



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



Frequency Finder

Easy Reference for Exercise



Workshop/Training on “Frequency Finder 2023” application

Lima, Perú | 29 May to 02 June 2023

Prepared by

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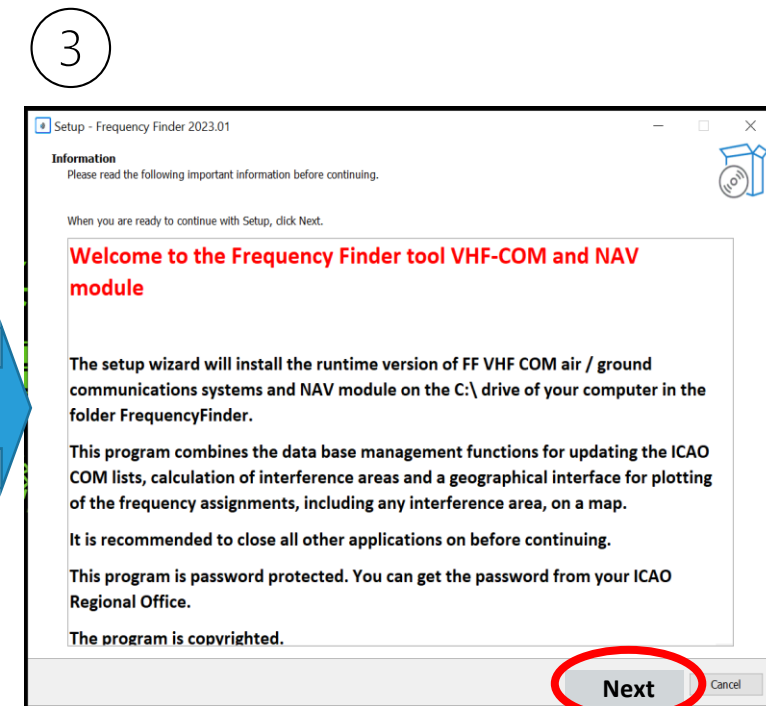
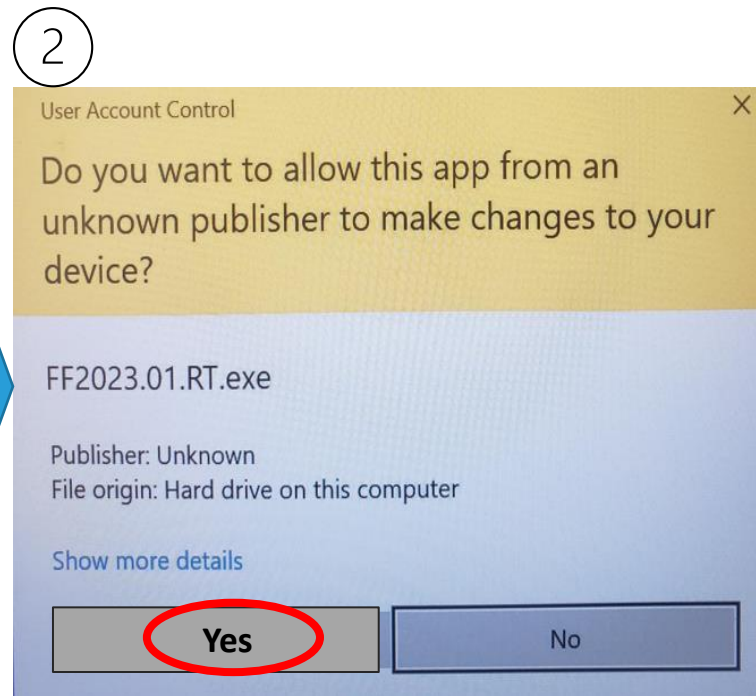
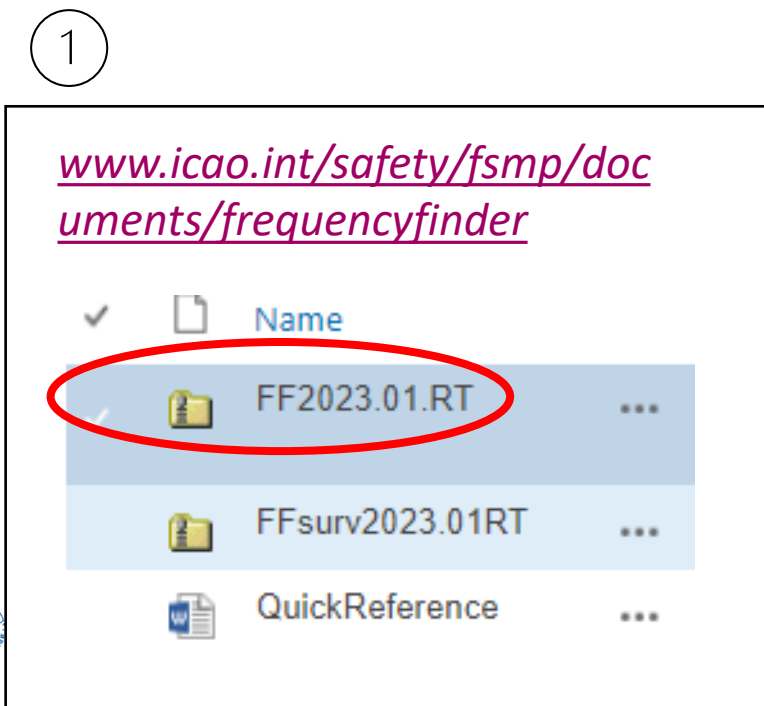
Robert Witzen

Prep for FF operation

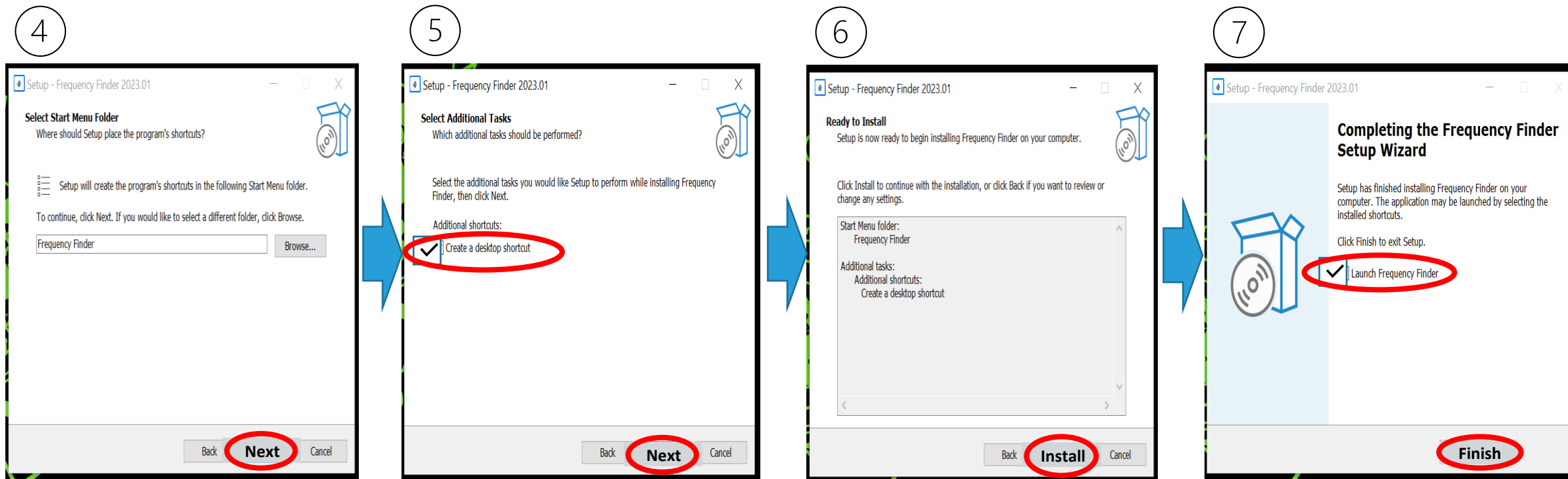
1. Download Runtime version of the Frequency Finder
 - **Download** from the FSMP website the zip-file ***FF2023.01.RT.exe***
www.icao.int/safety/fsmp/documents/frequencyfinder
 - Remove earlier version of Frequency Finder, if any.
 - **Unzip and run the installer file FF2023.01.Rsetup.exe**
 - Select to create desktop icon

--See next slides

1. Go to the FSMP website. Unzip and run the installer file (**FF2023.01.RT.exe**)
2. Click “Next” in the Welcome to the Setup Wizard message
3. Click “Next” in the Welcome to Frequency Finder message



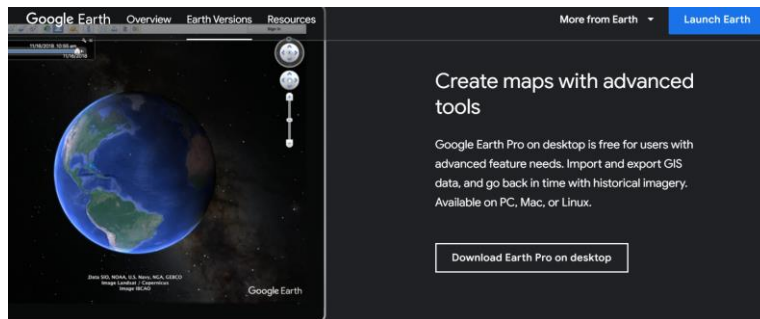
4. Click “Next” in Select Start Menu Folder
5. Check to Create a desktop shortcut and click “Next” in Select Additional Tasks message
6. Click “Install” reply to a message, Ready to Install,
7. Check to Launch Frequency Finder and click “Finish” in Completing the Frequency Finder Setup Wizard.



Prep for FF operation

2. Download and install google Earth

<https://www.google.com/earth/versions/#earth-pro>



The following settings in Google Earth are recommended:

Tools -> Options

- > Navigation -> set Fly-To Speed to Fast
- > Navigation -> Click “Do not automatically tilt while zooming”
- > General-> click KML Error Handling: Silently accept all unrecognized data.

3. More details can be found in the user manual:

(Installing Frequency Finder(Run-time version))

This PC > Windows (C:) > FrequencyFinder

- User manual - Import Submissions.docx
- User manual - InstallFullRegionalOffices.docx
- User manual - InstallRuntime2017.docx
- User manual - Planning criteria Mode S II.docx

Exercises- Start page/Home page

Open Frequency Finder - Start page

Frequency Finder
Version FF_2023.01

User Manual Time Zone -5
Sync Manual Application Runtime

Server: https://frequency.icao.int/ffopen/

The server http://frequency.icao.int/fflogin is not operational until the compatibility issues with Windows 10 have been addressed.

Select from the field below the Region from which you are operating

MID

<210> Enter Password
Enter Password
You can get the password from the Regional Office.
Password
OK

VHF.COM This is a beta version for which tests have not yet been completed. This version should only be used for initial testing/testing of the provided.

Add the password to open the Start page

You might get this message



– select “Yes”

FF

“Frequency Finder.fmpur” is not authorized to open the protected file “FF-ICAO FIR.fmpur”.

Do you want to authorize it?

(authorization is a one-time operation that requires full access privileges for both files)

Yes No

Start page and the selection of VHF-COM module

Select your region

==SAM

or

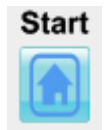
==CAR

You can select from COM and NAV

Click "VHF COM"



Start page and VHF Home page



① Click "SAM"

The ICAO Regional Officers are responsible for the coordination of frequency assignments.

② Click "VHF COM"

You might get this message.

- select "Yes"

Home page VHF COM

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

Start **VHF COM air/ground communication systems 117.975 - 137 MHz** User Manual Sync Manual Check Sync

Version: **FF_2023_01** User: Application: **Runtime** Connection status: **Connected** Time Zone: **-4**

Server: <https://frequency.icao.int/ffopen/> **Download**

Go to COM list 3:

- AFI
- APAC
- CAR
- EUR
- MID
- SAM** Active Region
- GLOBAL

Synchronization (all times in UTC; dd/mm/yyyy hh:mm:ss):

Check Sync

Download COM 20/05/2023 8:19:50 AM
 Sync status COM COM list 3 synchronized

Recent downloads from Global COM list 3 and Global table of polygons

Download ICAOFIR 05/07/2018 0:32:24
 Download Poly Safire 17/12/2022 3:07:29 AM
 Sync status Poly Table of Polygons synchronized

Recent uploads to Global COM

COM AFI synchronized	21/04/2023 5:00:07 PM	UTC
COM APAC synchronized	08/05/2023 7:46:45 AM	UTC
COM CAR synchronized	21/02/2023 9:15:15 PM	UTC
COM EUR synchronized	08/06/2022 1:11:49 PM	UTC
COM MID synchronized	18/05/2023 10:32:47 AM	UTC
COM SAM synchronized	20/05/2023 8:19:50 AM	UTC
COM EUR/NAT synchronized	08/06/2022 1:11:49 PM	UTC
COM EUR/SAFIRE synchronized	08/06/2022 1:11:49 PM	UTC
Polygons Safire synchronized	13/12/2019 2:17:08 AM	UTC
All Polygons Safire reloaded:	13/12/2019 2:17:08 AM	UTC

Summary COM:
 20/05/2023 8:19:50 AM

LOCAL BACK UP

Recover from local back-up
 dd/mm/yyyy



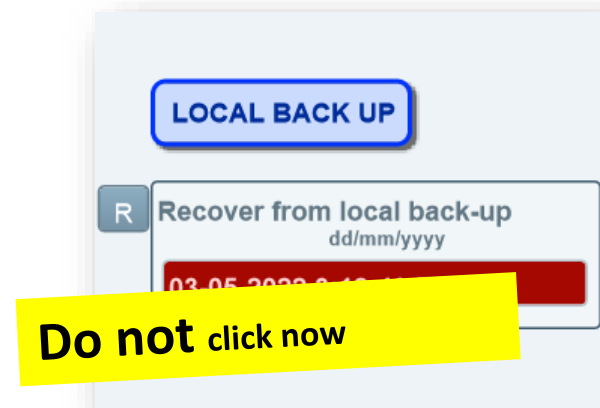
Home page VHF COM list 3

Back-up and recovery

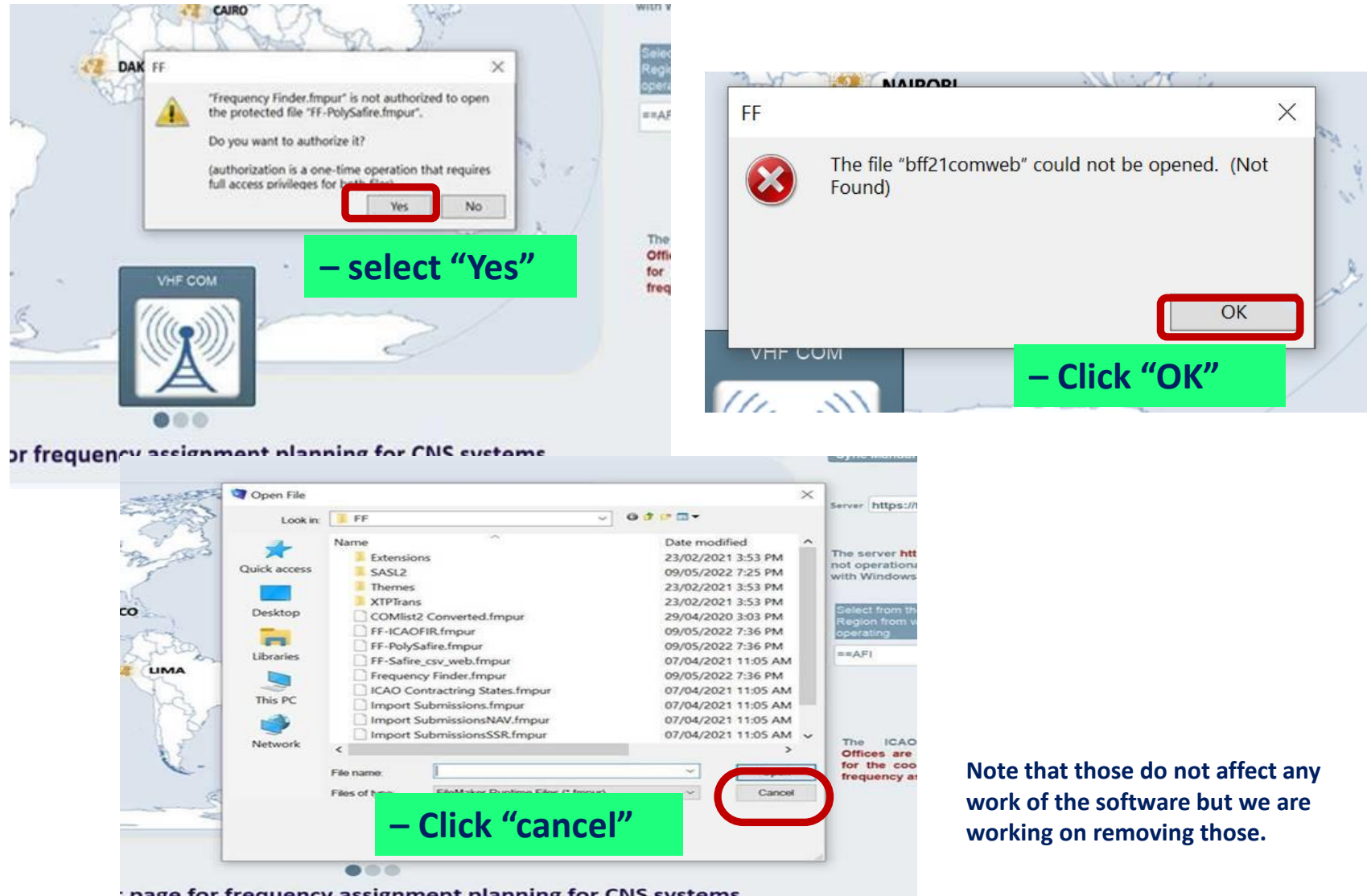
- Click “LOCAL BACK UP” to create a backup
- Click “R” to recover from local backup
- See user manual 4.4.4.2 to recover from a back-up created with an earlier version of Frequency Finder

Important

Please do not click during workshop on “local backup” as it will slow down your internet connection to create a backup



You might get following messages below.



Note that those do not affect any work of the software but we are working on removing those.

