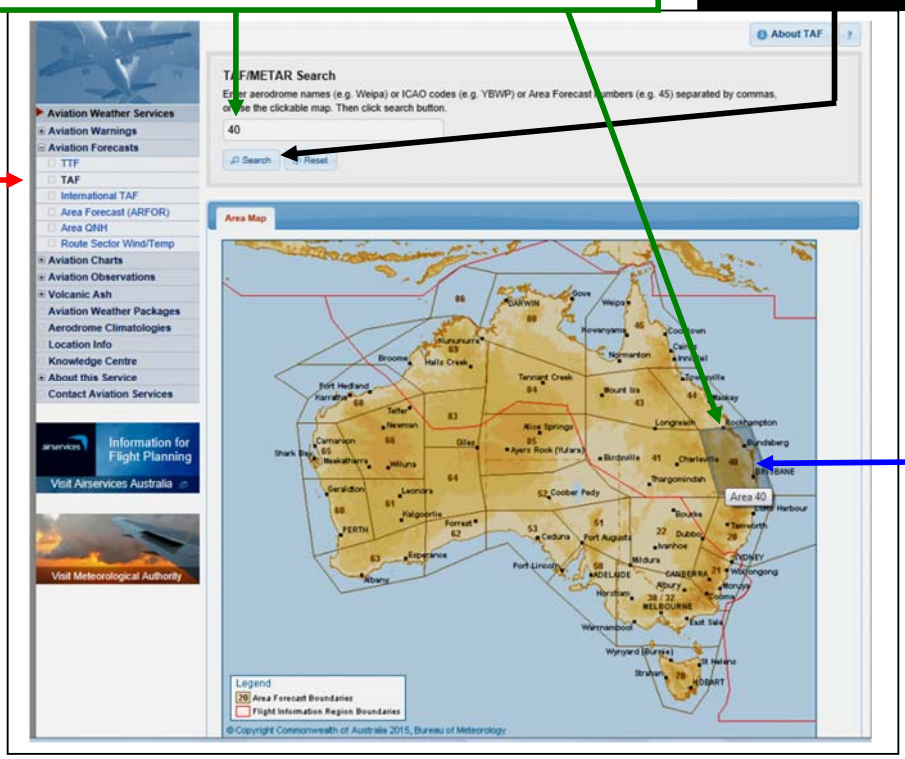
By Rob Knight

The forecast types available are ither ARFORs and linked either to the area through which our track passes, or TAFs to provide weather data on the aerodromes that we will encounter on our route. Today we are looking at TAFs and Metars and will deal with ARFORS at a later time.

We can obtain a forecasts by phoning the number for Met Briefings(1800805150). It is in the ERSA/ AIP. GEN PF 1 and is provided for Preflight Information and Flight Notification. Alternatively, we can get a forecast or weather report on-line by entering www.bom.gov.au/aviation/forecasts/taf/into the internet search engine and hitting 'Enter". The screen below should appear.

3. Enter either the code for the desired aerodrome (e.g. YAMB for RAAF Amberley) or click on the area.

After step 3, CLICK on "Search".

