

## **Internet, ACARS, HF and VHF Flight Tracking and Monitoring**

### **HF/VHF Airband Information**

#### **AirNav & HF/VHF**

AirNav is the most useful application for the HF/VHF air communications listener. AirNav first version was only to be used by HF/VHF listeners so all its background is based on this type of air communications listening. You can type what you have listened to in an easy to understand syntax and monitor and track the flights in one or more maps on your computer screen. Using Terminal Mode and Flight Management Mode you will be able to edit and see flight information like real life ATC controllers. You are able to create maps for any part of the world as well as draw many items over it such as ATC boundaries or VORs/NDBs/FIXs.

#### **General Info on HF Airband**

Air traffic control is one of the most fascinating subjects to monitor on HF. This band has a worldwide range so you can choose to hear almost any area you want. It is interesting to listen to areas like the North Atlantic where the traffic is very intensive but always interesting is to hear pilots over remote areas of the globe like the North Pole, Sahara or Indian ocean. All transmissions are done in USB (Upper Side Band) mode. Just tune your radio to one of the frequencies in the frequency section below and you will make an instantaneously trip to a cockpit in any part of the world.

#### **Help for Beginners**

For a novice user of AirNav, it's hard to listen and input at the same time the position reports given by flights or repeated by ATC. Not all users are clever typist so a "paper" logbook is still of great help. Here you find a sample in EXCEL format of a page of logbook that users can enjoy. By printing a few of them you have a scrap logbook to help you input the flights into AirNav.

#### **Standard air-ground message types and formats Info on air-ground messages used specially on the North Atlantic**

#### **POSITION REPORT**

To be used for routine position reports. The phraseology used to indicate the next position on the assigned route is "ESTIMATING" and for the following subsequent position "NEXT". Content and Data sequence:

- "Position"
- Flight Identification
- Present position
- Time over present position (hours and minutes)
- Present Flight Level
- Next position on assigned route or OCA entry point
- Estimated time for next position or OCA entry point
- Next subsequent position
- Any further information e.g. MET data or company message

#### **REQUEST CLEARANCE**

a) To be used in conjunction with a routine position report, to request a change of Mach Number, Flight Level or route and to request westbound Oceanic Clearance prior to entering Reykjavik and Santa Maria CTAs.

Content and Data sequence:

- "Request Clearance"
- Flight Identification
- Present or last reported position
- Time over present or last reported position (hours and minutes)
- Present Flight Level
- Next position on assigned route or OCA entry point
- Estimated time for next position or OCA entry point
- Next subsequent position
- Requested Mach Number, Flight Level or route
- Further information or clarifying remarks

b) To be used to request a change in Mach Number, Flight Level or route when a position report message is not appropriate.

- Content and Data sequence:
- "Request Clearance"
- Flight Identification
- Requested Mach Number, Flight Level or route
- Further information or clarifying remarks

## **REVISED ESTIMATE**

To be used to update time estimate for next position. Content and Data sequence:

- "Revised Estimate"
- Flight Identification
- Next position on route
- Revised estimate for next position (hours and minutes)
- Further information

## **MISCELLANEOUS MESSAGE**

To be used to update to pass information or make a request in plain language that does not conform with the content of other message format. No message designator is required as this will be inserted by the ground station.

Content and Data sequence:

- Flight Identification
- General information or request in plain language and format free.

Atlantic Mailing List

### ***Please note that list is completely independent from AirNav.***

However you can find there many AirNav users and airband listening enthusiasts

There is a very useful and interesting Mailing List that covers the HF airband topic. Whether you enjoy watching the flights passing overhead or listening to them on HF Radio, the object of this list is to provide more information on them, and making existing data more widely available.