VHF COM air/ground communication systems 117.975 - 137 MHz

Start User Manual Sync Manual Check Sync

Version: **FF_2023.01** User: **FF-MID** Application: **Runtime** Connection status: **Connected** Time Zone: **-5**

Server: Download

Go to COM list 3:

- AFI
- APAC
- CAR
- EUR
- MID
- SAM** Active Region
- GLOBAL

Synchronization

Check Sync

Recent downloads from Global COM list 3 and Global table of polygons

Recent uploads to Global COM

Summary COM:	COM
20/12/2022 5:13:25 AM	COM
COM SAM synchronized	16/02/2022 10:44:10 PM UTC
COM EUR/NAT synchronized	08/06/2022 1:11:49 PM UTC
COM EUR/SAFIRE synchronized	08/06/2022 1:11:49 PM UTC
Polygons Safire synchronized	13/12/2019 2:17:08 AM UTC
All Polygons Safire reloaded:	13/12/2019 2:17:08 AM UTC

LOCAL BACK UP

R Recover from local back-up dd/mm/yyyy

16-12-2022 10:07:21 PM

<2B> Update COM list 3

The global COM list 3 was modified.

Click "Download" to download these modifications.
Click "Cancel" to cancel downloading..


Cancel Download

Click Download

Exercises- Integrity Check



Start page and VHF Home page

Start 

VHF COM air/ground communication systems 117.975 - 137 MHz

User Manual

Sync Manual

Check Sync


Version

FF_2023.01

User

Application

State



Active Region

==SAM

Connection status

Connected

Time Zone

-5

Server

Download

Synchronization (all times in UTC; dd/mm/yy hh:mm:ss):

Check Sync

Recent downloads from Global COM list 3 and Global table of polygons

Download COM	28-12-2022 4:28:52 PM
Sync status COM COM list 3 synchronized	
Download ICAOFIR	05/07/2018 1:32:24
Download Poly Safire	13/12/2019 2:33:26 AM
Sync status Poly Table of Polygons synchronized	

Recent uploads to Global COM	COM AFI synchronized	01/12/2022 11:36:31 AM UTC
	COM APAC synchronized	20/12/2022 5:13:25 AM UTC
	COM CAR synchronized	08/11/2021 7:09:12 PM UTC
	COM EUR synchronized	08/06/2022 1:11:49 PM UTC
	COM MID synchronized	02/11/2022 8:35:33 AM UTC
	COM SAM synchronized	16/02/2022 10:44:10 PM UTC
	COM EUR/NAT synchronized	08/06/2022 1:11:49 PM UTC
	COM EUR/SAFIRE synchronized	08/06/2022 1:11:49 PM UTC
Summary COM:		
	20/12/2022 5:13:25 AM	
	Polygons Safire synchronized	13/12/2019 2:17:08 AM UTC
	All Polygons Safire reloaded:	13/12/2019 2:17:08 AM UTC

Go to COM list 3:

AFI

APAC

CAR

EUR

MID

SAM Active Region

GLOBAL

LOCAL BACK UP

Recover from local back-up
dd/mm/yyyy

16-12-2022 10:07:21 PM

① Click "SAM" or "CAR"

② "Integrity Check" will start –
See Next slide



Start page and VHF Home page

File Edit View Insert Format Records Scripts Tools Window Help

Start **VHF COM air/ground communication systems 117.975 - 137 MHz** User Manual Sync Manual Check Sync

Version User Application State **==SAM** Connection status **Connected** **Not Connected. You can continue working OFF-LINE** VIEW ROUTES Time Zone -4

Active Region

Server <https://frequency.icao.int/fflogin/> Download

Synchronization (all times in UTC; dd/mm/yyyy hh:mm:ss):

Check Sync Download COM 11/05/2022 1:22:29 PM Sync status COM Global COM list 3 modified

Recent downloads from Global COM list 3 and Global table of polygons

Download ICAOFIR 05/07/2018 0:32:24 Download Poly Safire 13/12/2019 2:33:26 AM Sync status Poly Table of Polygons synchronized

<2B> Update COM list 3

The global COM list 3 was modified.

Click "Download" to download these modifications. Click "Cancel" to cancel downloading..

Click **Download**

Cancel Download

Go to COM list 3:

AFI APAC CAR EUR MID ^① SAM Active Region GLOBAL

LOCAL BACK UP

R Recover from local back-up dd/mm/yyyy 03-05-2022 3:18:40 PM

All Polygons Safire reloaded: 13/12/2019 2:17:08 AM

② "Integrity Check" will start" – See Next slide

Integrity Check

Frequency Finder

Runtime 16.0.6 Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 137 MHz

Start Home Global COM list 3 New or Mod or Del Freq. TEST FREQUENCY Calculation results

MID COM list 3 SELECT Single Station Export COM list 3 Special Functions

total found 29098 1675 Query Integrity check completed - Export submissions -

MOD Key Region Frequency Country DOC FIR Sector PolyID Extended Range Cat

MOD	Key	Region	Frequency	Country	DOC	FIR Sector	PolyID	Extended Range	Cat
R	600000	MID	122.750	Bahrain	BHR	AS C-5/1			NAT
R	600001	MID	126.700	Bahrain	BHR	ACC-U C-260/450			ICAO
R	600002	MID	127.850	Bahrain	BHR	APP-U C-150/450			ICAO
R	600003	MID	122.300	Bahrain	BHR	APP-U C-150/450			ICAO
R	600004	MID	125.700	Bahrain	BHR	FIS-U C-260/450			NAT

<57> Empty fields

The integrity check has found 17 frequency assignments with empty essential fields or coordinates which are set to 00D00'00'.

Click "Keep" to keep these frequency assignments in your local COM list 3. This is NOT RECOMMENDED.

Click "Terminate" to terminate the integrity check and add the required data in the empty fields.

Terminate Keep

Integrity Check – Empty Essential Field

Click **"Keep"** to continue integrity check

If you have data with you and can correct some of them, then Click **"Terminate"** to correct data

Frequency Finder

Runtime 16.0.6 Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 137 MHz

Start Home Global COM list 3 New or Mod or Del Freq. TEST FREQUENCY Calculation results

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R	600002	MID	127.850	Bahrain	BHR	APP-U C-150/450			ICAO
R	600003	MID	122.300	Bahrain	BHR	APP-U C-150/450			ICAO
R	600004	MID	125.700	Bahrain	BHR	FIS-U C-260/450			NAT

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Click "Terminate" to terminate the integrity check and add the required data in the empty fields.

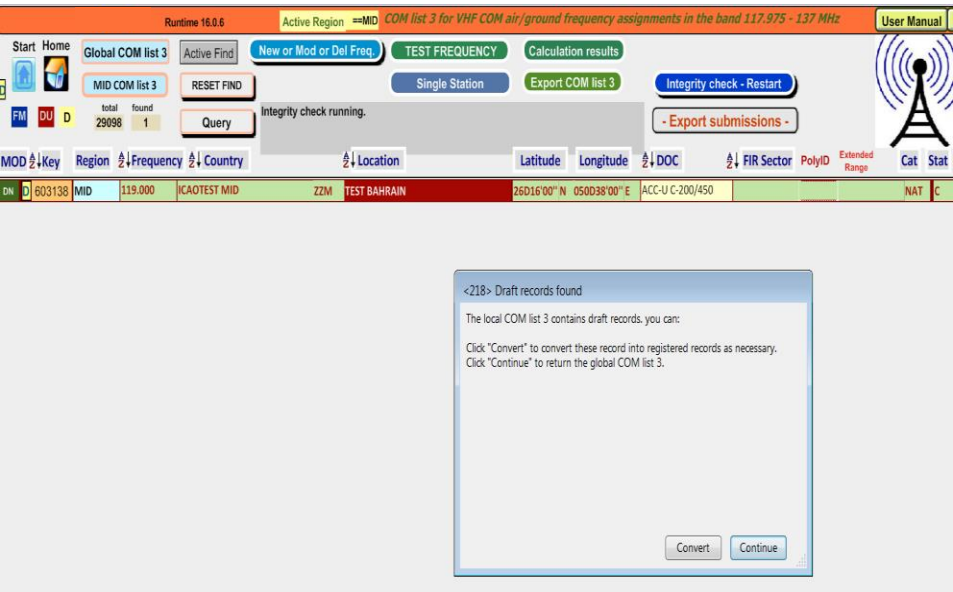
Terminate Keep

Integrity Check – Outside the range

Click **"Keep"** to continue integrity check

If you have data with you and can correct some of them, then Click **"Terminate"** to correct data

Integrity Check



Integrity Check – Draft Records

Click **“Continue”** to continue integrity check

If you finished drafting and believe you can convert/delete them as registered/deleted frequency, then you can click **“convert”** to correct data

Integrity check is completed!

Now you are in the COM List 3

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
R	600000	MID	122.750	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	AS C-5/1
R	600001	MID	126.700	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	ACC-U C-260/450
R	600002	MID	127.850	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	APP-U C-150/450
R	600003	MID	122.300	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	APP-U C-150/450
R	600004	MID	125.700	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	FIS-U C-260/450
R	600005	MID	122.450	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	AS C-5/1
R	600006	MID	127.200	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	ATIS B-260/450
R	600007	MID	121.900	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	AS C-5/1
R	600008	MID	121.850	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	AS C-5/1
R	600009	MID	119.100	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	TWR C-25/40
R	600010	MID	118.500	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	TWR C-25/40
R	600011	MID	128.800	Bahrain	BHR BAHRAIN	26D16'00" N	050D38'00" E	VOLMET B-260/450

Exercises- Query

Integrity check is completed!

Query

Now you are in
the Regional
COM List 3

Click "Query"

Frequency Finder

FF_2023.01 Runtime Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 137 MHz

Start Home Delete Record NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 SELECT MAPPING Export COM list 3 Special Functions

30724 total 1759 found Query Reset Export submissions -

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC	FIR Sector	PolyID	Extended Range	F	Cat	Stat	Remarks
R	601511	MID	127.575	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-L C-194/250					ICAO	M	VHF extension to SI
R	601512	MID	128.775	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-L C-194/250					ICAO	M	VHF extension to SI
R	602355	MID	129.425	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-L C-194/250					ICAO		TEST; added by RW
R	602194	MID	120.550	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	instead of 120.725
R	602163	MID	120.725	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	X	Fi; Also ACC-L
R	602175	MID	120.925	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	31/1/07 replace 12
R	602171	MID	125.950	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	27/11
R	602172	MID	125.975	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	27/11
R	602223	MID	126.125	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	Surveillance radar
R	602224	MID	126.175	Bahrain	BHR BAHRAIN	26D17'00" N	050D38'00" E	ACC-U C-260/450					ICAO	N	Surveillance radar

Select "information" required for your investigation

Click "Find"

Frequency Finder

Home Regional COM list Query COM List 3 Enter your QUERY

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==MID Frequency No Frequency selected Find

Country ==Bahrain Service No Service selected

Location ==BAHRAIN INTERNATIONAL FIR Sector No FIR name selected

Ext. Range No ER selected

Last Query - parameters

==APAC

==Pakistan

[Modify/redo] last find

1. Select criteria for the query from the fields in the blue box

2. Select geographic parameters (Region, Country and Location) first, if required

3. Select Frequency or Service or FIR Sector or Extended Range, if required

Note: combinations of frequency, service and sector and Extended Range are not permitted since these may result in non-matching find criteria. Select only Frequency OR Service OR FIR Sector OR Extended Range

4. Press FIND

To delete parameters for the query click button New Query

Use this window to only enter criteria for your query

VHF-COM VHF-COM CNS/AIRS VHF COM Frequency Assignment Planning VHF-COM VHF-COM Frequency Finder has been activated for the Region ==MID

Then you will see the outcome of your Query

Query

Query – Select Frequency, Service or FIR Sector

Selection of Frequency, Service or FIR Sector is mutually exclusive.
Only one (1) parameter can be selected.

Button **Find** returns the COM list 3 with the found frequencies, Services or FIR Sectors for the selected:

Region, If no Country/Location was selected

Country, if no Location was selected

Location, if a Location was selected

Button **New Query** – Enter or re-enter query parameters

Button **Modify/Redo last find**: Enters the query parameters for the most recent query

Button **Regional COM list 3** – Returns the COM list 3 for the Active Region

Exercises- Query

Exercises for SAM States

Exercise 1 for SAM- Query database

– French Guyana– CAMOPI – 122.700

Exercise 2 for SAM - Re-do and modify query

–Panama– Cerro Galera – APP-I

Exercises for CAR States

Exercise 1 for CAR- Query database

– Costa Rica– Cerro Brujo – 129.500

Exercise 2 for CAR- Re-do and modify query

–Aruba– ORANJESTAD Reina Beatric – TWR

Exercise 3 for both regions: Go back to SAM/CAR COM List 3 and return the results of the last Query

Exercise 4 for both regions: Find all frequency assignments for the service TWR in your country.

Exercise 5 for SAM- Select frequencies (select several frequencies)

- Select Panama- CERRO CANAJAGUA -126.900, 133.000 and 135.900

Exercise 5 for CAR- Select frequencies (select several frequencies)

- Select Aruba– ORANJESTAD Reina Beatric - 118.000, 118.100 and 120.900

Exercises- Test frequency

Exercises- Test frequency

Exercises for SAM States

1. Perform compatibly test – single frequency
 - Query: Ecuador, LATACUNGA COTOPAXI, Frequency 118.500
 - Click test frequency and single frequency
2. Perform compatibility test - found frequencies
 - Select Chile– CALAMA 118.700, 119.000 and 131.200
 - Click Add Records
 - Then click Test frequencies and found frequencies

Exercises for CAR States

1. Perform compatibly test – single frequency
 - Query: Belize, BALDY BEACON CENMER, Frequency 123.900
 - Click test frequency and single frequency
2. Perform compatibility test - found frequencies
 - Select Barbados– Bridgetown Grantley Adams Intl 118.700, 120.700 and 121.200
 - Click Add Records
 - Then click Test frequencies and found frequencies

3. Exercise for both regions: Perform compatibility tests in your country. For example, find all frequency assignments for the service TWR in your country and perform compatibly test.

Exercises

Test Frequency & Understand the result

Test Frequency (Case 1: CAR)

– Example: Guatemala 122.900 MHz

1. Select criteria for the query from the fields in the blue box
 2. Select geographic parameters (Region, Country and Location) first, if required
 3. Select Frequency or Service or FIR Sector or Extended Range, if required
 Note: combinations of frequency, service and sector and Extended Range are

- ① Click **“Query”**
- ② Select State: **Guatemala**
Frequency: **122.900 MHz**
- ③ Click **“Find”**

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC	FIR Sector	PolyID	Extended Range	F	Cat	Stat	Remarks
R	601873	MID	120.700	Saudi Arabia	ARS ABHA	18D14'25" N	042D39'23" E	AOC U-100/250					NAT	C	Radio link to Air Base
R	601999	MID	120.700	Saudi Arabia	ARS KMC	27D53'54" N	045D31'48" E	APP-L C-50/120					NAT	C	Also TWR

Frequency Finder found 1 entry with the 120.700 MHz in Guatemala
 Select Key 500509 (Guatemala)

- ④ Click **“Test Frequency”**
- ⑤ Select **“Single frequency”**



Test Frequency (Case 1: CAR)

– Example: Guatemala 122.900 MHz

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

FF_2023.01 Runtime Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 1

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Export COM list 3 Special Functions

30724 total 2 found MID COM List 3 Query

Query active. To return query click button "Active Find" To cancel query: click button "RESET QUERY"

FM DU D Quick Find Reset

MOD Key Region Frequency Country Location Latitude Longitude DOC FIR Sector PolyID Extend Range

R	601873	MID	120.700	Saudi Arabia	ARS	ABHA	18D14'25"N	042D39'23"E	AOC U-100/250			
R	601999	MID	120.700	Saudi Arabia	ARS	KKMC	27D53'54"N	045D31'48"E	APP-L C-50/120			

Present results of compatibility tests on a map

Click "Map" to plot the results of compatibility tests on a map. Click "No Map" to continue without plotting the results of the compatibility tests on a map. Click "Cancel" to cancel the compatibility tests.

No Map Cancel Map

⑥ Select **"Map"** if you want to see the result on Map as well

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

COM Data Base Active Region MID ST

Regional COM list Summary Calculations Delete all records Co-frequency details Adj. frequency details

Re-do calculations

Date	Key	F	Frequency	Region	Country	Location	Service	Margin	Result	Margin	Result	Adj. freq.
15_Dec_2022 10:43:41	R	120.700	MID	Saudi Arabia	ABHA	AOC	-538	Not compatible	---	Compatible		
15_Dec_2022 10:26:02	R	120.700	MID	Saudi Arabia	ABHA	AOC	-538	Not compatible	---	Compatible		
15_Dec_2022 10:15:20	R	127.700	MID	Saudi Arabia	KHAYBAR	ACC-U	-718	Not compatible	---	Compatible		
15_Dec_2022 9:41:55	R	127.700	MID	Saudi Arabia	KHAYBAR	ACC-U	-718	Not compatible	---	Compatible		
15_Dec_2022 9:25:43	R	127.700	MID	Saudi Arabia	KHAYBAR	ACC-U	-718	Not compatible	---	Compatible		
15_Dec_2022 9:22:33	R	124.100	MID	Saudi Arabia	RIYADH KING K I	APP-I	-490	Not compatible	---	Compatible		
15_Dec_2022 9:10:56	R	132.125	MID	Oman	Sohar	ACC-U	-941	Not compatible	71	Compatible		
15_Dec_2022 9:10:53	R	132.125	MID	Oman	Muscat	ACC-U	-941	Not compatible	172	Compatible		
15_Dec_2022 9:05:15	R	132.125	MID	Oman	Muscat	ACC-U	-941	Not compatible	172	Compatible		
15_Dec_2022 9:02:13	R	132.125	MID	Oman	Muscat	ACC-U	-941	Not compatible	172	Compatible		
15_Dec_2022 1:29:06	R	132.125	MID	Oman	Muscat	ACC-U	-941	Not compatible	172	Compatible		
15_Dec_2022 1:26:31	R	132.125	MID	Oman	Muscat	ACC-U	-941	Not compatible	172	Compatible		
15_Dec_2022 1:25:59	R	131.475	MID	Oman	Muscat	AOC	-383	Compatible, variant	---	Compatible		
15_Dec_2022 1:25:41	R	128.150	MID	Oman	Muscat	ACC-U	-344	Not compatible	-1	Compatible *		
15_Dec_2022 1:24:52	R	132.100	MID	Kuwait	KUWAIT	ACC-U	-318	Not compatible	217	Compatible		
15_Dec_2022 1:23:50	R	135.850	MID	Kuwait	KUWAIT	ACC-U	-181	Not compatible	---	Compatible		
15_Dec_2022 1:22:16	R	121.075	MID	Kuwait	Al Ahmadi	APP-L	792	Compatible	131	Compatible		
08_Dec_2022 10:59:45	1							No test results	Perform test first			

⑦ Summary Calculation is displayed

⑧ Click **"Co-Frequency details"** to view the most recent test result



Test Frequency (Case 1: CAR)

– Example: Guatemala 122.900 MHz

Result indicated :
500509 is *Not compatible* with 500510

COM Data Base (COM LIST 3) Details Co-frequency compatibility

2 / 4 records

Regional COM list Show all records

Test for the frequency ...122.900MHz

COM CO-frequency calculation details

Frequencies with a margin greater than 300 NM are not shown

Go to adj. frequency calc. Go to Summary Plot interference - All

1	Key R	500509	Frequency	122.900	Range	25	Height	4000	Radio Horizon	78	Sectorname		Latitude	15D59'28" N	Service	TWR
	Region	CAR	Country	Guatemala					Location	RUBELSANTO			Longitude	090D26'48" W	DOC	TWR C-25/40
Not compatible with record #2																
Margin -58 NM Not compatible																
Tower Circular																
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	500510	Frequency	122.900	Range	100	Height	25000	Radio Horizon	194	Sectorname		Latitude	12D08'41" N	Service	AOC
	Region	CAR	Country	Nicaragua					Location	MANAGUA Augusto Cesar Andino Intl			Longitude	086D10'19" W	DOC	AOC U-100/250
The distance is measured between the location of the station in record 1 and the location of the station in the current record																
	Actual distance	339 NM	Required distance	397 NM	Margin -58 NM Not compatible											
Aeronautical Operational Control Circular; Unprotected Service																
Ext. range																
Plot interference																
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.																