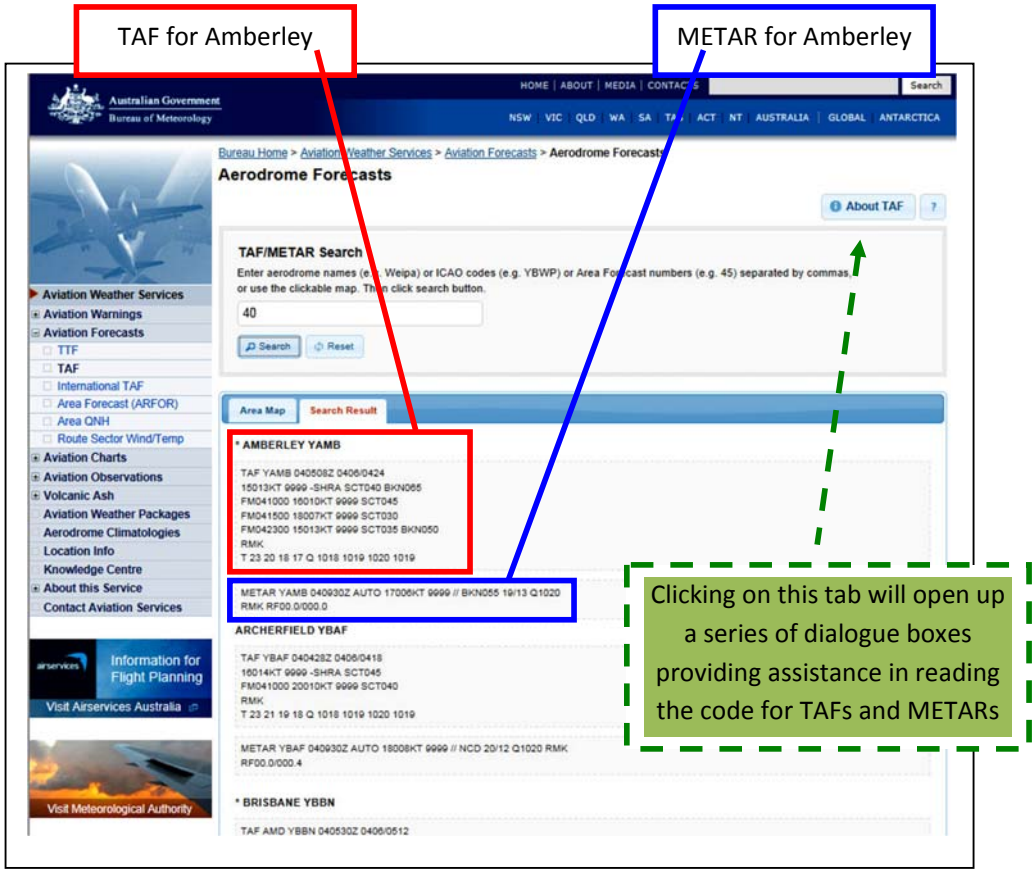


1. As you entered the TAF detail into your search engine, it takes you directly to the TAF window. However, this is no disadvantage as all the other forecasts you might require are listed in the same box.

2. Across the face of the country is depicted the various weather areas. Note that the Brisbane area lies in Area 40.

Note 1 METARS are displayed on the same screen as the TAF for that aerodrome

Note 2 Clicking on "Search" with Area 40 in the box brings up the following screen.



Using the scroll control on the right side of the screen, all the aerodromes in Area 40 (in this case) that are provided with TAF and METAR details are viewable, listed in alphabetic order. From this it is simple to extract their weather details.

Let's look at the details this has provided for YAMB – RAAF Amberley. Firstly – the TAF:

AMBERLEY YAMB

TAF YAMB 040508Z 0406/0424
15013KT 9999 -SHRA SCT040 BKN065
FM041000 16010KT 9999 SCT045
RMK
T 23 20 18 17 Q 1018 1019 1020 1019

And the METAR:

METAR YAMB 040930Z AUTO 17006KT 9999 // BKN055 19/13 Q1020
RMK RF00.0/000.0

At first this looks confusing but it is not really so once a few concepts are accepted and the breakdown code is available.

Concepts to be clearly understood.

1. The code. The code used is internationally accepted under I.C.A.O requirements so can be reads by any pilot of any nationality with a minimum chance of error.

2. All times listed are in Z, aka zulu time, the international code for UTC. This is because UTC is the universal time for the world, across all boundaries and borders.

Reading the TAF (the Aerodrome Forecast)

A TAF is an officially issued statement of the weather predicted at an aerodrome. The prediction is between specified times and within a radius of five nautical miles of the aerodrome's reference point.

So let's pull this TAF apart and see what it says in plain English.

AMBERLEY YAMB

Line 1. TAF YAMB 040508Z 0406/0424

Line 2. 15013KT 9999 -SHRA SCT040 BKN065

Line 3. FM041000 16010KT 9999 SCT045

Line 4. RMK

Line 5. T 23 20 18 17 Q 1018 1019 1020 1019

What it all means……

Line 1.