- VHF/HF Radio logs of the various Stations controlling the flow of North Atlantic traffic such as Shanwick, Gander, New York, Iceland or Santa Maria on HF, and Gander, Moncton, Shannon, Scottish, London etc. on VHF.
- RTTY messages from Santa Maria and other aero stations.
- ACARS messages from Aircraft transiting the North Atlantic.
- Providing identification/tie-ups for non ACARS equipped aircraft, perhaps through selcal checks being heard on HF or by airport locals seeing the aircraft at departure/destination airports.
- Reporting of unusual transatlantic flights, either heard over the Atlantic on HF Radio, or over the US/Ireland/UK/Europe on VHF.
- Posting of lists of transatlantic overflights seen above the US or Europe.
- Information about selcal changes, new codes, unidentified codes heard etc.
- Airline and flight information, new operators on the Atlantic, new routes, changes in routes or aircraft types used on routes etc.
- General Air Traffic Control and Airways news, new frequencies, changes in practices for handling flights, new Airways/revisions to routings etc.
- Any other general information of interest to the Atlantic scene.

### ***How do I subscribe to the ATLANTIC List?***

Send a message to <[majordomo@qth.net](mailto:majordomo@qth.net)> and in the body of the message put "subscribe atlantic youremail@address", without the quotes. You will be automatically subscribed to the list and will start to receive mail immediately.

## ***HF Frequencies***

Click on one of the following regions to detailed information on HF frequencies:

## Africa - AFI

General: 2851, 2878, 3419, 3425, 3467, 4657, 5493, 5517, 5652, 6559, 6574, 6673, 8894, 8903, 11300, 11330, 13273, 13288, 13294, 17961

### AFI 1

Abidjan 6535, 6673, 8861  
Bamako 6673, 8861  
Bissau 6535, 8861, 13357, 17955  
Canaries 3452, 6535, 8861, 13357, 17955  
Casablanca 3452, 6535, 8861, 13357  
Conakry 8861  
Dakar 3452, 6535, 6673, 8861, 13357, 17955  
Freetown 6673, 8861  
Korhogo 6673  
Monrovia/Roberts 3452, 6673, 8861  
Nouadhibou 5670, 6673, 8861  
Nouakchott 5670, 6673, 8861  
Ouagadougou 6673  
Sanaa 5658  
Sal 3452, 6535, 8861, 13357, 17955

### AFI 2

Algiers 3419, 5652, 8894, 13273, 17961  
Ghardaia 5552, 8894  
Kano 13294 (6879, 9495)  
Maiduguri 5652  
N'Djamena 5652, 8894  
Niamey 3419, 5652, 8894, 13273, 13294  
Tamanrasset 3419; 5652, 8894, 13273, 17961  
Tripoli 3419, 5652, 8894, 13273  
Tunis 3411, 5519, 8826

### AFI 3

Addis Ababa 3467, 5517, 11300, 13268, 17961  
Aden 3467, 5517, 11300, 13288  
Benghazi 3467, 5517, 11300  
Bombay 3467, 5517, 13288  
Bujumbura 11300, 13288  
Cairo 3467, 5517, 6574, 11300, 13288  
Comores 5517, 11300  
Dar es Salaam 8879  
Djibouti (5505, 5659, 8959)  
Hargeisa 5517, 11300  
Jeddah 5517, 11300  
Khartoum 3467, 5517, 6574, 11300, 13288  
Kigali 5517, 11300, 13288  
Male 3467, 5517, 13288  
Mogadishu 5517, 11300  
Nairobi 3467, 5517, 11300  
Riyan 3467, 5517, 11300, 13288  
Sanaa 11300  
Seychelles 3467, 5517, 11300, 13288, 17961, (8903)  
Tripoli 5517, 11300

### AFI 4

Abidjan 13294, (6586)  
Accra 5493, 8903, 13294, (6586)  
Bangui 6559, 8903  
Brazzaville 2878, 5493, 6559, 8903, 13294, (8873)  
Bujumbura 8903, 13294  
Gaborone 5493, 13294, (6586, 8888)

Gbadolite 8903  
Johannesburg 6559, 21926 (8826)  
Kano 8903, 13294, (6879, 9495)  
Kisangani 8903  
Kinshasa 2878, 5493, 8903, 13294  
Kumasi 8903, (6586)  
Lagos 5493, 8903, 13294, (6586, 9495)  
Libreville 6559, 8903, (8873)  
Lome (6586)  
Luanda 2878, 5493, 8903, 13294  
Lubumbashi 8903  
Maiduguri 2878, 5493, 8903  
N'Djamena 2878, 5493, 8903, 13294  
Niamey 2878, 5493, 8903, 13294, (6586)  
Ouagadougou (6586, 6673)  
Sao Tome 5493, 8903, 13294  
Windhoek (8861)