Click on plot interference

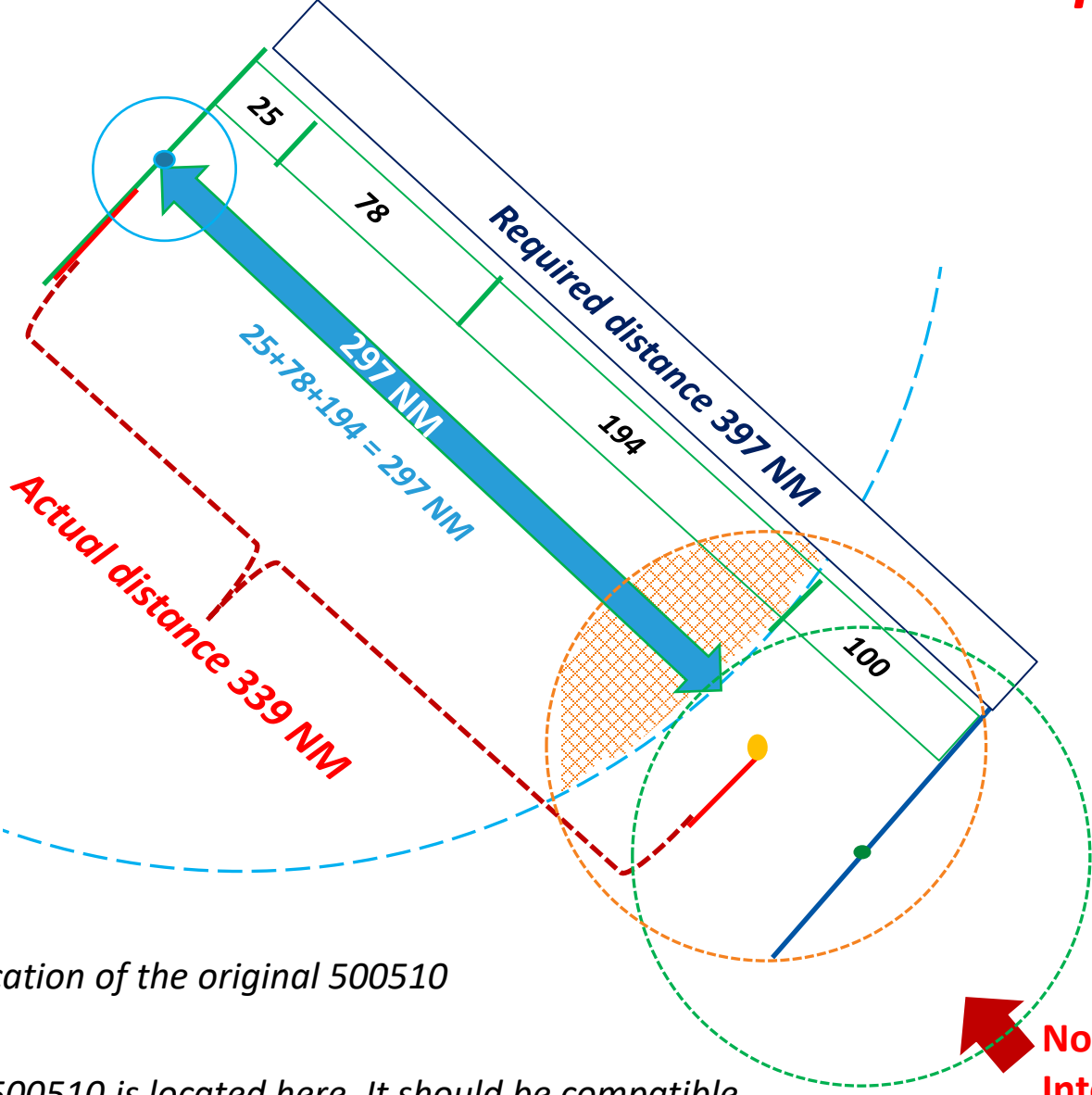
Compatibility test result (Case 1: CAR)

Result indicated: **500509** is **Not compatible with 500510**

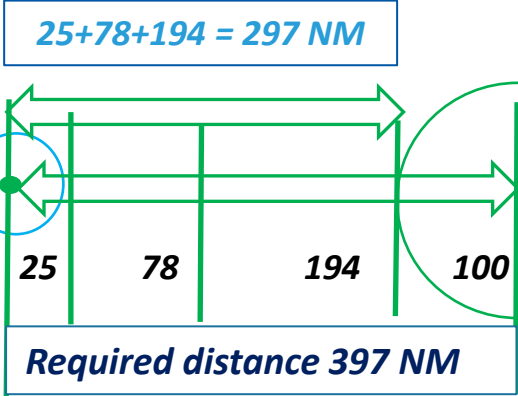




Compatibility test result (Case 1: CAR)

Result indicated: 500509 is **Not compatible with 500510**



FF calculates the possible interference based on the radius: 297 NM



-  Location of the original 500510
-  **If** 500510 is located here, It should be compatible

No possible Interference

Test Frequency (Case 2 SAM/CAR)

– Example: Guyana 124.200 MHz

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==SAM Frequency 124.200

Country ==Guyana R Service No Service selected

Location No Location selected R FIR Sector No FIR name selected

Ext. Range No ER selected

Find

Query Database

- ① Click **“Query”**
- ② Select State: **Guyana**,
Frequency: **124.200 Mhz**
- ③ Click **“Find”**

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Export COM

30767 total 1 found SAM COM List 3 Query

FM DU D Quick Find Reset

Query active.
To return query click button "Active Find"
To cancel query: click button "RESET QUERY"

MOD Key Region Frequency Country Location Latitude Longitude DOC

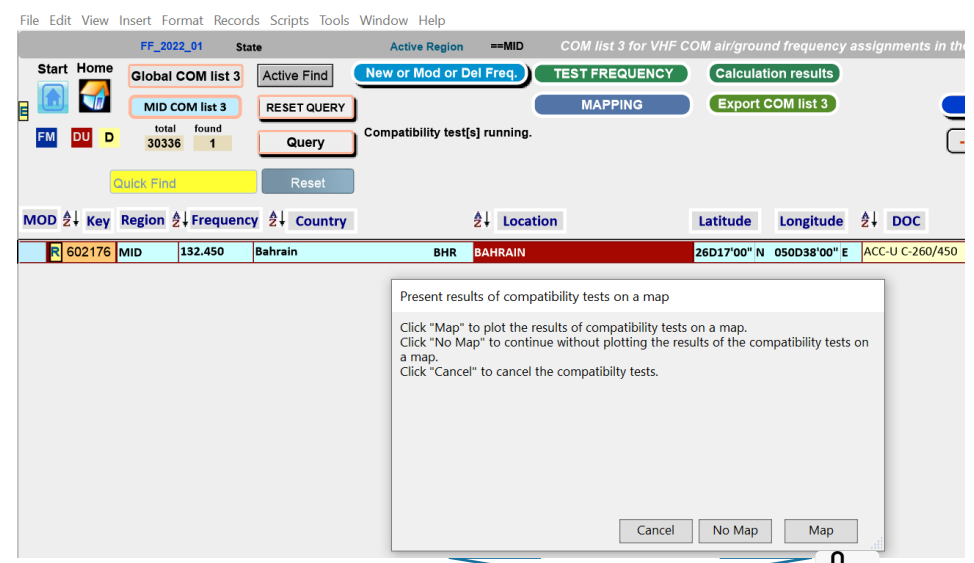
R	702214	SAM	124.200	Guyana	GUY	GEORGETOWN	06D30'00" N	058D15'00" W	ACC-L A-191/250
---	--------	-----	---------	--------	-----	------------	-------------	--------------	-----------------

Frequency Finder found a
124.200 MHz in Guyana
(Key codes 702214)

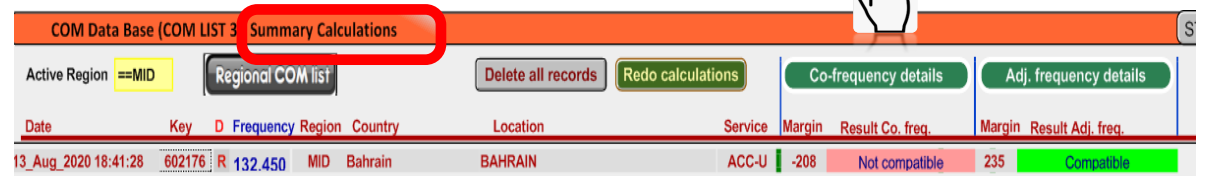
- ④ Click **“Test Frequency”**
- ⑤ Select **“Single frequency”**

Test Frequency (Case 2 SAM/CAR)

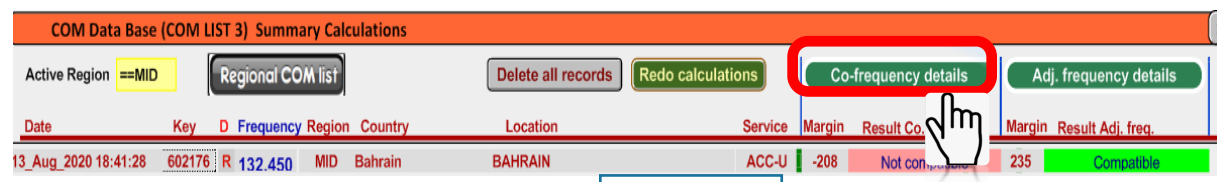
– Example: Guyana 124.200 MHz



⑥ Select **“Map”** if you want to see the result on Map as well



⑦ Summary Calculation is displayed



⑧ Click **“Co-Frequency details”** to view the most recent test result

Test Frequency (Case 2 SAM/CAR) – Example: Guyana 124.200 MHz

Result indicated :

702214 is Not compatible with **500553**

Region: **SAM**
State: **Guyana**

Region: **CAR**
State: **Trinidad and Tobago**

COM Data Base (COM LIST 3) Details Co-frequency compatibility **COM CO-frequency calculation details** (ST)

3 / 6 records

Regional COM list **Show all records**

Test for the frequency ...124.200MHz **Go to adj. frequency calc.** **Go to Summary** **Plot interference - All**

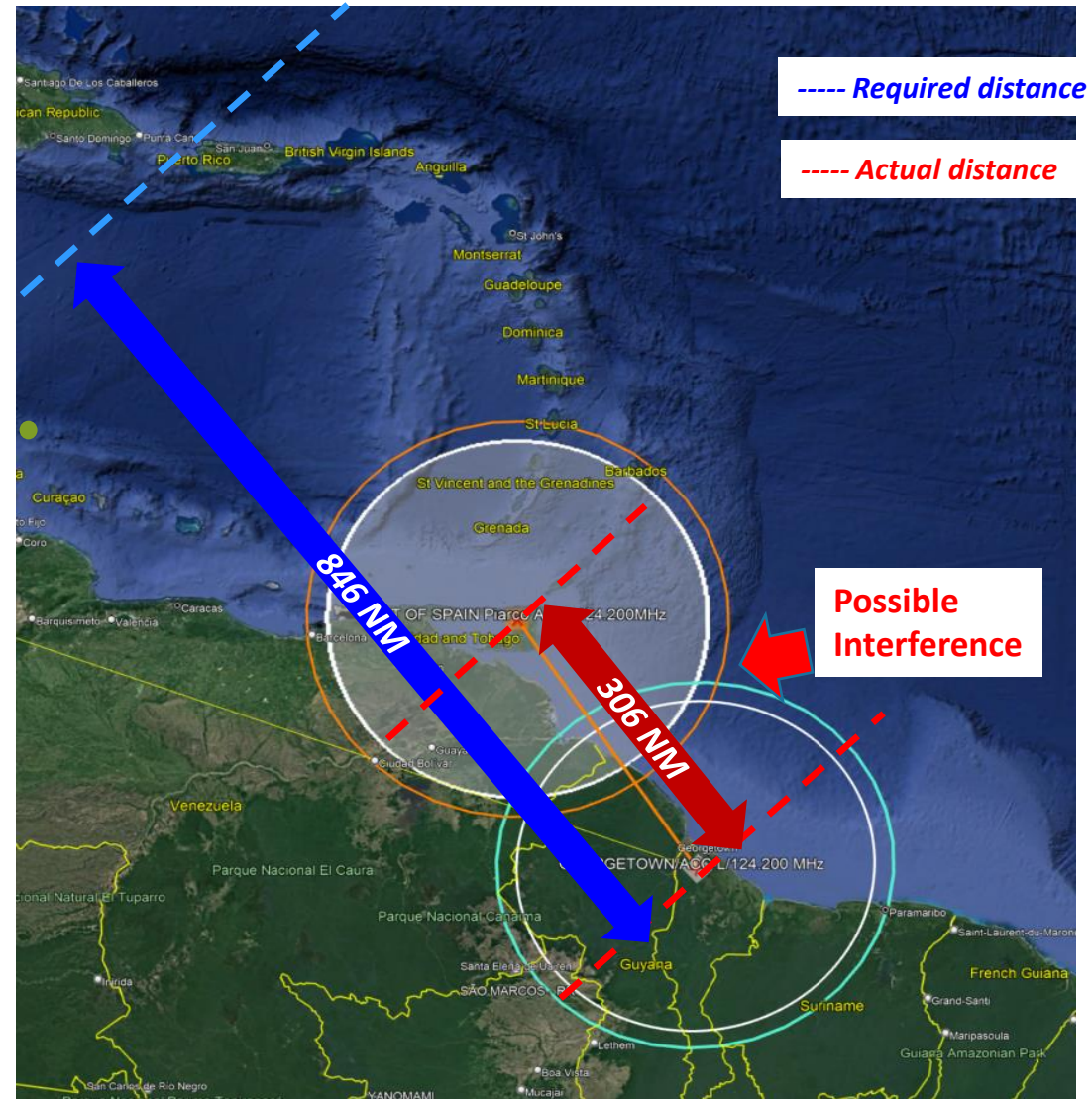
1	Key R 702214	Frequency 124.200	Range 191	Height 25000	Radio Horizon 194	Sectorname	Latitude 06D30'00" N	Service ACC-L
	Region SAM	Country Guyana			Location GEORGETOWN		Longitude 058D15'00" W	DOC ACC-L A-191/250
Not compatible with record #2								
Margin -540 NM Not compatible ACC Lower Area Plot 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 500553	Frequency 124.200	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 10D35'43" N	Service ACC-U
	Region CAR	Country Trinidad and Tobago			Location PORT OF SPAIN Piarco ACC		Longitude 061D20'14" W	DOC ACC-U C-200/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record								
Actual distance 306 NM Required distance 846 NM Margin -540 NM Not compatible ACC Upper Circular Plot interference								
3	Key R 701952	Frequency 124.200	Range 191	Height 25000	Radio Horizon 194	Sectorname	Latitude 10D53'00" N	Service ACC-L

This might require inter-regional coordination by Regional officers



Compatibility test result (Case 2 SAM/CAR)

702214 is Not compatible with 500553

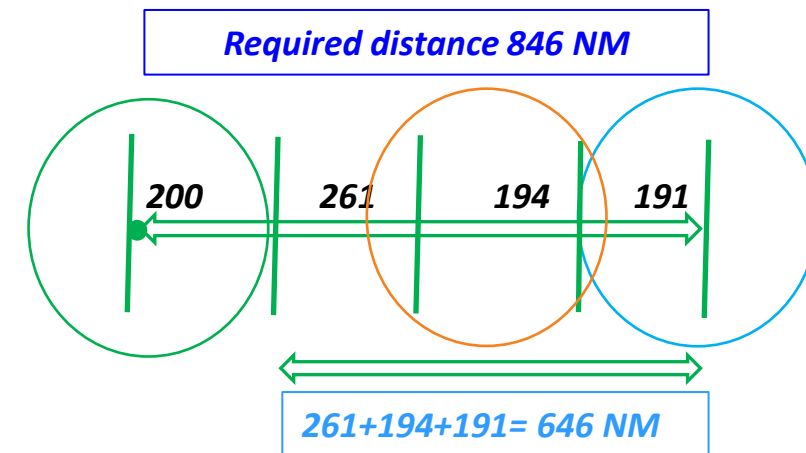
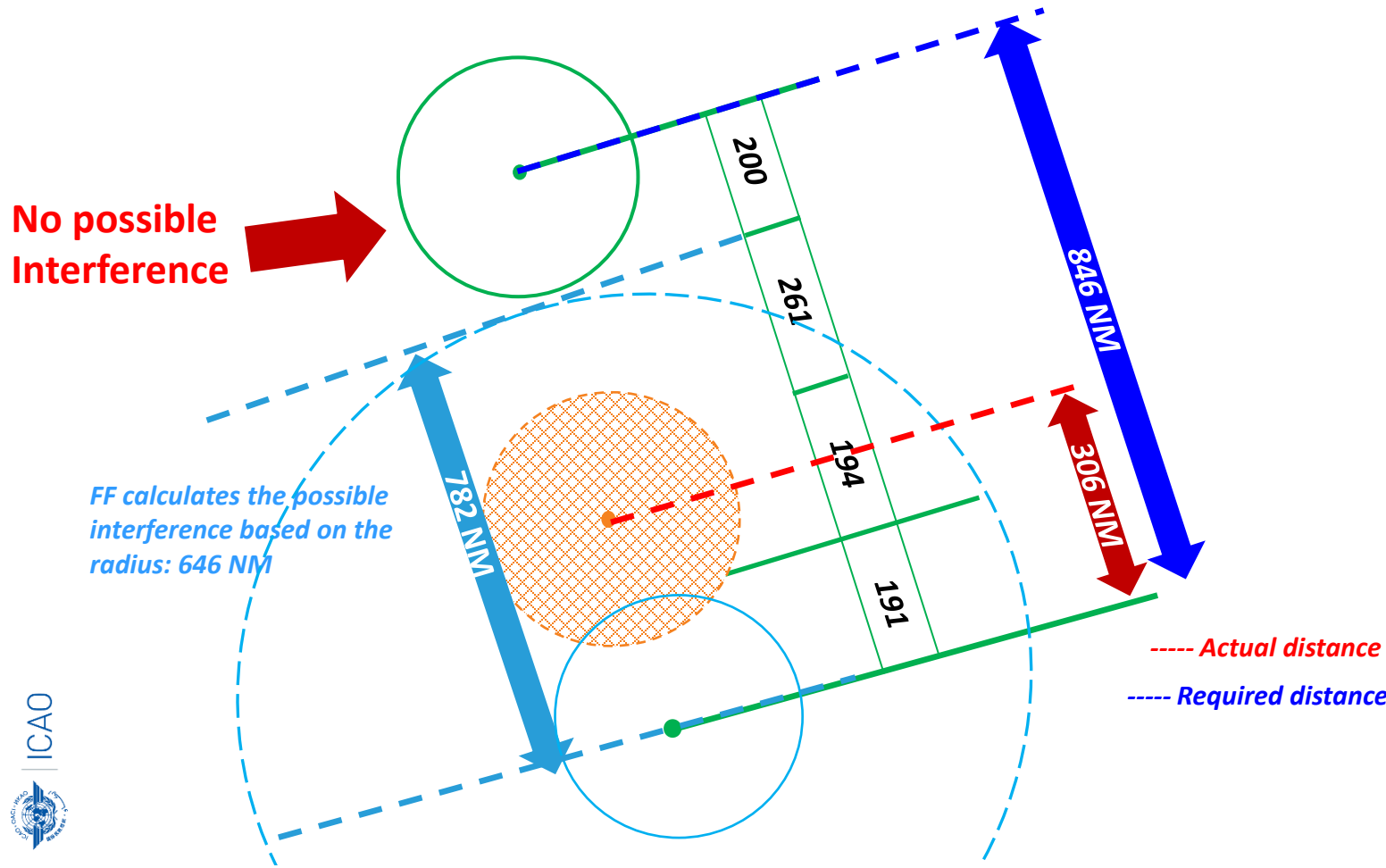