TAF YAMB	04 0508Z	0406 / 0424
Identifier for item & Amberley airfield	Issued on 4th at 0508Z[1]	Validity starts on 4th at 0600Z[2] and ends on 4th at 2400Z[3]

Notes from line 1

1. 0508Z = 1508 hours AEST
2. 0600Z = 1600 hours AEST
3. 2400Z = 1000 hours AEST

Line 2.

150/13KT	9999	SHRA	SCT040 BKN065
Surface wind FROM 150°T at 13 knots	Visibility 10 km or more	Local weather is showers	Scattered cloud, base 4000 ft with broken cloud, above, base 6500 ft.

Line 3. FM 04 1000 | 160 10KT | 9999 | SCT045

- FM 04 1000: FROM 1000Z[4] on the 4th
- 160 10KT: The surface wind veers to 160°T at 10 knots
- 9999: Visibility remains at 10 km or more
- SCT045: Cloud changes to scattered cloud, base 4500 ft, and no cloud above

Notes from line 3

4. 1000Z = 2000 hours AEST.

Line 4. RMK

A place for the forecaster to add remarks relating to any turbulence forecast and/or temperature /QNH issues. In this case none were added.

Line 5.

T 23 20 18 17

Temperatures at this location every 3 hours after commencement of validity period (0600Z from line 1).

(Start of validity period) 0600Z= 1600 AEST = 23°C
(3 hours later) 0900Z = 1900 AEST = 20°C
(6 hours later) 1200Z = 2200 AEST = 18°C
(9 hours later) 1500Z = 0100 AEST = 17°C

Q 1018 1019 1020 1019

QNH values for this location forecast every 3 hours after commencement of validity period (0600Z from line 1).

(Start of validity period) 0600Z= 1600 AEST = 1018 hPa
(3 hours later) 0900Z = 1900 AEST = 1019 hPa
(6 hours later) 1200Z = 2200 AEST = 1020 hPa
(9 hours later) 1500Z = 0100 AEST = 1019 hPa

Note that, for definitions of cloud cover, FEW, SCT, BKN etc., weather abbreviations OVC CAVOK etc, and UTC conversions, clicking on the "Knowledge Centre" tab below the ARFOR tabs in the screens on pages 2 and 3 will take the viewer to a good selection of help files.

This leaves the METAR to be de-coded. Let's see again what it reads.

Line 1. METAR YAMB | 040930Z | AUTO 17006KT 9999 // BKN055 19/13 Q1020

- METAR YAMB: Identifies it as the being the METAR for Amberley
- 040930Z: Issued on 4th at 0930Z (or 1930 AEST)
- AUTO 17006KT 9999 // BKN055 19/13 Q1020: From automated observations, the conditions existing at Amberley at 1930 AEST are:
  - Surface wind Velocity = 170°T at 6 knots
  - Visibility = 10 km or more.
  - Broken cloud with base 5500 feet **AGL**
  - Surface temperature = 19°C
  - Dew point = 13°C
  - QNH = 1020 hPa
  - Note: Having // after the visibility indicates that the "weather" statement has not been included.

Line 2. RMK RF00.0/000.0

Remarks covering rainfall and other factors of operational significance including rainfall and cloud cover not included in the body of the METAR

Next month we'll look at ARFORs. See you there.

Electric aircraft prepares to make landmark English Channel flight

By Sarah Knapton, Science Editor

Didier Esteyne'sgroundbreaking cross-Channel journey could herald a new era of electric aviation

The Airbus E-Fan electric aircraft Photo: PASCAL ROSSIGNOL

From story by Sarah Knapton

While it's more than 100 years since Louis Bleriot made the first cross Channel flight from Calais to Dover ushering in a new era of aviation, next week Airbus will take the next giant leap in air travel when the company embarks on the longest-ever manned electric flight.

Reversing Bleriot's 1909 route, French designer and pilot Didier Esteyne will take off from Lydd Airfield on Friday morning in the Airbus E-Fan two-seater aircraft for a 38 minute journey into the history books.