**AFI-5**

Antananarivo 3476, 5634, 8879, 13306  
Beira 3425, 3476, 4657, 8879, 13306  
Bombay 8879, 10018  
Bujumbura 8879, 13306  
Cocos 3476, 5634, 8879, 13306, 17961  
Colombo 8879, 13306  
Comores 4657, 8879  
Dar es Salaam 8879, 11306  
Harare 8879, 3682, 6915, 8849, 8861  
Johannesburg 6559, 8826, 21926  
Mahajanga 4657, 8879  
Male 13306  
Mauritius 3476, 5634, 8879, 13306  
Nairobi 5634, 8879, 13306  
Perth 3476, 5634, 8879, 11306, 17961  
St. Denis 3476, 5634, 8879  
Seychelles 3425, 3476, 4657, 5634, 8879, 13306, 17961, 10018

**Caribbean - CAR**

General: 2887, 3455, 5520, 5550, 6577, 6586, 8846, 8918, 11387, 11396, 13297, 17907

**CAR**

Barranquilla 2887, 6577, 8918, 11387  
Bogota 8918  
Cayenne 5550, 8918  
Cenamer 2887, 5550, 6577, 8918, 11396, 13297  
Havana 2887, 5550, 6577, 8918, 11396, 13297, (13339)  
Maiquetia 5550, 6577, 8918, 13297  
Merida 2887, 5550, 6577, 8918, 11396, 13297, 17907  
New York 2887, 5550, 6577, 8918, 11396, 13297, 17907, (8846)  
Panama 6577, 8918, 11396, (5520)  
Paramaribo 5550, 6577, 8918  
Piarco 2887, 6577, 11387, 13297  
San Andres 6577, 8918, (6532, 6728, 10017)

**Central East Pacific - CEP**

General: 2869, 3413, 4657, 5547, 6673, 8843, 10057, 11282, 13300, 17904  
CEP

Honolulu 3413, 5547, 5574, 8843, 11282, 13288, 13354, 17904 San Francisco 2869, 3413, 5547, 5574, 6673, 8843, 10057, 11282, 13288, 13354, 17904

**Central West Pacific - CWP**

General: 2998, 3455, 4666, 5652, 5661, 6532, 6562, 8903, 10081, 11384, 13300, 17904  
CWP

Guam 2998, 6532, 8903, 11384, 13300, 17904  
Hong Kong 6532, 8903, 13300

Manila 2998, 6532, 6562, 8903, 13300, 17904  
Naha 2998, 4666, 6532, 8903, 11384, 13300  
Port Moresby 2998, 6532, 8903, 13300  
Seoul 2998, 6532, 8903, 13300  
Taipei 6532, 8903, 13300  
Tokyo 2998, 4666, 6532, 8903, 13300, 17904

## **East Asia - EA**

General: 3016, 3485, 5649, 5655, 6571, 8897, 8942, 10042, 11396, 13309, 17907, 17958  
EA-1

Beijing 3016, 6571, 8897, 10042, 17958  
Hailar 3016, 6571, 8897, 10042, 17958  
Guangzhou 3016, 6571, 8897, 10042, 17958  
Irkutsk 3016, 6571, 8897, 10042, 17958  
Jinan 3016, 6571, 8897, 10042, 17958  
Kunming 3016, 6571, 8897, 10042, 17958  
Lanzhou 3016, 6571, 8897, 10042, 17958  
Pyongyang 3016, 6571, 8897, 10042, 17958  
Shanghai 3016, 6571, 8897, 10042, 17958  
Shenyang 3016, 6571, 8897, 10042, 17958  
Taegu 3016, 6571, 8897, 10042, 17958  
Ulaanbaator 3016, 6571, 8897, 10042, 17958  
Urumqi 3016, 6571, 8897, 10042, 17958  
Wuhan 3016, 6571, 8897, 10042, 17958  
Zhengzhou 3016, 6571, 8897, 10042, 17958