– Example: Guyana
124.200 MHz

Compatibility test result (Case 2 SAM/CAR)

702214 is Not compatible with 500553

– Example: Guyana 124.200 MHz



Exercises- Test Frequency & Understand the result

Exercises for CAR States

3. Perform compatibility test – single frequency

- Query: State: Jamaica 128.600 MHz
- Select key “500698”
- Click test frequency and single frequency

Exercises for SAM States

3. Perform compatibility test – single frequency

- Query: State: Colombia 128.600 MHz
- Select key “701964”
- Click test frequency and single frequency

4. Exercise for both regions: Perform compatibility tests.

- all frequency assignments in your country
- Test all these frequency assignments
- Look at each incompatible frequency assignment to determine if or what action is required.

Test Frequency (Case 3: CAR)

– Example: Jamaica 128.600 MHz

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==CAR Frequency 128.600

Country ==Jamaica R Service No Service selected

Location No Location selected R FIR Sector No FIR name selected

Ext. Range No ER selected

Find

Query Database

- ① Click **“Query”**
- ② Select State: **Jamaica**,
Frequency : **128.600**
- ③ Click **“Find”**

FF_2023_01 Runtime Active Region ==CAR COM list 3 for VHF COM air/ground frequency assign

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Exp. COM list 3

30767 total 1 found CAR COM List 3 Query

Query active.
To return query click button "Active Find"
To cancel query: click button "RESET QUERY"

FM DU D Quick Find Reset

MOD Key Region Frequency Country Location Latitude Longitude DOC

R	500698	CAR	128.600	Jamaica	JMC	KINGSTON ACC	18D13'35" N	077D30'22" W	ACC-U C-200/45
---	--------	-----	---------	---------	-----	--------------	-------------	--------------	----------------

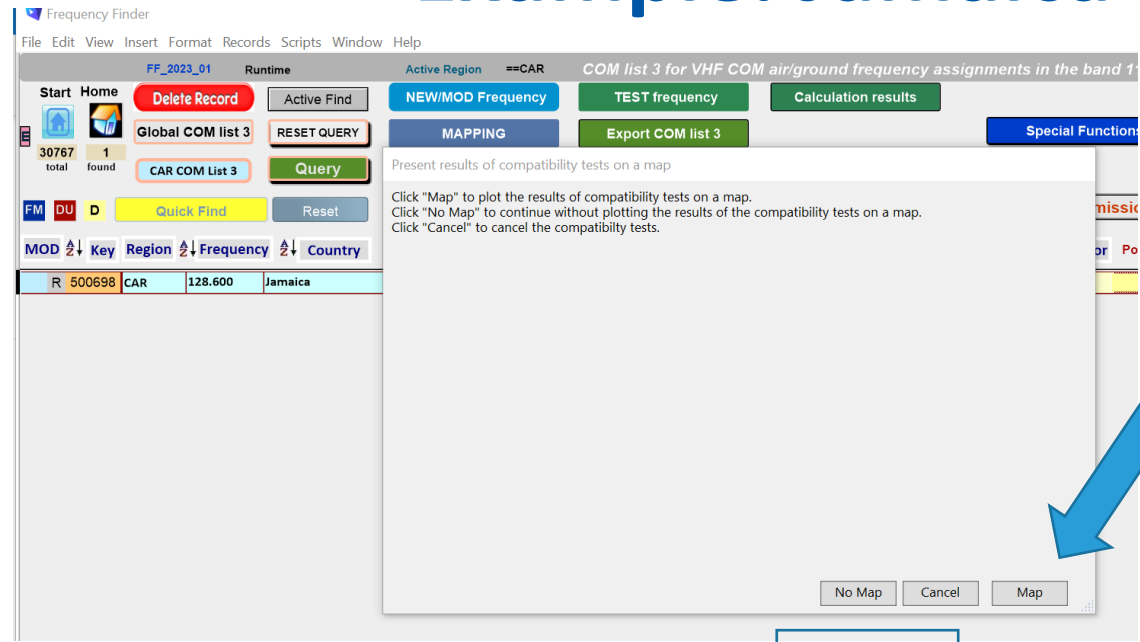
Frequency Finder found one user case of 128.600 MHz in Jamaica

- ④ Select Key **“701964”**
- ⑤ Click **“Test Frequency”**

⑥ Select **“Single frequency”**

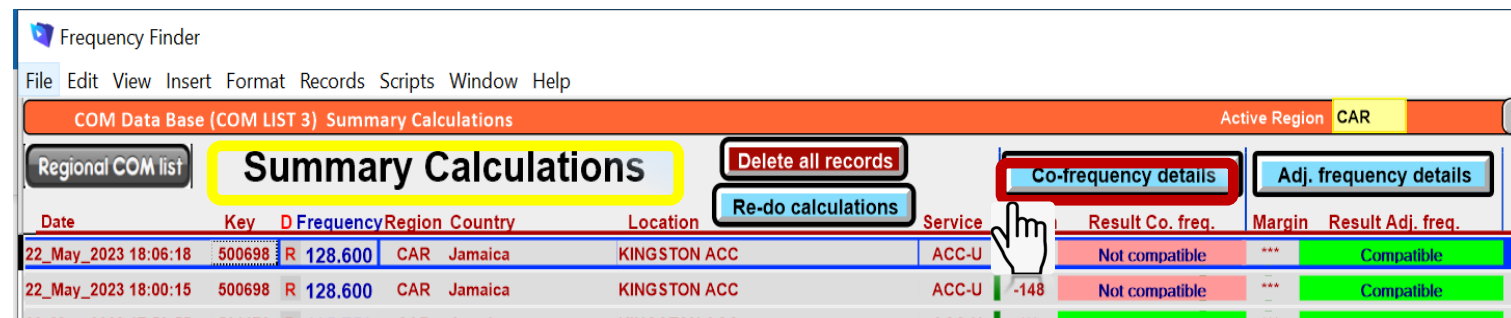
Test Frequency (Case 3: CAR)

– Example: Jamaica 128.600 MHz



⑦ Select **“Map”** if you want to see the result on Map as well

⑧ Summary Calculation is displayed



⑨ Click **“Co-Frequency details”** to view the most recent test result

Test Frequency (Case 3: CAR)

– Example: Jamaica 128.600 MHz

COM Data Base (COM LIST 3) Details Co-frequency compatibility COM CO-frequency calculation details ST

3 / 3 records

Regional COM list Show all records

Test for the frequency ...128.600MHz Go to adj. frequency calc. Go to Summary Plot interference - All

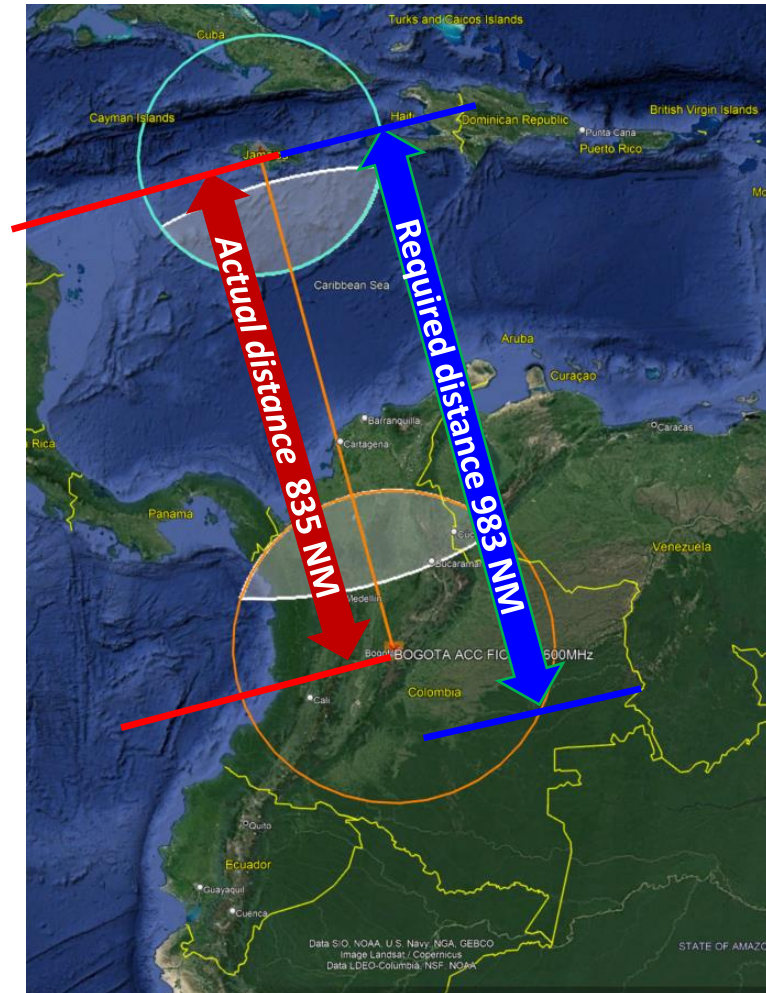
1	Key R 701964	Frequency 128.600	Range 261	Height 45000	Radio Horizon 261	Sectorname	Latitude 04D42'00" N	Service ACC-U
	Region SAM	Country Colombia			Location BOGOTA ACC FIC		Longitude 074D08'00" W	DOC ACC-U C-260/450
Not compatible with record #2, #3 Margin -148 NM Not compatible ACC Upper Circular 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 500698	Frequency 128.600	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 18D13'35" N	Service ACC-U
	Region CAR	Country Jamaica			Location KINGSTON ACC		Longitude 077D30'22" W	DOC ACC-U C-200/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record Actual distance 835 NM Required distance 983 NM Margin -148 NM Not compatible ACC Upper Circular Ext. range Plot interference								
3	Key R 702217	Frequency 128.600	Range 261	Height 45000	Radio Horizon 261	Sectorname	Latitude 06D30'00" N	Service ACC-U
	Region SAM	Country Guyana			Location GEORGETOWN		Longitude 058D15'00" W	DOC ACC-U C-260/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record Actual distance 955 NM Required distance 1044 NM Margin -89 NM Not compatible ACC Upper Circular Ext. range Plot interference								
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.								

Result indicated :
500698 is Not compatible with 701964

Test Frequency (Case 3: CAR)

– Example: Jamaica 128.600 MHz

500698 is Not compatible with 701964



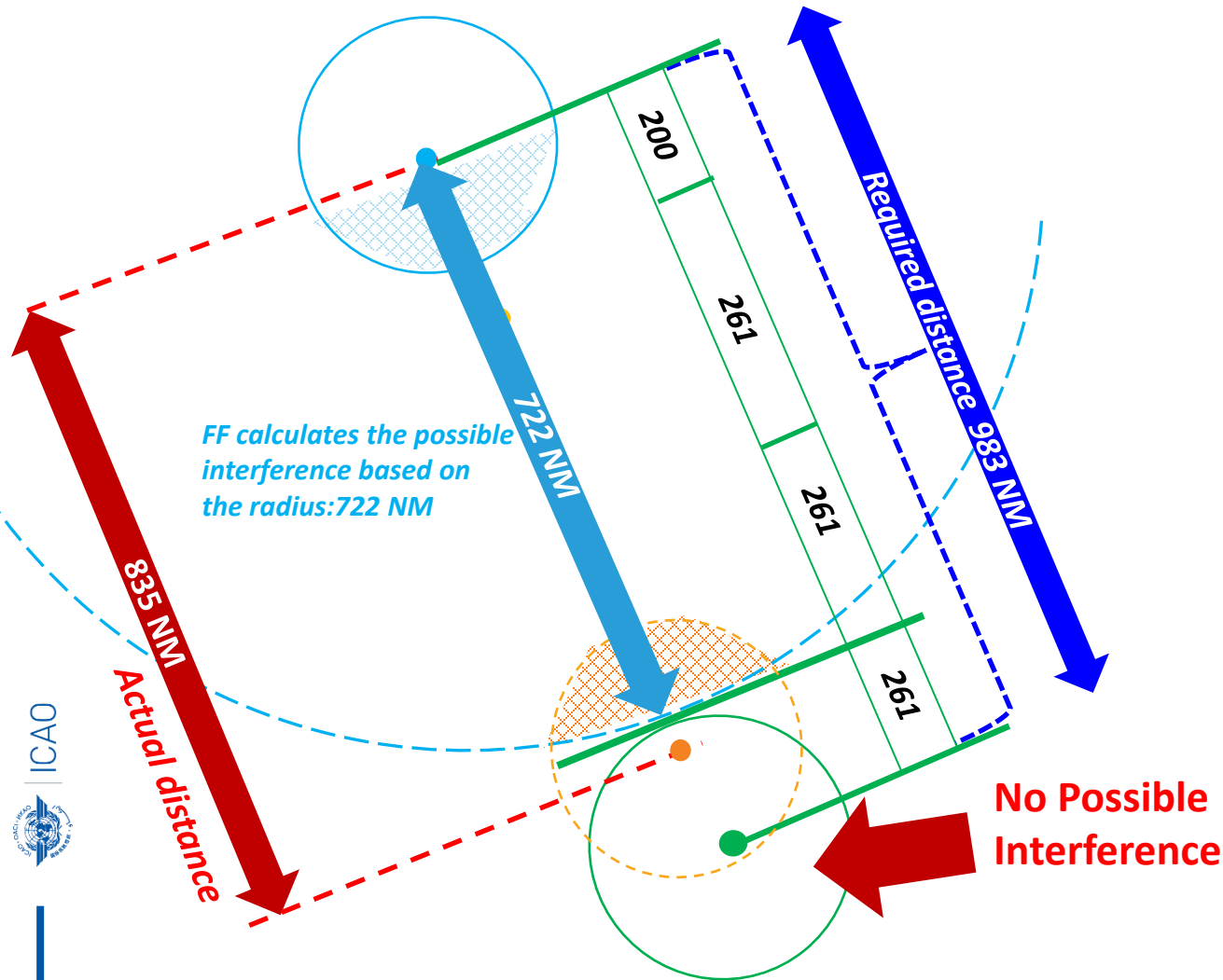
----- Required distance

----- Actual distance

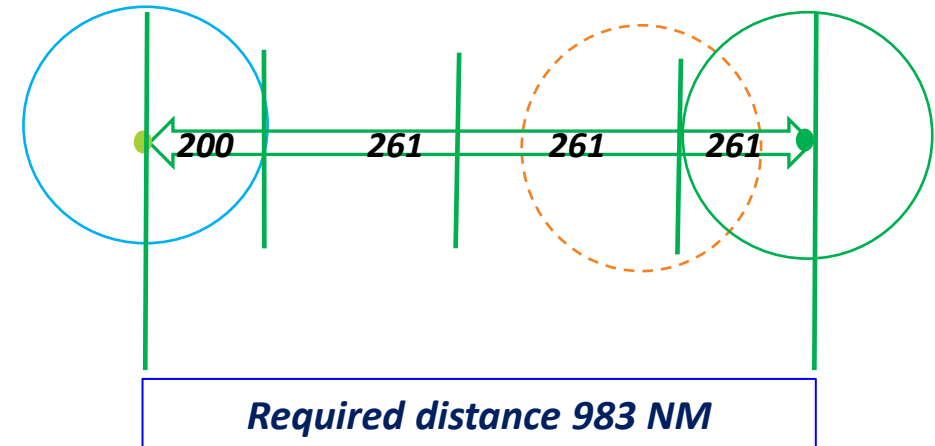
Test Frequency (Case 3: CAR)

– Example: Jamaica 128.600 MHz

500698 is Not compatible with 701964



$$200 + 261 + 261 = 722 \text{ NM}$$



- Location of the original 701964
- If 701964 is located here, It should be compatible

Test Frequency (Case 3: SAM)

– Example: Colombia 128.600 MHz

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==CAR Frequency 128.600

Country ==Jamaica R Service No Service selected

Location No Location selected R FIR Sector No FIR name selected

Ext. Range No ER selected

Find

Query Database

- ① Click **“Query”**
- ② Select State: **Colombia**, Frequency : **128.600**
- ③ Click **“Find”**

FF_2023_01 Runtime Active Region ==CAR COM list 3 for VHF COM air/ground frequency assign

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Exp. COM list 3

30767 total 1 found CAR COM List 3 Query

Query active. To return query click button "Active Find" To cancel query: click button "RESET QUERY"

FM DU D Quick Find Reset

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
R	500698	CAR	128.600	Jamaica	JMC KINGSTON ACC	18D13'35" N	077D30'22" W	ACC-U C-200/45