So far manned electric planes have only made short test-flights at air-shows or loops of airfields, but the E-Fan aims to be the first to cross the sea to another country, travelling 22 miles from England to France.

If successful, the feat could herald a new era of electric aviation where passengers need no longer worry about their carbon footprint and those under flight paths can live in relative quiet.

Airbus is already planning a 90-seat regional airliner that can fly with all-electric or hybrid propulsion by 2050.

Mr Esteyne, Airbus test pilot and designer of the E-Fan: "I am immensely excited to be piloting the E-Fan on this historic flight.

"Like so many others in aviation the industry, Louis Blériot has been a hero and inspiration to me and it gives me great pride that I am able to honour his legacy with the first ever electric powered Channel crossing.

“The E-Fan project shows the role that electric flight can play in the future of aerospace and the Channel crossing is an important demonstration of its capabilities and a milestone in the project’s development.”

The E-Fan is so light that it costs just £10 an hour to run compared with £35 for a similar sized piston-engine petrol-powered plane.

It is made completely of carbon fibre and can cruise at nearly 100mph for up to an hour before changing batteries.

And if it gets into trouble it can deploy its own parachute and float gently down to the ground.

Standing just under two metres in height, the plane has a 36ft wingspan and is 18.6ft from nose to tail.

Didier Esteyne taxis in the Airbus E-Fan

It is powered by two 32kw electric motors which drive a pair of fans attached to the carbon body, so that the plane can get quickly and quietly off the ground. Separate batteries power the ventilation and cooling systems. The batteries take just 90 minutes to full recharge meaning the plane could get back in the air quickly.

Jean Botti, Chief Technical Officer Airbus Group: “110 years after the dawn of heavier-than-air powered flight, a new transformation is coming to aviation through electric and hybrid flight.

“The E-Fan project, and flights like the Channel Crossing, show that the pioneering spirit and ingenuity demonstrated by Blériot and the other early aviators is still alive today.”

"We hope that this flight will capture the imagination of the next generation of aviators and engineers, and encourage them to pursue their dreams of flying. “

“The aircraft flies like a conventional aircraft of its size, is very reliable and some of the big advantages are its zero emissions, almost noiseless flight and cost effectiveness.”

The E-Fan made its maiden flight on March 11 2014, and has since been up 100 times. But this will be the first time the aircraft has flown so far.

The Airbus E-fan flies over a traditional liner

Airbus claims that electric-powered low-emission flight is crucial to meeting the European Union's "Flightpath 2050" targets of reducing aviation carbon dioxide emissions by 75 per cent, nitrous oxide emissions by 90 per cent and noise levels by 65 per cent from year-2000 levels.

The E-fan will fly in 2016 and enter the market this year (2017)and a larger four-seat E-fan 4.0 will follow in 2019. The 4.0 will feature a hybrid power plant to boost range and endurance.

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FLY-INS Looming

April 8	Murgon (Angelfield), ALA	Burnett Flyers Breakfast Fly In
Apr 22-23	Caboolture, YCAB	Tavas Great War Flying Display

Mystery Aircraft (April Issue)

What's this?

Mystery Aircraft (Last Issue)

The Howard 500 was an American executive transport aircraft produced by Howard Aero Inc during the early 1960s.
Top speed: 660 km/h, Cruise speed: 563 km/h, Range: 4,185 km, Wingspan: 21 m, Length: 18 m, Unit cost: 580,000–580,000 USD, Engine type: Pratt & Whitney R-2800 Double Wasp
Congratulations to Mal McKenzie for successfully naming this mystery aircraft.

Keeping up with the Play *(Test yourself – how good are you, really?)*

1. Operating a 4 stroke engine with a slightly over-rich fuel mixture is likely to cause which of the following?
   A. Improved fuel economy.
   B. Cleaner spark plugs.
   C. Cooler operating temperatures.
   D. Lower oil pressure.

2. Whilst flaring and floating after a tailwind approach with a wind gradient, which of the following should a pilot expect?
   A. Increasing IAS.
   B. Sudden sink.
   C. Directional control difficulty.
   D. Sudden pitch changes.