### EA-2

Guangzhou 3485, 5649, 5655, 8942, 11396, 13309, 17907  
Irkutsk 3485, 5649, 5655, 8942, 11396, 13309, 17907  
Pyongyang 3485, 5649, 5655, 8942, 11396, 13309, 17907  
Ulanbaator 3485, 5649, 5655, 8942, 11396, 13309, 17907

## **Europe - EUR**

General: 3479, 5661, 6598, 10084, 13288, 17961  
EUR  
Beirut 2910, 4689, 8875  
Berlin 3479, 5661, 6598, 10084  
Malta 5661, 10084  
Tunis 4689

## **Middle East - MID**

General: 6625, 6631, 8918, 8951, 10018, 11375, 13288, 13312, 17961

### **MID-1**

Aden 5667, 8918  
Amman 2992, 5667, 8918, 13312  
Baghdad 2992, 5667, 8918  
Basrah 3404, 5603, 8847, 13336  
Beirut 3404, 5603, 8847, 13336  
Damascus 2992, 5667, 8918, 13312  
Jeddah 2992, 5667, 8918  
Kuwait 2992, 5667, 8918, 13312  
Riyan 5667, 8918  
Sanaa 8918  
Tehran 5667, 8918, 13312

### **MID-2**

Bombay 3467, 5658, 10018, 13288  
Delhi 3467, 5658, 10018, 13288  
Islamabad 5601, 2923  
Kabul 3467, 5658, 10018, 13288

Karachi 3467, 5601, 5658, 10018, 13288  
Kathmandu 5658, 10018  
Kuwait 5658, 10018, 13288  
Lahore 3467, 5601, 5658, 10018  
Male 3467, 5658, 10018, 13288  
Muscat 5658, 10018  
Peshawar 5601, 2923  
Seychelles 10018  
Shiraz 5658, 10018  
Tehran 5658, 10018, 13288

### **North Atlantic - NAT**

General: 5598, 5616, 5649, 6622, 6628, 8825, 8831, 8864, 8879, 8891, 8906, 11279, 11309, 11336, 13291, 13306, 17946

#### **NAT-A**

Canaries 3016, 5598, 8906, 13306, 17946

#### **NAT-B**

Gander 2899, 5616, 8864, 13291  
Reykjavik 2899, 5616, 8864, 13291  
Shanwick 2899, 5616, 8864, 13291, 17946

#### **NAT-C**

Gander 2872, 5649, 8879, 11336, 13306  
Reykjavik 2872, 5649, 8879, 13306  
Shanwick 2872, 5649, 8879, 11336, 13306, 17946

#### **NAT-D**

Bodo 2971, 4675, 8891, 11279, 4666, 6544, 8840  
Cambridge Bay 2971, 4675, 8891, 11279  
Churchill 2971, 4675, 8891  
Montreal 2971, 4675, 8891, 11279  
Kangerlussuaq 2950, 5526, 8945, 10042  
Reykjavik 2971, 4675, 8891, 11279, 13291  
Shanwick 2971, 4675, 8891, 13291, 17946

#### **NAT-E**

New York 2962, 6628, 8825, 11309, 17946  
Santa Maria 2962, 6628, 8825, 11309, 17946

#### **NAT-F**

Gander 3476, 6622, 8831, 13291  
Shanwick 3476, 6622, 8831, 13291

### **Other Areas**

NCA (North Central America) 2851, 3004, 3019, 4678, 5646, 6592, 100039, 10096, 13303, 17958  
NP (North Pacific) 2932, 5628, 6655, 6661, 10048, 11330, 13300, 17904  
SAM (South America) 2944, 3479, 4669, 5526, 6649, 8855, 10024, 10096, 11360, 13297, 17907  
SAT (South Atlantic) 2854, 2935, 3452, 5565, 6535, 8861, 11291, 13315, 13359, 17955  
SEA (South East Asia) 3470, 3485, 5649, 5655, 6556, 8942, 10066, 11396, 13309, 13318, 17907  
SP (South Pacific) 3467, 5559, 5643, 8867, 10084, 11327, 13300, 17904