Frequency Finder found one user case of 128.600 MHz in Colombia

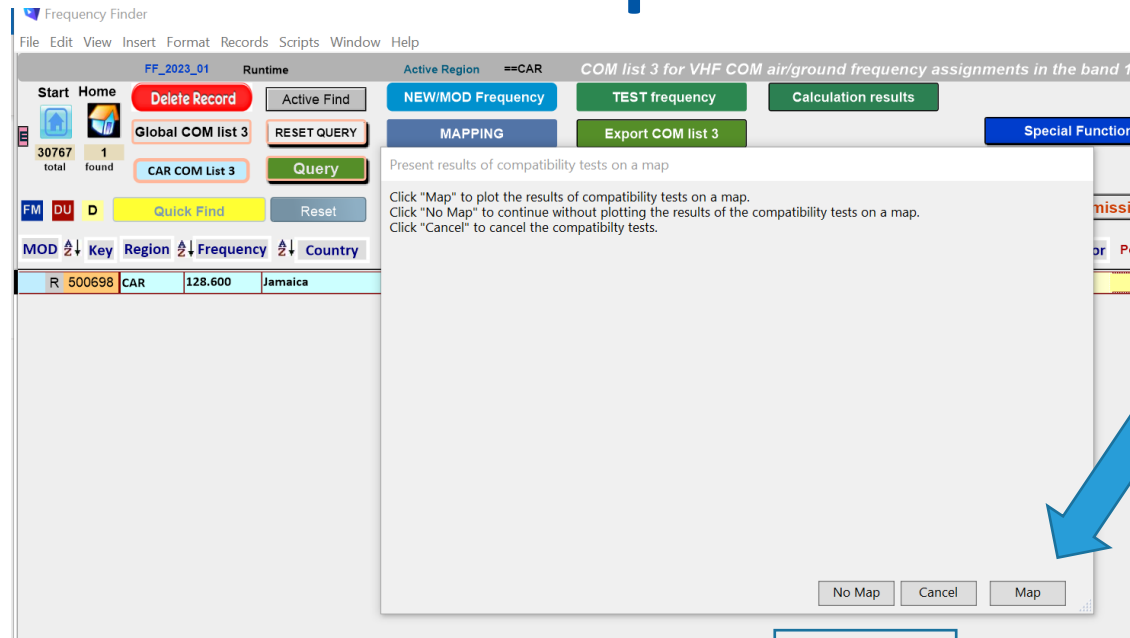
- ④ Select Key **“701984”**
- ⑤ Click **“Test Frequency”**

⑥ Select **“Single frequency”**



Test Frequency (Case 3: SAM)

– Example: Colombia 128.600 MHz



⑦ Select **“Map”** if you want to see the result on Map as well

⑧ Summary Calculation is displayed

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

COM Data Base (COM LIST 3) Summary Calculations Active Region CAR

Regional COM list Summary Calculations Delete all records Re-do calculations Co-frequency details Adj. frequency details

Date	Key	D	Frequency	Region	Country	Location	Service	Result	Co. freq.	Margin	Result	Adj. freq.
22_May_2023 18:06:18	500698	R	128.600	CAR	Jamaica	KINGSTON ACC	ACC-U	Not compatible	***	***	Compatible	
22_May_2023 18:00:15	500698	R	128.600	CAR	Jamaica	KINGSTON ACC	ACC-U	Not compatible	***	***	Compatible	

⑨ Click **“Co-Frequency details”** to view the most recent test result

Test Frequency (Case 3: SAM)

– Example: Colombia 128.600 MHz

COM Data Base (COM LIST 3) Details Co-frequency compatibility

3 / 3 records

Regional COM list Show all records

Test for the frequency ...128.600MHz

Go to adj. frequency calc. Go to Summary Plot interference - All

Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Service				
1	R 701964	128.600	261	45000	261		04D42'00" N	ACC-U				
Region	SAM						Longitude 074D08'00" W	DOC ACC-U C-260/450				
Country	Colombia							Ext. range				
		Not compatible with record #2, #3		Margin	-148 NM	Not compatible	ACC Upper Circular	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.												
Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Service				
2	R 500698	128.600	200	45000	261		18D13'35" N	ACC-U				
Region	CAR						Longitude 077D30'22" W	DOC ACC-U C-200/450				
Country	Jamaica							Ext. range				
		The distance is measured between the location of the station in record 1 and the location of the station in the current record		Actual distance	835 NM	Required distance	983 NM	Margin	-148 NM	Not compatible	ACC Upper Circular	Plot interference
Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Service				
3	R 702217	128.600	261	45000	261		06D30'00" N	ACC-U				
Region	SAM						Longitude 058D15'00" W	DOC ACC-U C-260/450				
Country	Guyana							Ext. range				
		The distance is measured between the location of the station in record 1 and the location of the station in the current record		Actual distance	955 NM	Required distance	1044 NM	Margin	-89 NM	Not compatible	ACC Upper Circular	Plot interference
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.												

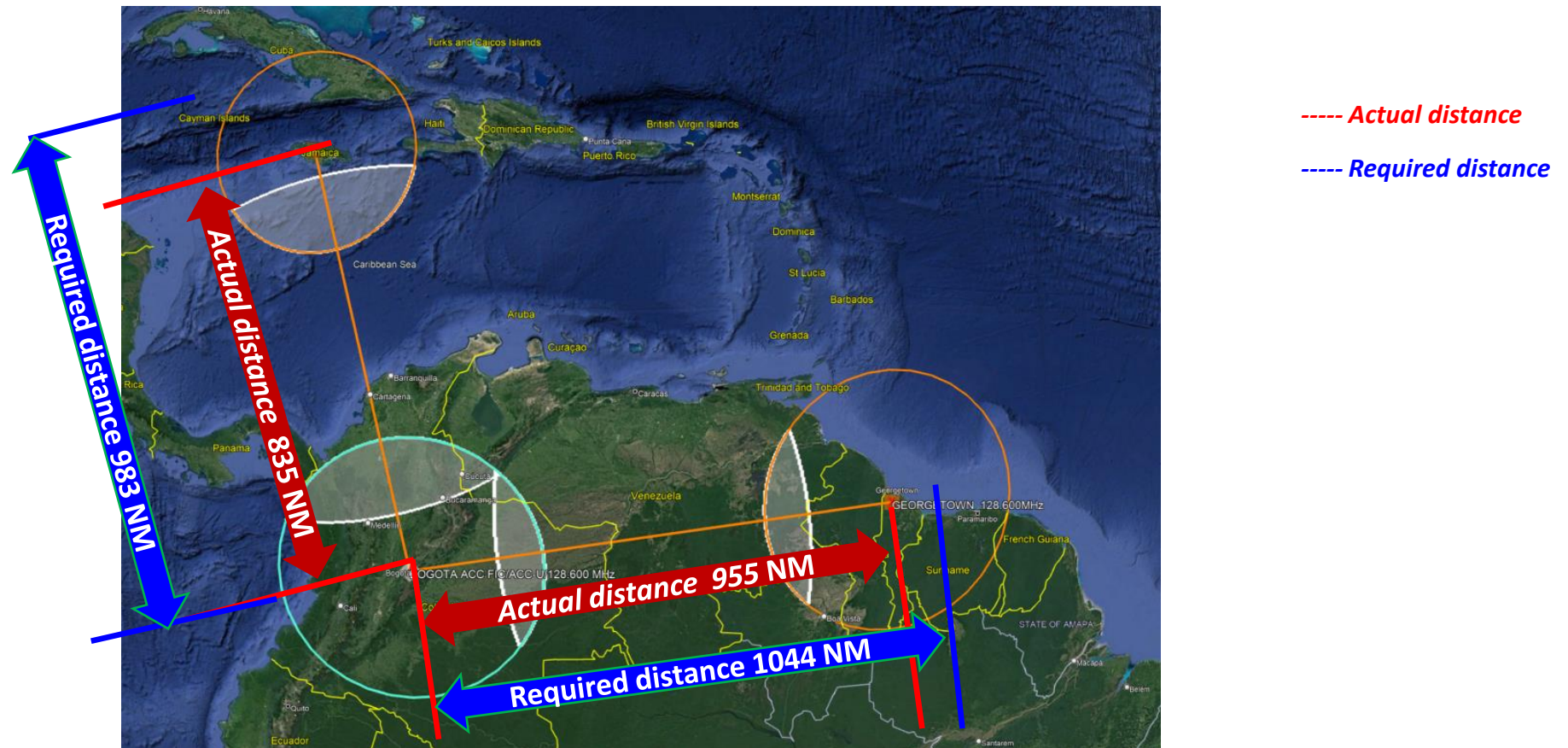
Result indicated :

- **701964 is Not compatible with 500698 and**
- **701964 is Not compatible with 702217**

Test Frequency (Case 3: SAM)

– Example: Colombia 128.600 MHz

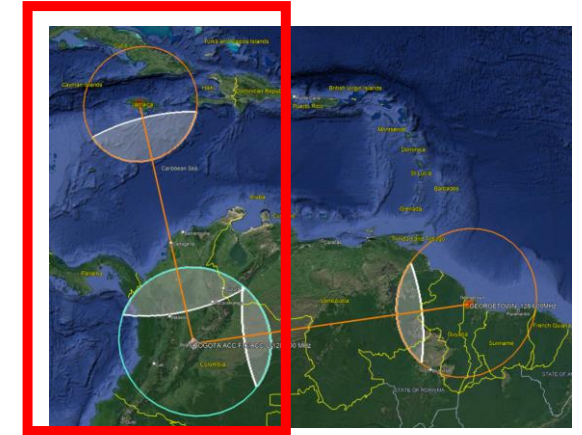
- **701964 is *Not* compatible with 500698, and**
- **701964 is *Not* compatible with 702217**



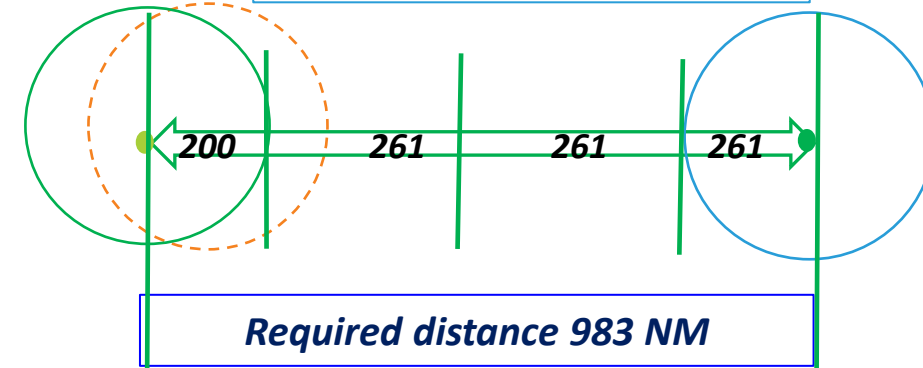
Test Frequency (Case 3: SAM)

– Example: Colombia 128.600 MHz

701964 is *Not* compatible with 500698

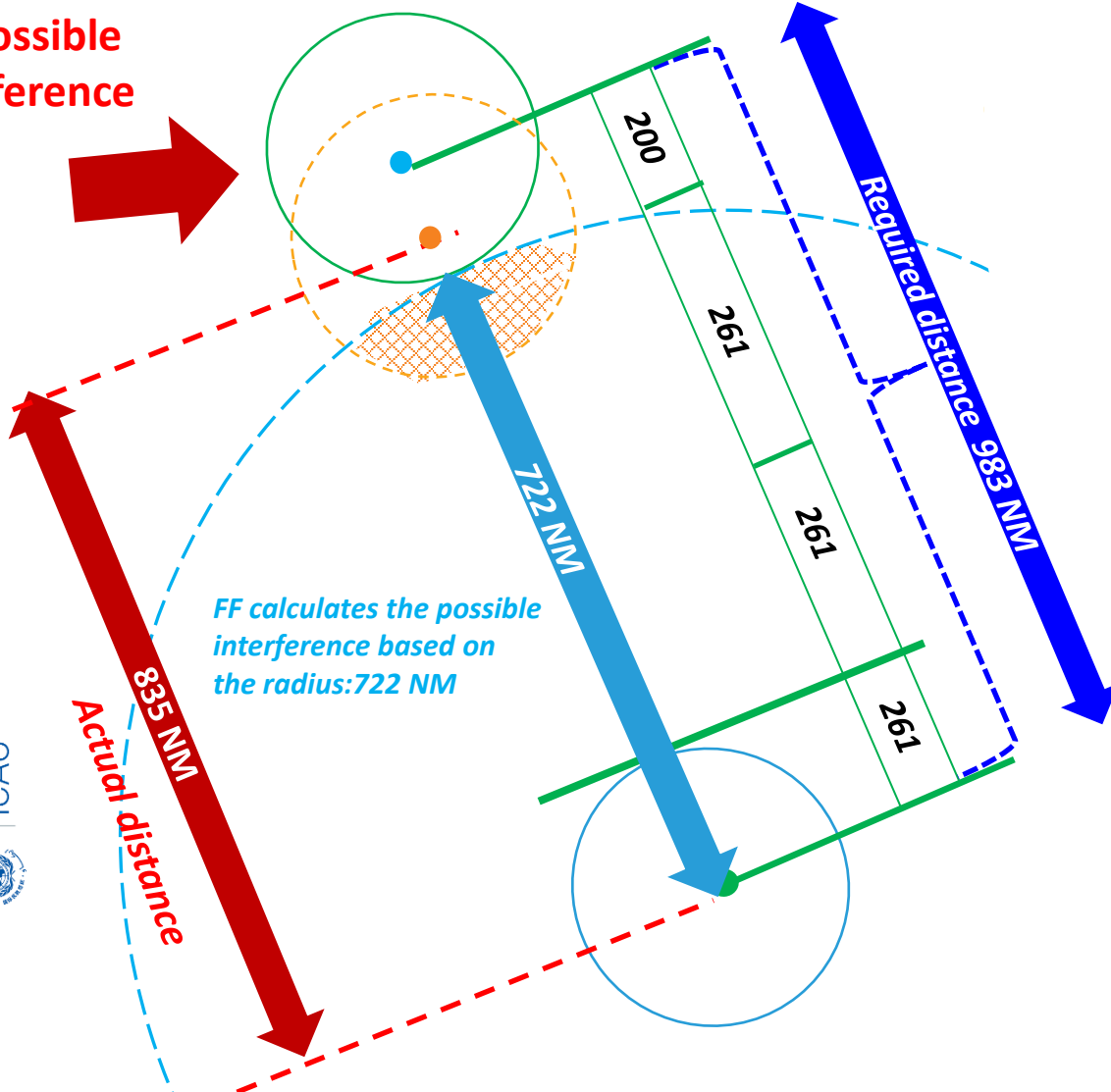
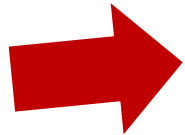


$$200 + 261 + 261 = 722 \text{ NM}$$



Required distance 983 NM

No Possible Interference



FF calculates the possible interference based on the radius: 722 NM

Actual distance 835 NM



Location of the original 500698

If 500698 is located here, It should be compatible

Demonstrations

Add, Modify or Delete Frequency

Demonstration 1- Add:

Based on a frequency assignment (for example, select: Bolivia, TARIJA Cap Oriel Lea Plaza, 119.400), then add ACC-U frequency to **ICAOTEST SAM**

The screenshot shows the ICAO frequency assignment software interface. The top bar displays 'FF_2023_01 Runtime' and 'Active Region ==SAM'. The main area contains several buttons: 'Delete Record', 'Active Find', 'NEW/MOD Frequency', 'TEST frequency', 'Calculation results', 'Global COM list 3', 'RESET QUERY', 'MAPPING', and 'Export COM list 3'. A search bar shows '30761 total' and '1 found'. Below the search bar, there are buttons for 'SAM COM List 3' and 'Query'. A message box indicates 'Query active. To return query click button "Active Find". To cancel query: click button "RESET QUERY"'. The bottom section shows a table with columns for 'MOD', 'Key', 'Region', 'Frequency', 'Country', 'Location', 'Latitude', 'Longitude', and 'DOC'. The table contains one row with the following data: R 700581, SAM, 119.400, Bolivia, BOL, TARIJA Cap Oriel Lea Plaza, 21D33'00" S, 064D42'00" W, APP-L C-50/120.

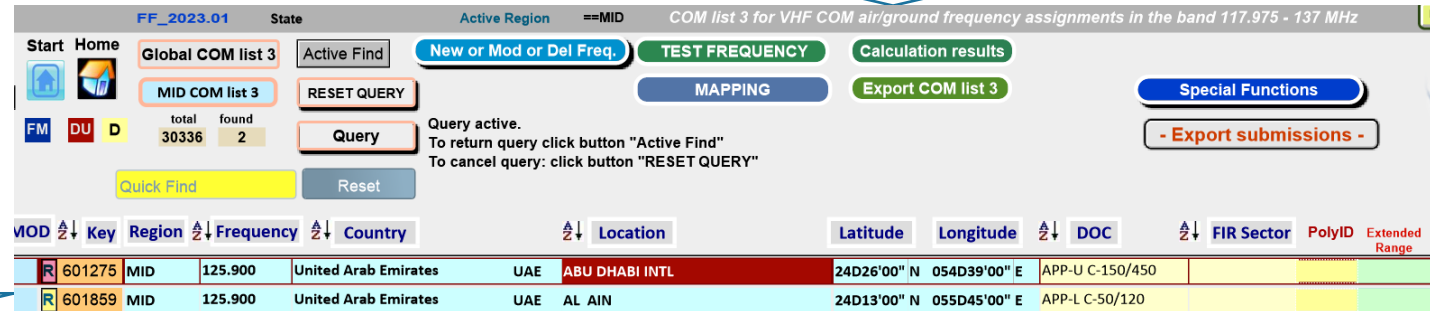
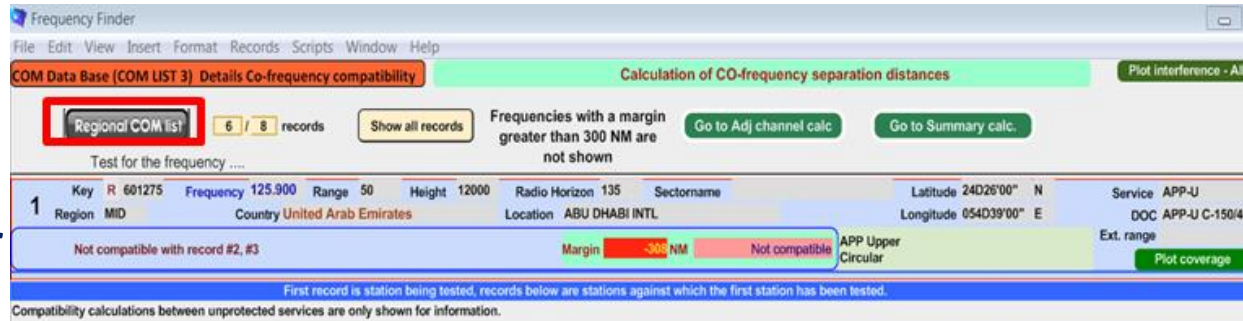
MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC	
R	700581	SAM	119.400	Bolivia	BOL	TARIJA Cap Oriel Lea Plaza	21D33'00" S	064D42'00" W	APP-L C-50/120