3. A pilot maintains a steady 45 degree banked turn. The aeroplane is maintaining height and in balanced flight. If that pilot weighed 75 kg on the ground, what would be his weight if he could be weighed during the turn?
   A. 105 kg.
   B. 150 kg.
   C. 75 kg.
   D. 82 kg.

4. An aeroplane has a limit load factor of 6G at its maximum take-off weight of 600 kg. If the aeroplane is flown at 725 kg, at what G loading would it reach its loading limit.
   A. 6G.
   B. 3.7G.
   C. 5.4G.
   D. 4.9G.

5. From the following meteorological abbreviations, select the correct one
   A. SCT means 3-5 oktas of cloud cover.
   B. OVC means “Over valleys and creeks”.
   C. FEW means 1 to 2 oktas of cloud cover.
   D. DU means Dust Storm.

ANSWERS: 1. C, 2. A, 3. A, 4. D, 5. C

If you have any problems with these questions, call me(in the evening) and let’s discuss it! Ed.

Hours engine & Airframe -0 320
Cruise 70-75 knots @ 15 l/hr

Fan cooled Rotax 503 DCDI
6 hours endurance

With brakes
Registered

¼ Share for sale - $4500
A share in a WB Drifter 582 is being offered. The aircraft is based at Lynfield west of Brisbane.
!/4share price of $4500 (includes hangarage
Contact Kev Walters Tel 0488 488 104

REMEMBER

That the meeting date for the next BVSAC meeting has been changed to the 8th of April. It would normally have been held on the 1st April.

BRISBANE VALLEY SPORT AVIATION CLUB Inc

MINUTES OF THE March 2017GENERAL MEETING

MEETING LOCATION: Watts Bridge Memorial Airfield – BVSAC Clubrooms

MEETING DATE: 4 March 2017

MEETING OPENED: 1015hrs

MEMBERS PRESENT: 12
APOLOGIES: K.Hulse, M. Purdie, Liz Cook, Ian Ratcliffe, Peter Ratcliffe
VISITORS: Nil

MINUTES:

February meeting of the BVSAC Inc.
Proposed: Mike Smith. Seconded: Wayne Petty. Acceptance motion carried.

PRESIDENT'S REPORT:

BVSAC Hangar

Hangar repairs are complete.

SECRETARY'S REPORT:

Correspondence in –

- WBMA – update to proposed leasing arrangement
- WBMA – WBMA aircraft insurance scheme

Correspondence out – reminder emails to members who have not paid 2016/17 membership.

TREASURER'S REPORT:

Report for the 1 month period ending 28February 2017.
Income included additional payment from insurance company for claim for hangar repairs.
Proposed by Priscilla Smith Seconded by Peter Biddle.

- BVSAC ING account - $565.69
- BVSAC NAB account - $14,401.78

Payment still outstanding for hangar repairs. Treasurer to arrange payment.

AIRFIELD COUNCIL:

- Nil to report

WBMA REPORT:

- Plan to cut vetiver grass on 21/22 April. Volunteers needed to assist on both days.

BUSINESS ARISING:

- Nil

GENERAL BUSINESS:

- Richard Faint encouraged members to use the WBMA Forum. Recent posts have expressed some opposition to Home Base Groups HBGs). Need more members to join in discussion and support HBGs.
- Sandy Walker proposed the date for the April meeting be changed due to a clash with RAA event. Richard Faint proposed 8 April, seconded Peter Biddle. Passed.
- Wayne Petty has installed door from clubhouse to canteen and proposing to continue with further works in the canteen.
- Mike Smith led a discussion on the "Keeping Up With The Play" questions in the February newsletter.

NEXT MEETING: The next meeting will be on 8April 2017 in the BVSAC Clubrooms at Watts Bridge at10:00AM. A BBQ lunch will follow the meeting.

MEETING CLOSED: There being no further business, the meeting was declared closed at 1040 hrs.
A BBQ lunchwas held after the meeting.

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