



ICAO

SAFETY

# Frequency Finder

## 3 Test Frequency



Workshop

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## Test Frequency (1)

- Click button *Test Frequency* on window *COM list 3*
- Options:
  - Test Single Frequency
  - Test found frequencies  
(all frequencies in the found-set)
- As desired by the user, the calculation results can be displayed on a map with Google Earth.
- When the calculations are completed the window *Summary Calculations* is displayed



## Test Frequency (2) Summary calculation results (1)

COM Data Base (COM LIST 3) Summary Calculations												ST	
Active Region ==APAC		Regional COM list		Delete all records		Redo calculations		Co-frequency details		Adj. frequency details			
Date	Key	D	Frequency	Region	Country	Location	Service	Margin	Result	Co. freq.	Margin	Result	Adj. freq.
17_Sep_2016 11:31:31	05952	R	126.500	EUR	Libya	BENGAZI ACC	ACC	-441	Not compatible	382	Compatible		
17_Sep_2016 10:31:18	05952	R	126.500	EUR	Libya	BENGAZI ACC	ACC	-441	Not compatible	382	Compatible		
17_Sep_2016 8:53:41	00065	R	136.350	EUR	Albania	TIRANA ACC	ACC	-199	Not compatible	134	Compatible		

- Presents most recent and earlier test results
- Option to redo earlier tests with button with button *Redo* or click in field *Co-frequency details*
- Option to view detailed co- and adjacent calculation results of the most recent test. Click button Co- or Adj frequency details
- Alternatively the user can navigate to the window *Summary Calculations* with the button *Calculation Results* on the window COM list 3



# Test Frequency (3)

## Detailed calculation results – Co-frequency (1)

Frequency Finder

COM Data Base (COM LIST 3) Details Co-frequency compatibility Calculation of CO-frequency separation distances Plot interference - All ST

Regional COM list 15 / 15 records Show all records Go to Adj channel calc Go to Summary calc.

Test for the frequency ....

1	Key R 00065	Frequency 136.350	Range 261	Height 45000	Radio Horizon 261	Sectorname 28	Latitude 41D17'00" N	Service ACC
	Region EUR	Country Albania			Location TIRANA ACC		Longitude 019D47'00" E	DOC ACC A-450
		Not compatible with record #2, #3, #4		Margin -199 NM	Not compatible		ACC (Upper assumed) Area	Ext. range Plot coverage

First record is station being tested, records below are stations against which the first station has been tested.

Compatibility calculations between unprotected services are only shown for information.

2	Key R 300194	Frequency 136.350	Range 194	Height 25000	Radio Horizon 194	Sectorname	Latitude 32D05'00" N	Service ACC-L
	Region AFI	Country Libya			Location BENGHAZI ACC		Longitude 020D17'00" E	DOC ACC-L C-194/250
		The distance is measured between the edge of the area service (closest point) in record 1 and the location of the station in the current record		Actual distance 450 NM	Required distance 649 NM	Margin -199 NM	Not compatible ACC Lower Circular Ext. range Plot interference	

3	Key R 05951	Frequency 136.350	Range 194	Height 25000	Radio Horizon 194	Sectorname 1198	Latitude 32D05'00" N	Service ACC
	Region EUR	Country Libya			Location BENGHAZI ACC		Longitude 020D17'00" E	DOC ACC A-250
		The distance is measured between the edge of the area service in record 1 and the edge of the area service in the current record (closest points)		Actual distance 353 NM	Required distance 455 NM	Margin -102 NM	Not compatible ACC (Upper assumed) Area Ext. range Plot interference	

- Displays for each frequency against which the new/modified frequency has been tested details of the compatibility between the two frequency assignments



## Test Frequency (4)

### Detailed calculation results – Co-frequency (2)

- Details include
  - Actual distance between the two stations
  - Minimum required distance
  - Margin in NM (positive figure means frequency assignment are compatible; negative figure means frequency assignments are not compatible)
  - Message “Compatible” or “Not Compatible”
  - If the station is part of an extended range family
  - If the station is linked to a specific area (polygon)



## Test Frequency (5)

### Detailed calculation results – Co-frequency (3)

#### Buttons (1)

- Regional COM list
  - Returns COM list 3 with the selected frequency
- Show all records
  - Show all records used in the calculation
- Go to Adj channel calc.
  - Navigate to the window with adjacent channel calculation results
- Go to Summary calc.
  - Navigate to the window with summary calculation results



## Test Frequency (5)

### Detailed calculation results – Co-frequency (3)

#### Buttons (2)

- Plot interference – all
  - Plot compatibility of all frequency assignments in the table
- Plot coverage
  - Plot coverage of the station that has been tested
- Plot interference
  - Plot interference or compatibility of the station that is being tested with the selected station against which compatibility is tested.



## Test Frequency (6)

### Detailed calculation results – Adjacent frequency (1)

The screenshot shows the 'Frequency Finder' application window. The title bar reads 'Frequency Finder'. The main window has a header with 'COM Data Base (COM LIST 3) Details Adj-frequency compatibility' and 'ADJACENT frequency compatibility'. Below the header, there are buttons for 'Regional COM list', '2 / 55 records', 'Show all records', 'Go to Co-channel calc.', 'Go to Summary calc.', and 'Plot interference - All'. The main content area displays three records:

Key	R	Region	Country	Location	Frequency	Range	Service	DOC AS
1	05365	EUR	Netherlands	ROTTERDAM ROTTERDAM	121.775	5 NM	AS	C-5/1
		Actual Distance	0 NM	Required Distance	10 NM	Margin	-10 NM	Compatible *
The distance is measured between the location of the station in record 1 and the location of the station in the current record.								
* For information only; States need to secure a minimum separation distance of 10 NM between the transmitting / receiving stations in record 1 and the current record. User Manual § 4.9.6.3.3.15								
2	05363	EUR	Netherlands	ROTTERDAM ROTTERDAM	121.750	5 NM	AS	C-5/1
		Actual Distance	0 NM	Required Distance	10 NM	Margin	-10 NM	Compatible *
The distance is measured between the location of the station in record 1 and the location of the station in the current record.								
3	02150	EUR	Belgium	BRUXELLES NATIONAL	121.750	5 NM	AS	C-5/1
		Actual Distance	63 NM	Required Distance	10 NM	Margin	53 NM	Compatible
The distance is measured between the location of the station in record 1 and the location of the station in the current record.								
For information only								

- Displays for each frequency against which the new/modified frequency has been tested details of the compatibility between two adjacent frequency assignments



## Test Frequency (7)

### Detailed calculation results – Adj-frequency (2)

- Details include
  - Actual distance between the two stations
  - Minimum required distance
  - Margin in NM (positive figure means frequency assignment are compatible; negative figure means frequency assignments are not compatible)
  - Message “Compatible” or “Not Compatible”
  - If the station is linked to a specific area (polygon)



## Calculation results (1)

- Button Calculation results.
  - Navigates to the window with the summary of previous compatibility calculations.
- Re-do earlier calculations when COM list 3 was modified
- Navigate to windows with detailed compatibility analysis for co- and adjacent frequency assignments
- More information in slides with Test Results