Add, Mod or Delete Frequency

Go back to [Regional COM List 3](#)

Click **“Query”**

Select information required for your investigation and Click **“Find”**

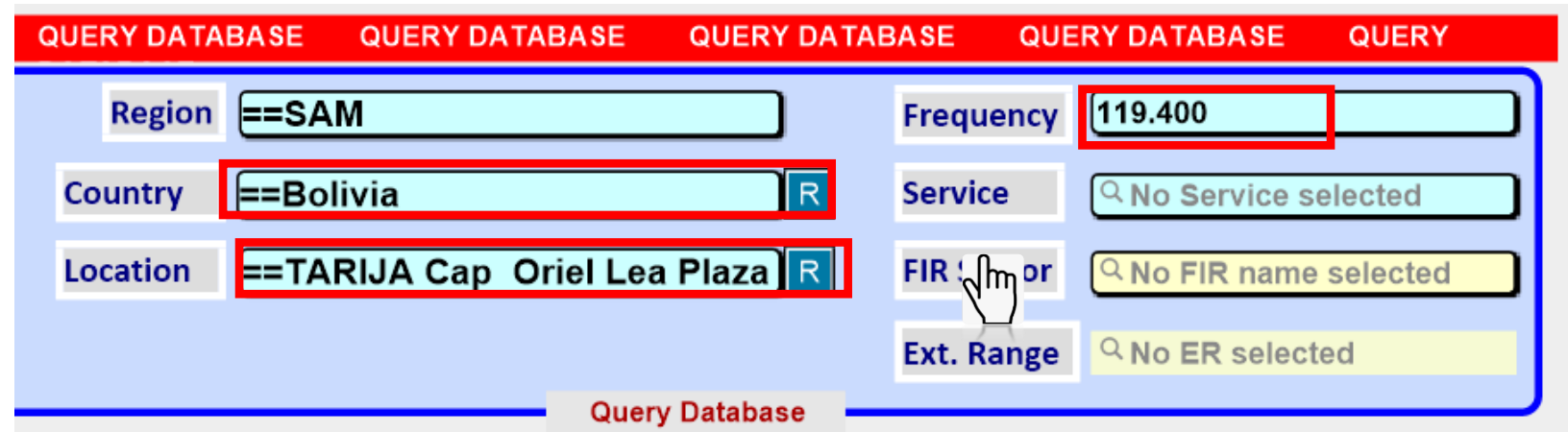


In this demonstration,

Country: **Bolivia**

Location: **TARIJA Cap Oriel Lea Plaza**

Frequency: **119.400**



Add Frequency

Your Query outcome is displayed

Selected **“700581”** in this demonstration

Click **“New or Mod,”**

Select **“Add Frequency”**

FF_2023_01 Runtime Active Region ==SAM COM list 3 for VHF COM air/ground frequency assign

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY

30761 total 1 found SAM COM List 3 Query

NEW frequency ADD frequency MODIFY frequency DELETE frequency CANCEL

FM DU D Quick Find Reset

MOD Key Region Frequency Country

R	700581	SAM	119.400	Bolivia	BOL	TARIJA Cap Oriel Lea Plaza	21D33'00" S 064D42'00" W	APP-L C-50/120
---	--------	-----	---------	---------	-----	----------------------------	--------------------------	----------------

Add information required

In this demonstration

Change:

Country: **ICAOTEST SAM**

Add:

Location: **ICAO SAM 1**

Frequency: **119.000**

Service: **ACC-U**

Remark: **TEST WORKSHOP 2023**

Station New assignment

MOD DN

Region SAM Key D 705215 Cat ICAO Channel spacing

Country ICAOTEST SAM Ctry ZZS 25 kHz

Location ICAO SAM1 8.33 kHz

Latitude 21 D 33 ' 00 " S Longitude 064 D 42 ' 00 " W Frequency 119.000

Service ACC-U ER family

DOC ACC-U C-200/450 Example: ER-BOT-01

Range (NM) 200 Height (feet) 45000 Set Area Service

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID Reset

Remarks TEST WORKSHOP 2023

TEST Not tested

Then Click **“TEST”**



Add Frequency cont.

*Test result is displayed.
In this demonstration, it said that :
The selected frequency
is Not compatible*

Click "Co-frequency" to see more detail

*Also click "Plot-Interference all" to see
outcome on Map*

Station

MOD DN New assignment

Region SAM Key D 705214 Cat ICAO Channel spacing

Country Bolivia Ctry BOL 25 kHz

Location TARIJA Cap Oriel Lea Plaza 8.33 kHz

Latitude 21 D 33 ' 00 " S N S

Longitude 064 D 42 ' 00 " W E W

Frequency 119.000

Service ACC-U

DOC ACC-U C-200/450

Range (NM) 200 Height (feet) 45000

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID Reset

Remarks TEST WORKSHOP 2023

TEST The selected frequency is NOT compatible. Test completed

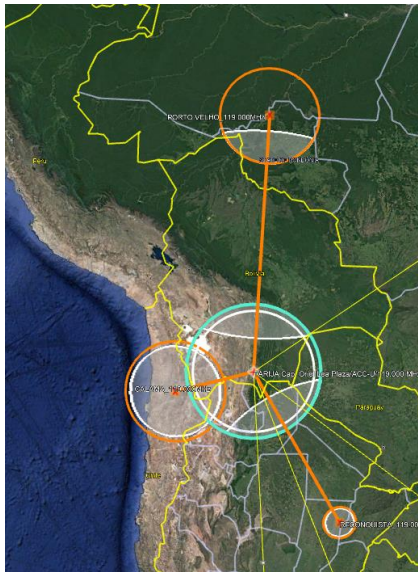
Required fields

Summary Co-frequency Adj. Frequency Summary Test results of

Date/time	Key	D	Frequency	Region	Country	Location
23/05/2023 16:33:02	705214	D	119.000	SAM	Bolivia	TARIJA Cap Ori

Click the button TEST in the pane "Station" to view the calculation results if the fields are empty or the Key in the b

Print co-frequency Plot interference - All Print adj-frequency Plot interference - All



Summary of the new or modified record First record is tested record

Key	D	Frequency	Region	Country	Location	Service	Range	Sectorname	Required D.	Actual D.	Margin	Result
705214	D	119.000	SAM	Bolivia	TARIJA Cap Oriel Lea Plaza	ACC-U	200		0	0	-632	Not compatible
701818	E	119.000	SAM	Chile	CALAMA	APP-U	150		872	240	-632	Not compatible
700352	E	119.000	SAM	Argentina	RECONQUISTA	APP-L	50		646	534	-112	Not compatible
704453	E	119.000	SAM	Brazil	PORTO VELHO	APP	150		872	772	-100	Not compatible
704452	E	119.000	SAM	Brazil	PORTO ALEGRE	APP	150		872	888	16	Compatible

Add Frequency cont.

This selected frequency was **Not** compatible, so now you **need to find an appropriate one!**

Before “start search”, you need to:

- **Define Search Range**
(Two options (set frequency range or select from regional frequency allotment plan.
Note.- it is always better to select it from the regional allotment plan!!)
- **Set Maximum # of frequencies**
(1-10 can be selected)

Find Frequency

Search range
117.999...136.976 MHz

Set frequency range
START 118.000 MHz
END 136.975 MHz

Select from Regional Frequency Allotment Plan
SAM ACC
Reset

Max. # of frequencies 10

START SEARCH

FF1
FF2
FF3
FF4
FF5
FF6
FF7
FF8
FF9
FF10

FOUND frequencies
Selected frequency All

In this example, select **ACC** and **10** frequencies

Then “**Start Search**”

Add Frequency cont.

10 Frequency were found and select a frequency.

Search range: 118...136.975 MHz

Set frequency range: START 118.000 MHz, END 136.975 MHz

Select from Regional Frequency Allotment Plan: SAM ACC

Max. # of frequencies: 10

Frequencies found	Margin co-freq	Margin adj-freq
FF1 123.725	***	241
FF2 123.775	***	***
FF3 123.800	73	***
FF4 123.825	***	308
FF5 123.875	***	308
FF6 123.925	***	352
FF7 123.975	***	***
FF8 124.025	***	***
FF9 124.050	***	***
FF10 124.075	***	***

FOUND frequencies: 10

Margin in NM

Selected frequency: 123.800

Allotted to: ACC

When you select a candidate frequency, please consider how you can use spectrum efficiently!

In this demonstration: Click "123.800".

The frequency you selected will be automatically included in the left side.

Station: New assignment

Region: SAM, Key: D 705214, Cat: ICAO, Channel spacing: 25 kHz

Country: ICAOTEST SAM, Ctry: ZZS

Location: ICAO SAM 1, Channel spacing: 8.33 kHz

Latitude: 21 D 33 ' 00 " S, Longitude: 064 D 42 ' 00 " W

Service: ACC-U, ER family: ACC

DOC: ACC-U C-200/450, Range (NM): 200, Height (feet): 45000

FIR SECTORNAME: No area service set or selected, PolyID: Enter Poly ID

Remarks: TEST WORKSHOP 2023

TEST: The selected frequency is compatible. Test completed

Find Frequency window (overlaid):

Search range: 118...136.975 MHz

Set frequency range: START 118.000 MHz, END 136.975 MHz

Select from Regional Frequency Allotment Plan: SAM ACC

Max. # of frequencies: 10

Frequencies found	Margin co-freq	Margin adj-freq
FF1 123.725	***	241
FF2 123.775	***	***
FF3 123.800	73	***
FF4 123.825	91	308
FF5 123.875	***	308
FF6 123.925	***	352
FF7 123.975	***	***
FF8 124.025	***	***
FF9 124.050	***	***
FF10 124.075	***	***

FOUND frequencies: 10

Margin in NM

Selected frequency: 123.800

Allotted to: ACC

When you selected a frequency, FF also checked the compatibility and indicated the result : "The selected frequency is compatible. Test completed".



Add Frequency cont.

You selected the frequency, the result indicates “compatible”.

Select :
“Save as DRAFT frequency”
 in case you need to work on this assignment more.

“Save as REGISTERED frequency”
 in case you completed the assignment and ready for submission

Summary

Test results of the new or modified frequency assignment

Date/time	Key	D	Frequency	Region	Country	Location	Service	Margin in NM	Compatibility	
16/05/2022 15:04:06	603200	D	118.025	MID	Kuwait	Al Ahmadi	APP-L 8	Compatible	81	Compatible

Click the button TEST in the pane "Station" to view the calculation results if the fields are empty or the Key in the box Summary is di...

Print co-frequency Plot interference - All Print adj-frequency Plot interference - All



Export Submissions

The registered frequency needs to report to Regional officer

File Edit View Insert Format Records Scripts Tools Window Help

FF_2022_01 State Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 137 MHz

Start Home Global COM list 3 Active Find New or Mod or Del Freq. TEST FREQUENCY Calculation results

MID COM list 3 RESET QUERY MAPPING Export COM list 3

total found 30337 1 Query

Quick Find Reset

Special Functions - Export submissions - 1

Key Region Frequency Country Location Latitude Longitude DOC FIR Sector

MID	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC	FIR Sector
N	?	MID	118.025	ICAO TEST MID	ZZM Al Ahmadi	29D03'36" N	048D03'18" E	APP-L C-50/120	

Click "Export submission" to report New, Mod or Del frequency to regional officer

<110> Open Excel file

An Excel file will be created containing your submissions, which you can attach later to an email message to be sent to the Regional Office.

Click "Open" to look at the Excel file, Click "Cancel" to cancel.

Note: From this folder, attach, later, to your email the file you want to submit.

Cancel Open 2

Through a dialogue box, the State (user) can consult the excel file prior submission to the ICAO Regional Office (RO) by email;

SaveSubmissions

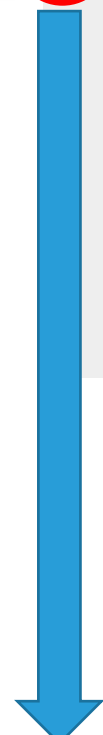
File Home Share View

Clipboard Organize New Open Select

frequencyfind... SaveSubmissions

Name	Date modified	Type
VHFCOM ZZM 16-05-2022 34305 PM.xlsx	16/05/2022 3:48 PM	Microsoft

SN	R	?	SAM	123.800	ICAO TEST SAM	ZZS	ICAO SAM 1	21D33'00" S	064D42'00" W	ACC-U C-200/450
N	?	MID	118.025	ICAO TEST MID	ZZM Al Ahmadi	29D03'36" N	048D03'18" E	APP-L C-50/120		



Exercises

Add, Modify or Delete Frequency

Exercise 1- ADD: using one station in your country as a template, add a station and find an appropriate frequency for that station. (recommend to add TWR service)

- 1) Query a frequency (in your country) and select it
- 2) Add one station and find an appropriate frequency for that station
(In Remark, **please add TEST WORKSHOP 2023**)
- 3) If you found an appropriate one, save it as registered frequency.
- 4) Send it to the Regional officer.

CAR STATES: Please send me the file : mutsunomiya@icao.int

Demonstrations

Add, Modify or Delete Frequency

Demonstration 2- MOD: using outside range data (key 705210 – integrity check outcome), modify the data and find an appropriate frequency.

- 1) Query a frequency (State: ICAO TEST SAM, Frequency 119.000)
- 2) Modify its data, change
 - Location : from ICAO SAM 1 to ICAO SAM 2
 - latitude /longitude: to 23D26'00"S/070D26'00"W),
- 3) Test the modified data, and
- 4) If the result indicates not compatible, find an appropriate frequency for this site.

Add, Mod or Delete Frequency (Demonstration 2: Mod)

Go back to [Regional COM List 3](#)

Click **“Query”**

In this demonstration select,
Country: **ICAO TEST SAM**
Location: **ICAO SAM 1**,
Frequency: **119.000**

Click **“Find”**

The screenshot shows a 'Query Database' form with the following fields and values:

- Region: ==SAM
- Country: ==ICAO TEST SAM
- Location: ==ICAO SAM 1
- Frequency: 119.000
- Service: No Service selected
- FIR Sector: No FIR name selected
- Ext. Range: No ER selected

The 'Find' button is highlighted with a red box and a hand cursor icon.

Your Query outcome
(the data with key 705210)
is displayed in this demonstration.

Click **“New or Mod”**

Select **“MODIFY Frequency”**

The screenshot shows the application interface with the following elements:

- Buttons: Delete Record, Active Find, NEW/Mod Frequency, TEST frequency, Calculation results, Global COM list 3, RESET QUERY, MAPPING, Export COM list 3, Special Functions, SAM COM List 3, Query, Quick Find, Reset.
- Message: Query active. To return query click 'Active Find'. To cancel query: click 'RESET QUERY'.
- Table with columns: MOD, Key, Region, Frequency, Country, Location, Latitude, Longitude, DOC.

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
R	705210	SAM	119.000	ICAO TEST SAM	ZZS ICAO SAM 1	00D00'00" S	00D00'00" W	ACC-I C-155/250

Add, Mod or Delete Frequency (Demonstration 2: Mod)

In this demonstration, *change*

- Location to ICAO SAM 2
- latitude/longitude to 23D26'00"S/070D26'00"W

Then Click **“TEST”**

Station

MOD DR Mod assignment

Region SAM Key D 705210 Cat ICAO Channel spacing

Country ICAOTEST SAM Ctry ZZS 25 kHz

Location ICAO SAM 2 8.33 kHz

Latitude 23 D 26 ' 00 " S N S

Longitude 070 D 26 ' 00 " W E W Frequency 119.000

Service ACC-I

DOC ACC-I C-155/250

Range (NM) 155 Height (feet) 25000

ER family Example: ER-BOT-01

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID Reset

Remarks TEST WORKSHOP MAY 2023

TEST Not tested

Station

MOD DR Mod assignment

Region SAM Key D 705210 Cat ICAO Channel spacing

Country ICAOTEST SAM Ctry ZZS 25 kHz

Location ICAO SAM 2 8.33 kHz

Latitude 23 D 26 ' 00 " S N S

Longitude 070 D 26 ' 00 " W E W Frequency 119.000

Service ACC-I

DOC ACC-I C-155/250

Range (NM) 155 Height (feet) 25000

ER family Example: ER-BOT-01

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID Reset

Remarks TEST WORKSHOP MAY 2023

TEST The selected frequency is NOT compatible. Test completed

Test result is displayed.
In this demonstration, it said that :
The selected frequency *is Not compatible*

if you want to see the outcome on the Map, click **“Plot interference-All”**

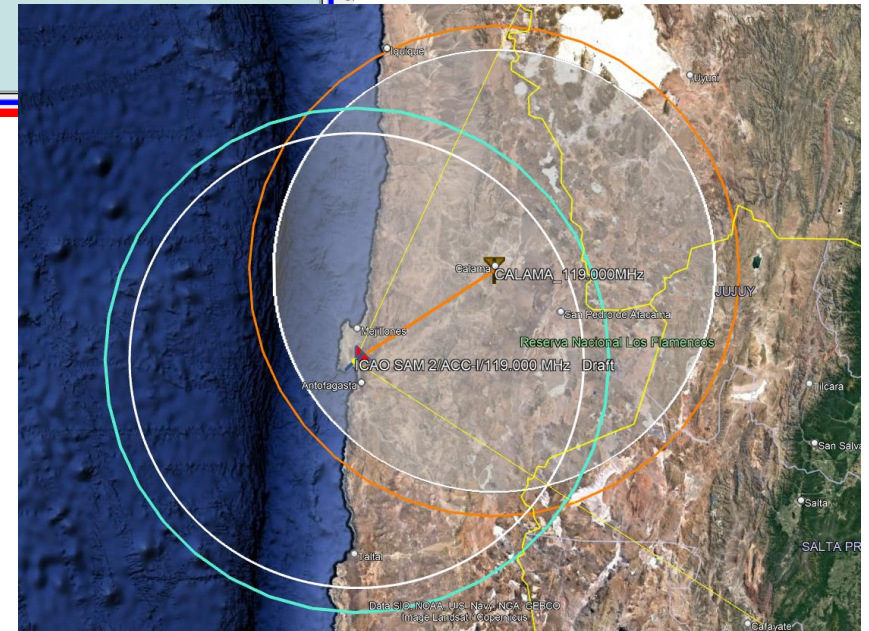

Summary Co-frequency Adj. Frequency **Summary** Test results of the new or modified frequency assignment

Margin in NM

Date/time	Key	D	Frequency	Region	Country	Location	Service	Margin	Result co-ch	Margin Result ad
26/05/2023 17:09:01	705210	D	119.000	SAM	ICAOTEST SAM	ICAO SAM 2	ACC-I	-658	Not compatible ***	Compatible

Click the button TEST in the pane "Station" to view the calculation results if the fields are empty or the Key in the box Summary is different from the Key in the box Station

Print co-frequency **Plot interference - All** Print adj-frequency Plot interference - All



Add, Mod or Delete Frequency (Demonstration 2: Mod)

This selected frequency was **Not** compatible, so now you **need to find an appropriate one!**

Before “start search”, you need to:

- **Define Search Range**
(Two options (set frequency range or select from regional frequency allotment plan.
Note.- it is always better to select it from the regional allotment plan!!).
- **Set Maximum # of frequencies**
(1-10 can be selected)

Search range
118...136.975 MHz

Set frequency range
START 118.000 MHz
END 136.975 MHz

Select from Regional Frequency Allotment Plan
SAM ACC

Reset

Max. # of frequencies 10

START SEARCH

In this example, select **ACC** and **10** frequencies

Then **“Start Search”**

Add, Mod or Delete Frequency (Demonstration 2: Mod)

10 Frequency were found and select a frequency.

When you select a candidate frequency, please consider how you can use the spectrum efficiently!

Station

MOD DR Mod assignment

Region SAM Key D 705210 Cat ICAO Channel spacing

Country ICAOTEST SAM Ctry ZZS 25 kHz

Location ICAO SAM 2 8.33 kHz

Latitude 23 D 26 ' 00 " S N S

Longitude 070 D 26 ' 00 " W E W

Frequency 119.000

Service ACC-I

DOC ACC-I C-155/250

Range (NM) 155 Height (feet) 25000

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID

Remarks TEST WORKSHOP MAY 2023

TEST The selected frequency is NOT compatible. **Test completed**

Find Frequency

Search range 118...136.975 MHz

Set frequency range

START 118.000 MHz

END 136.975 MHz

Select from Regional Frequency Allotment Plan

SAM ACC

Reset

Max. # of frequencies 10

START SEARCH

Searching

Search completed

124.025

Frequencies found	Margin co-freq	Margin adj-freq
FF1 123.725	***	***
FF2 123.750	189	***
FF3 123.775	***	***
FF4 123.825	***	344
FF5 123.875	***	344
FF6 123.925	***	425
FF7 123.950	111	***
FF8 123.975	***	***
FF9 124.000	83	***
FF10 124.025	***	***

Selected frequency 124.000 Allotted to ACC

In this demonstration: Click "124.000".

The frequency you selected will be automatically included in the left side.

Station

MOD DR Mod assignment

Region SAM Key D 705210 Cat ICAO Channel spacing

Country ICAOTEST SAM Ctry ZZS 25 kHz

Location ICAO SAM 2 8.33 kHz

Latitude 23 D 26 ' 00 " S N S

Longitude 070 D 26 ' 00 " W E W

Frequency 124.000

Service ACC-I

DOC ACC-I C-155/250

Range (NM) 155 Height (feet) 25000

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID

Remarks TEST WORKSHOP MAY 2023

TEST The selected frequency is compatible. **Test completed**

Find Frequency

Search range 118...136.975 MHz

Set frequency range

START 118.000 MHz

END 136.975 MHz

Select from Regional Frequency Allotment Plan

SAM ACC

Reset

Max. # of frequencies 10

START SEARCH

Searching

Search completed

124.025

Frequencies found	Margin co-freq	Margin adj-freq
FF1 123.725	***	***
FF2 123.750	189	***
FF3 123.775	***	***
FF4 123.825	***	344
FF5 123.875	***	344
FF6 123.925	***	425
FF7 123.950	111	***
FF8 123.975	***	***
FF9 124.000	83	***
FF10 124.025	***	***

FOUND frequencies 10

Selected frequency 124.000 Allotted to ACC

When you selected a frequency, FF also checked the compatibility and indicated the result : "The selected frequency is compatible. Test completed".

Add, Mod or Delete Frequency (Demonstration 2: Mod)

You selected the frequency, the result indicates “compatible”.

COM Data Base (COM LIST 3) NEW/MOD Frequency FF 2022 01

Active Region ==MID User_COM State

COM list 3 synchronized
Table of Polygons synchronized

Station

MOD DR Mod assignment

Region SAM Key D 705210 Cat ICAO

Country ICAO TEST SAM Ctry ZZS

Location ICAO SAM 2

Latitude 23 D 26 ' 00 " S

Longitude 070 D 26 ' 00 " W

Service ACC-I

DOC ACC-I C-155/250

Range (NM) 155 Height (feet) 25000

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID

Remarks TEST WORKSHOP MAY 2023

TEST The selected frequency is compatible. Test completed

Save as REGISTERED frequency

Save as DRAFT frequency

Delete draft frequency

View Summary calculations

Go to Regional COM list

Frequency Allotment Plan

MID TWR

Max. # of frequencies 10

Searching 118.550

Search complete 118.550

Selected frequency 118.150

Select :

*“Save as DRAFT frequency”
in case you need to work on this
assignment more.*

*“Save as REGISTERED frequency”
in case you completed the
assignment and ready for
submission*

Export Submissions

The registered frequency needs to report to Regional officer

The screenshot shows a software interface for managing frequency assignments. At the top, there are navigation buttons like 'Delete Record', 'Active Find', 'NEW/MOD Frequency', 'TEST frequency', and 'Calculation results'. Below these are search and filter options. A table displays a list of frequency assignments with columns for MOD, Key, Region, Frequency, Country, Location, Latitude, Longitude, and DOC. A red circle highlights a row with MOD 'M', Key 'R', Region 'SAM', Frequency '124.000', Country 'ICAO TEST SAM', and Location 'ZZS ICAO SAM 2'. A hand icon points to a button labeled '- Export submissions -' with a red circle and the number '1' next to it. Below the table, a dialog box titled '<110> Open Excel file' is shown, with 'Open' and 'Cancel' buttons. A red circle and the number '2' are next to the 'Open' button, with the text 'Click "Open"'. Below the dialog box, a file explorer window shows a folder named 'SaveSubmissions' containing an Excel file named 'VHFCOM ZZS 26-05-2023 53147 PM.xlsx', which is highlighted with a red box. A blue arrow points from the top row of the table to the bottom row, which has MOD 'SM', Key 'R', Region 'SAM', Frequency '124.000', Country 'ICAO TEST SAM', and Location 'ZZS ICAO SAM 2'. A red circle highlights this bottom row. The ICAO logo is visible in the bottom left corner.

Click **“Export submission”** to report New, Mod or Del frequency to regional officer

Click **“Open”**

Through a dialogue box, the State (user) can consult the Excel file prior to submission to the ICAO Regional Office (RO) **by email**;



Exercises

Add, Modify or Delete Frequency

Prior to start this exercise, please make sure that you have the latest data.

- Go back to Home page, check sync, and if the message “modification to the global database” appeared, then please select “download”.

Exercise 2- MOD: modify some parameter in the TWR frequency of your country you created in **Exercise 1- ADD**, and find an appropriate frequency for that station.

- 1) Query a frequency (in your country) and select the frequency you created in the **Exercise 1- ADD**.
- 2) Modify the service from **TWR to ATIS**, and find an appropriate frequency for that station (In Remark, please keep the remark “**TEST WORKSHOP 2023**”)
- 3) If you found an appropriate one, save it as registered frequency; and
- 4) Send it to the Regional officer.

Add, Mod or Delete Frequency (Exercise 2: Mod)

Go back to [Regional COM List 3](#)

Click **“Query”**

In this example select,
Country: **ICAO TEST SAM**
Location: **ICAO SAM 3**
Service: **TWR**

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==SAM

Country ==ICAO TEST SAM R

Location ==ICAO SAM 3 R

Frequency No Frequency selected

Service TWR

FIR Sector No FIR name selected

Ext. Range No ER selected

Find

Query Database

Click **“Find”**

Query outcome in this example:
(the data with key 705215) is displayed.

FF_2022_01 Runtime Active Region ==MID COM list 3 for VHF COM air/ground frequency assignments In

Global COM list 3 Active Find TEST FREQUENCY Calculation results

MID COM list 3 RESET QUERY MAPPING Export COM list 3

total found

30374 1

Query MODIFY frequency

Quick Find Reset DELETE CANCEL

MOD Key Region Frequency Country Location Latitude Longitude DOC

R	705215	SAM	118.050	ICAO TEST SAM	ZZS	ICAO SAM 3	23D26'50" S	070D22'50" W	TWR C-25/40
---	--------	-----	---------	---------------	-----	------------	-------------	--------------	-------------

Click **“New or Mod or Del Freq,”**
Select **“MODIFY Frequency”**



Add, Mod or Delete Frequency (Exercise 2: Mod)

Station

MOD DR Mod assignment

Region SAM Key D 705215 Cat ICAO Channel spacing 25 kHz

Country ICAOTEST SAM Ctry ZZS 8.33 kHz

Location ICAO SAM 3

Latitude 23 D 26 ' 50 " S N S

Longitude 070 D 22 ' 50 " W E W

Service ATIS

DOC ATIS B-200/450

Range (NM) 200 Height (feet) 45000

FIR SECTORNAME No area service set or selected PolyID Enter Poly ID

Remarks

TEST Not tested

In this example, I changed the service from "TWR" to "ATIS"

Since I changed the service, I need to find an appropriate frequency for ATIS.

In this example, I used "regional allotment plan" and select "VOLMET, ATIS" and set maximum # of frequencies 10 for the search.

Then "Start Search"

118...136.975 MHz

Set frequency range

START 118.000 MHz

END 136.975 MHz

Select from Regional Frequency Allotment Plan

SAM VOLMET, ATIS

Reset

Max. # of frequencies 10

START SEARCH



Add, Mod or Delete Frequency (Exercise 2: Mod)

10 Frequency were found and select a frequency. *When you select a candidate frequency, please consider how you can use the spectrum efficiently!*

In this demonstration: Click "127.600".

The frequency you selected will be automatically included in the left side.

Station configuration interface showing fields for Region (SAM), Country (ICAO TEST SAM), Location (ICAO SAM 3), Latitude (23 D 26 ' 50 " S), Longitude (070 D 22 ' 50 " W), Service (ATIS), and DOC (ATIS B-200/450). The Frequency field is set to 127.600. A message at the bottom indicates: "The selected frequency is compatible. Test completed".

Find Frequency search results table:

Frequencies	Margin	Margin
FF1 127.600	33	***
FF2 127.625	***	271
FF3 127.675	523	271
FF4 127.725	***	341
FF5 127.750	117	***
FF6 127.775	***	372
FF7 127.825	***	372
FF8 127.850	123	***
FF9 127.875	***	***
FF10 127.900	250	***

FOUND frequencies: 10
Margin in NM: []

Selected frequency: 127.600
Allotted to: []

When you selected a frequency, FF also checked the compatibility and indicated the result : "The selected frequency is compatible. Test completed".



Add, Mod or Delete Frequency (Exercise 2: Mod)

You selected the frequency, the result indicates "compatible".

SAM COM List 3
COM list 3 synchronized
Table of Polygons synchronized

**VHF COM LIST 3
NEW/MOD Frequency**

Save as draft record
Save as registered record
Delete

Find Frequency

Search range: 18...136.975 MHz

Set frequency range:
START 118.000 MHz
END 136.975 MHz

Select from Regional Frequency Allotment Plan
SAM VOLMET, ATIS

Reset

Max. # of frequencies: 10

Frequencies found	Margin co-freq	Margin adj-freq
FF1 127.600	33	***
FF2 127.625	***	271
FF3 127.675	523	271
FF4 127.725	***	341
FF5 127.750	117	***
FF6 127.775	***	372
FF7 127.825	***	372
FF8 127.850	123	***
FF9 127.875	***	***
FF10 127.900	250	***

FOUND frequencies: 10
Margin in NM

Selected frequency 127.600 Allotted to VOLMET, ATIS

TEST The selected frequency is compatible. Test completed

Select :
“Save as DRAFT frequency”
 in case you need to work on this assignment more.

“Save as REGISTERED frequency”
 in case you completed the
 assignment and ready for submission

In this example,
 I saved **as REGISTERED**
 frequency.



Export Submissions

The registered frequency needs to report to Regional officer

FF_2023_01 Runtime Active Region ==SAM COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 -

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Export COM list 3 Special Functions

30762 total 1 found SAM COM List 3 Query

FM DU D Quick Find Reset

MOD Key Region Frequency Country Location Latitude Longitude DOC

M F 705215 SAM 127.600 ICAOTEST SAM ZZS ICAO SAM 3 23D26'50" S 070D22'50" W ATIS B-200/450

- Export submissions - 1

Click "Export submission" to report New, Mod or Del frequency to regional officer

<110> Open Excel file

An Excel file will be created containing your submissions, which you can attach later to an email message to be sent to the Regional Office.

Cancel Open 2

Click "Open"

Through a dialogue box, the State (user) can consult the Excel file prior to submission to the ICAO Regional Office (RO) by email;

File Home Share View

Pin to Quick access Copy Paste Cut Copy path Move to Copy to Delete Rename New folder Easy access Properties Edit History Open

Clipboard Organize New Open

Windows (C:) > frequencyfinder > SaveSubmissions

Name Date modified

VHFCOM ZZS 27-05-2023 52051 PM.xlsx 27/05/2023 5:24 PM

MOD Key Region Frequency Country Location Latitude Longitude DOC

SM R 705215 SAM 127.600 ICAOTEST SAM ZZS ICAO SAM 3 23D26'50" S 070D22'50" W ATIS B-200/450



Demonstrations

Add, Modify or Delete Frequency

Demonstration 3- Delete a frequency, using ICAO MID Key 705208.

- 1) Query a frequency (State: ICAOTEST SAM, Frequency 118.025)
- 2) Delete this frequency, and
- 3) submit it to the regional officer.

.

Add, Mod or Delete Frequency (Demonstration 3: Del)

Go back to [Regional COM List 3](#)

Click **“Query”**

In this demonstration, select,

Country: **ICAO TEST SAM**

Frequency: **118.025**

Home Regional COM list Query COM List 3 Enter your QUERY

QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY DATABASE QUERY

Region ==SAM Frequency 118.025

Country ==ICAO TEST SAM Service No Service selected

Location ==Groningen FIR Sector No FIR name selected

Ext. Range No ER selected

Find

Click **“Find”**

Your Query outcome (the data with key 705208) is displayed in this demonstration.

Click **“Delete Record”**

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM 30762 total 1 found

SAM COM Query

Quick Find Reset

Query active.
To return query click button "Active Find"
To cancel query: click button "RESET QUERY"

MOD Key Region Frequency Country Location Latitude Longitude DOC

R	705208	SAM	118.025	ICAO TEST SAM	ZZS	Groningen	34D34'00" N	058D25'00" W	APP-U C-150/
---	--------	-----	---------	---------------	-----	-----------	-------------	--------------	--------------

Add, Mod or Delete Frequency (Demonstration 3: Del)

Once you selected **“DELETE Frequency”**, the following message appeared.

The screenshot shows a software interface with a table of frequency assignments. A dialog box is open over the table, asking for confirmation to delete a specific frequency assignment. The dialog text is as follows:

<65.5> Delete registered frequency assignment # E705208
Delete the registered frequency assignment # E705208 from your local COM list 3.
Click "Delete" to (functionally) delete the registered frequency.

Buttons: Cancel, Delete

A hand icon is pointing to the 'Delete' button, with the text 'Click "Delete"' next to it.

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
R	705208	SAM	118.025	ICAOTEST SAM	ZZS Groningen	34D34'00" N	058D25'00" W	APP-U C-150/45

- If you are deleting a “registered frequency”, you need to submit it to the Regional officer using “export submission”.
- If you are deleting a “draft frequency”, there is no need to send it to Regional office.

In this demonstration, we are deleting the registered frequency, you need to send it to the Regional officer.



Export Submissions

The registered frequency needs to report to the Regional officer

FF_2023_01 Runtime Active Region ==SAM COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 1

Start Home Delete Record Active Find NEW/MOD Frequency TEST frequency Calculation results

Global COM list 3 RESET QUERY MAPPING Export COM list 3 Special Functions

30762 total 1 found SAM COM List 3 Query

Query active. To return query click button "Active Find" To cancel query: click button "RESET QUERY"

FM DU D Quick Find Reset

MOD Key Region Frequency Country Location Latitude Longitude DOC

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
D	R	705208	SAM	0.000	ICAOTEST SAM	ZZS	Groningen	34D34'00" N 058D25'00" W APP-U C-150/450

- Export submissions -

Click "Export submission" to report New, Mod or Del frequency to the regional officer

<110> Open Excel file

An Excel file will be created containing your submissions, which you can attach later to an email message to be sent to the Regional Office.

Cancel Open

Click "Open"
Through a dialogue box, the State (user) can consult the Excel file prior to submission to the ICAO Regional Office (RO) by email;

SaveSubmissions

File Home Share View

Clipboard Organize New Open

Windows (C:) > frequencyfinder > SaveSubmissions

2022-2023

FF workshop SAM_

Lima Peru May 202:

VHFCOM ZZS 27-05-2023 52051 PM.xlsx



MOD Key Region Frequency Country Location Latitude Longitude DOC

MOD	Key	Region	Frequency	Country	Location	Latitude	Longitude	DOC
SD	R	705208	SAM	0.000	ICAOTEST SAM	ZZS	Groningen	34D34'00" N 058D25'00" W APP-U C-150/450

Exercises

Add, Modify or Delete Frequency

Prior to start this exercise, please make sure that you have the latest data.

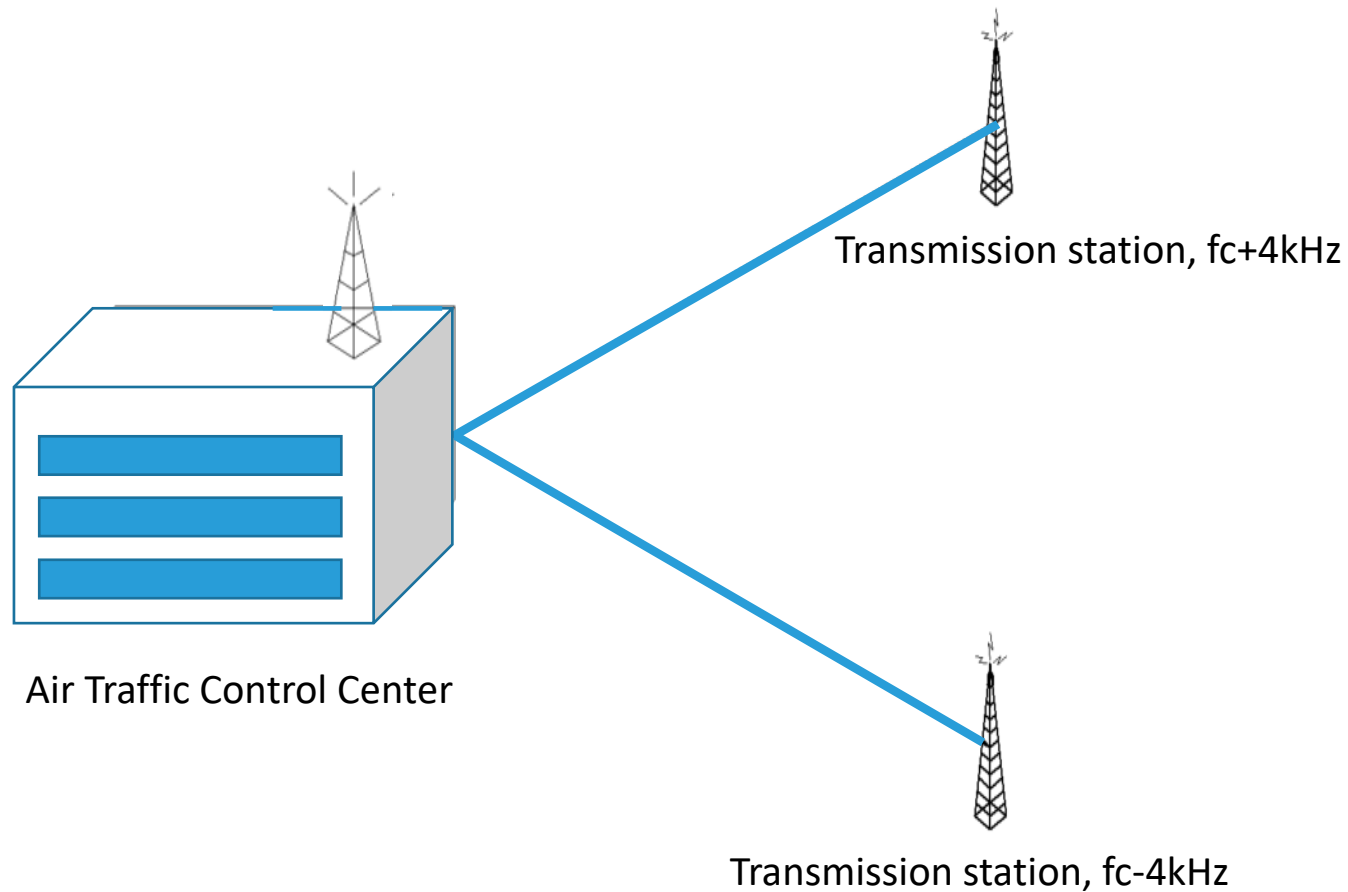
- Go back to Home page, check sync, and if the message “modification to the global database” appeared, then please select “download”.

Exercise 3- DEL: Delete the ATIS frequency of your country you created in the **Exercise 2- MOD**.

- 1) Query a frequency (in your country) and select the frequency you created in the Exercise 2 MOD.
- 2) Click “Delete Record ”.
- 3) Click “Delete”
- 3) Submit it to the Regional officer.

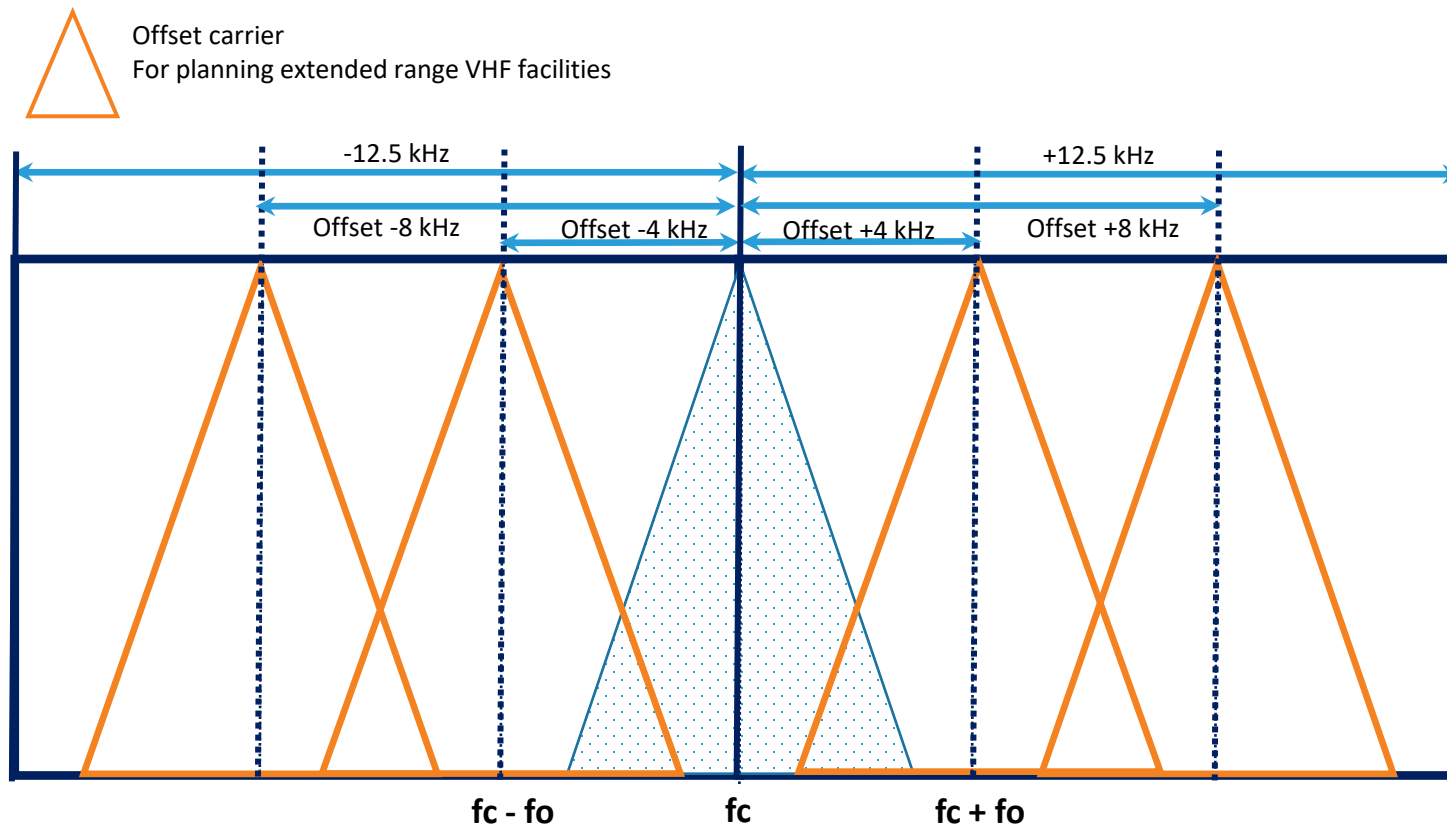
Applying Extended Range (ER) and Area Service

Extended Range (ER) Facilities



- For large geographical ATC sectors or sectors with difficult propagation, the VHF coverage cannot be met with a single ground transmitter.
- In such coverage situations, instead of using several different frequencies, additional coverage is provided through installing extended range stations (forward relay).
- These stations can operate on the same frequency using the offset carrier system or multi-carrier system.

Extended Range (ER) Facilities Cont.



Extended Range (ER) Facilities Cont.

- ER Stations are implemented to provide coverage **over a large geographical area that cannot be covered by a single VHF station.**
- The ER stations operate on the **same frequency in the off-set carrier configuration** (refer to Annex 10).
- All stations within same ER family
 - ***No longer considered as interferer between each other***
(Refer to Frequency Finder Manual)

Extended Range (ER) Facilities Cont.

How to apply Extended range to stations in Frequency Finder

- 1) For existing ER family,
 - click the drop down menu in the ER family and
 - **select from the available ER families.**
- 2) For a new ER family,
 - **Type a new ER family name** in the box ER family.

Note.- This name must be preceded with the characters “ER-“.
*E.g. **ER-UAE-01** for a family of frequency assignments in UAE.*

Exercise

Add, Modify or Delete Frequency

Exercise 4- Update your COM List 3 of the Frequency Finder, using your latest data.

Demonstrations Extended Range (ER)

Adding Extended Range stations Example 1

1) **Add two frequencies** based on 702085 (Colombia 127.300) and 702073 (Colombia 127.300)

A frequency based on 702073 (Colombia 127.300)

Change information (like below)

- Country : ICAO TEST SAM,
- Location : ICAO SAM 4
- Service : ACC-U
- Frequency : 123.775
- Remark: TEST WORKSHOP 2023

At this moment, No FIR, No extended range

A frequency based on 702085 (Colombia 127.300)

Change information (like below)

- Country : ICAO TEST SAM
- Location : ICAO SAM 5
- Service : ACC-U
- Frequency : 123.775
- Remark : TEST WORKSHOP 2023

At this moment, No FIR, No extended range

Save as draft frequencies

Station

MOD DN New assignment

Region SAM **Key** D 705217 **Cat** NAT

Country ICAO TEST SAM **Ctry** ZZS

Location ICAO SAM 4

Latitude 02 D 34 ' 00 " N_S

Longitude 072 D 38 ' 00 " W_E

Service ACC-U

DOC ACC-U C-200/450

Range (NM) 200 **Height (feet)** 45000

FIR SECTORNAME No area service set or selected **PolyID** Enter Poly ID

Remarks TEST WORKSHOP 2023

Channel spacing 25 kHz

8.33 kHz

Frequency 123.775

ER family

Example: ER-BOT-01

Set Area Service

Reset

TEST
Not tested

Station

MOD DN New assignment

Region SAM **Key** D 705216 **Cat** NAT

Country ICAO TEST SAM **Ctry** ZZS

Location ICAO SAM 5

Latitude 04 D 10 ' 00 " N_S

Longitude 073 D 36 ' 00 " W_E

Service ACC-U

DOC ACC-U C-200/450

Range (NM) 200 **Height (feet)** 45000

FIR SECTORNAME No area service set or selected **PolyID** Enter Poly ID

Remarks TEST WORKSHOP 2023

Channel spacing 25 kHz

8.33 kHz

Frequency 123.775

ER family

Example: ER-BOT-01

Set Area Service

Reset

TEST
Test completed



Adding Extended Range stations Example 1 Cont.

2) Then, check compatibility test.
Outcome indicates “not compatible”

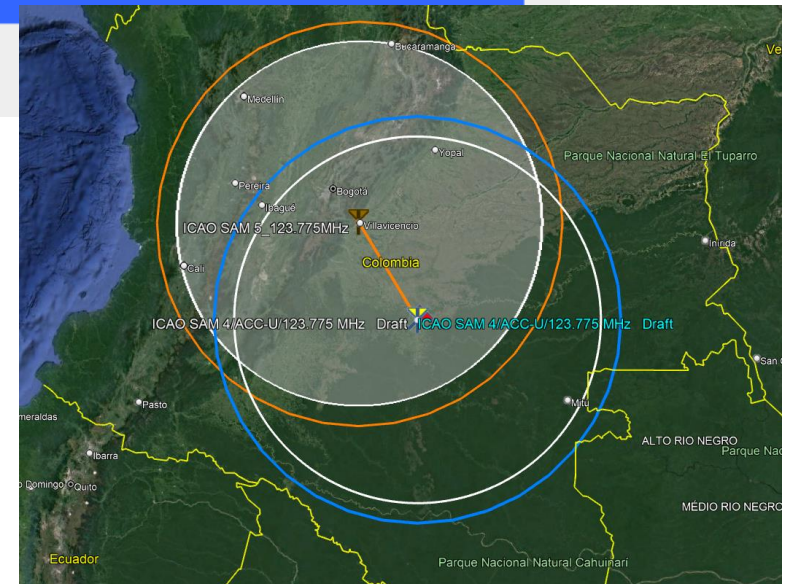
2 / 2 records

Regional COM list Show all records

Test for the frequency ...123.775MHz

Go to adj. frequency calc. Go to Summary Plot interference - All

Draft 1	Key D	705217	Frequency 123.775	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 02D34'00" N	Service ACC-U
	Region SAM		Country ICAOTEST SAM			Location ICAO SAM 4		Longitude 072D38'00" W	DOC ACC-U C-200/450
Not compatible with record #2			Margin -810 NM	Not compatible		ACC Upper Circular	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.									
Draft 2	Key D	705216	Frequency 123.775	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 04D10'00" N	Service ACC-U
	Region SAM		Country ICAOTEST SAM			Location ICAO SAM 5		Longitude 073D36'00" W	DOC ACC-U C-200/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record			Actual distance 112 NM	Required distance 922 NM	Margin -810 NM	Not compatible		ACC Upper Circular	Ext. range Plot interference
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.									



Adding Extended Range stations Example 1 Cont.

3) Add extended range to those two
ER-UAE-01 to both of added draft frequencies

Station: ICAO SAM 4

MOD DN: New assignment

Region: SAM Key: D 705217 Cat: NAT Channel spacing: 25 kHz

Country: ICAOTEST SAM Ctry: ZZS

Location: ICAO SAM 4

Latitude: 02 D 34 ' 00 " N Longitude: 072 D 38 ' 00 " W

Service: ACC-U

DOC: ACC-U C-200/450

Range (NM): 200 Height (feet): 45000

Frequency: 123.775

ER family: ER-COL-01

FIR SECTORNAME: No area service set or selected PolyID: Enter Poly ID

Remarks: TEST WORKSHOP 2023

TEST The selected frequency is NOT compatible. Not tested

Station: ICAO SAM 5

MOD DN: New assignment

Region: SAM Key: D 705216 Cat: NAT Channel spacing: 25 kHz

Country: ICAOTEST SAM Ctry: ZZS

Location: ICAO SAM 5

Latitude: 04 D 10 ' 00 " N Longitude: 073 D 36 ' 00 " W

Service: ACC-U

DOC: ACC-U C-200/450

Range (NM): 200 Height (feet): 45000

Frequency: 123.775

ER family: ER-COL-01

FIR SECTORNAME: No area service set or selected PolyID: Enter Poly ID

Remarks: TEST WORKSHOP 2023

TEST The selected frequency is compatible. Not tested

Add ER-COL-01

Save as draft frequencies



Adding Extended Range stations Example 1 Cont.

4) Outcome indicates "compatible" thanks to Ext Range

3 / 3 records

Regional COM list **Show all records**

Test for the frequency ...123.775MHz **Go to adj. frequency calc.** **Go to Summary** **Plot interference - All**

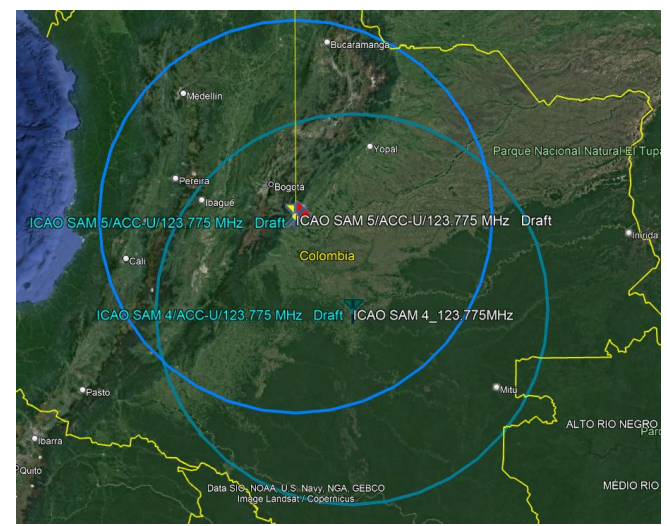
Draft 1	Key D	705216	Frequency 123.775	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 04D10'00" N	Service ACC-U
	Region	SAM	Country ICAOTEST SAM			Location ICAO SAM 5		Longitude 073D38'00" W	DOC ACC-U C-200/450
			Margin	0 NM	Compatible	ACC Upper Circular	Ext. range ER-COL-01 Plot coverage		

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.

Draft 2	Key O	705217	Frequency 123.775	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 02D34'00" N	Service ACC-U
	Region	SAM	Country ICAOTEST SAM			Location ICAO SAM 4		Longitude 072D38'00" W	DOC ACC-U C-200/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record			Actual distance	112 NM	Required distance	922 NM	Margin	0 NM	Extended Range
							ACC Upper Circular	Ext. range ER-COL-01 Plot interference	

	Key R	500529	Frequency 123.775	Range 200	Height 45000	Radio Horizon 261	Sectorname	Latitude 20D56'17" N	Service ACC-U
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Extended Range



Demonstrations Area Service

Applying Area Service Example 1

Using an ACC-U frequency in Guyana (GEORGETOWN, 128.600, ACC-U), check the influence when we applied FIR to the frequency.

A frequency with key code 702217 (Guyana, GEORGETOWN, 128.600) is not compatible with a frequency with key code 701964 (Colombia, 128.600 MHz).

The required distance is 1044 NM, but the actual distance is 955 NM. Its margin is 89 NM.

Regional COM list **Show all records**

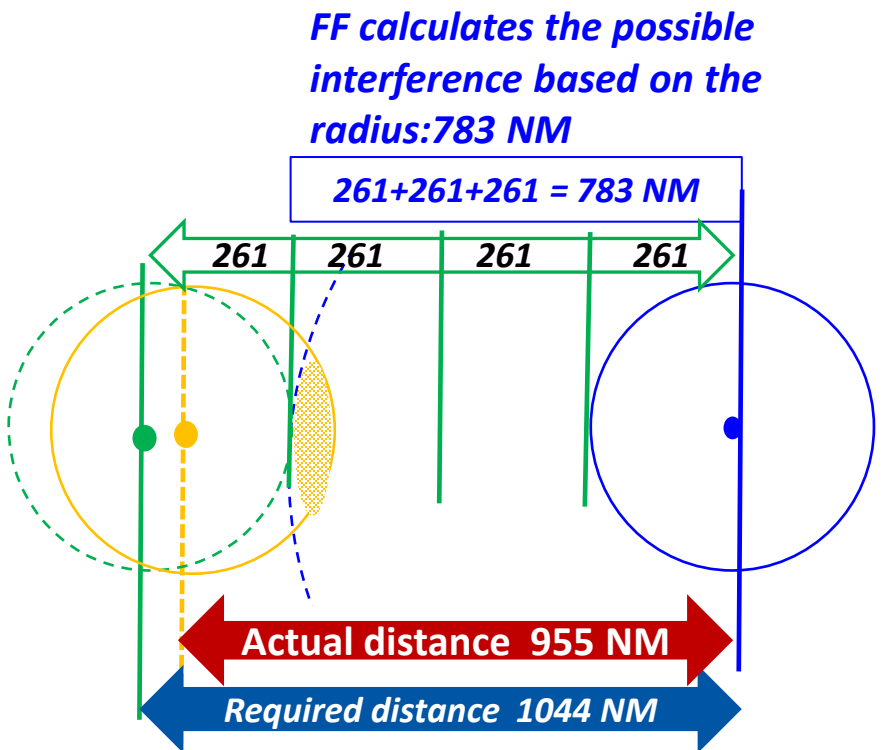
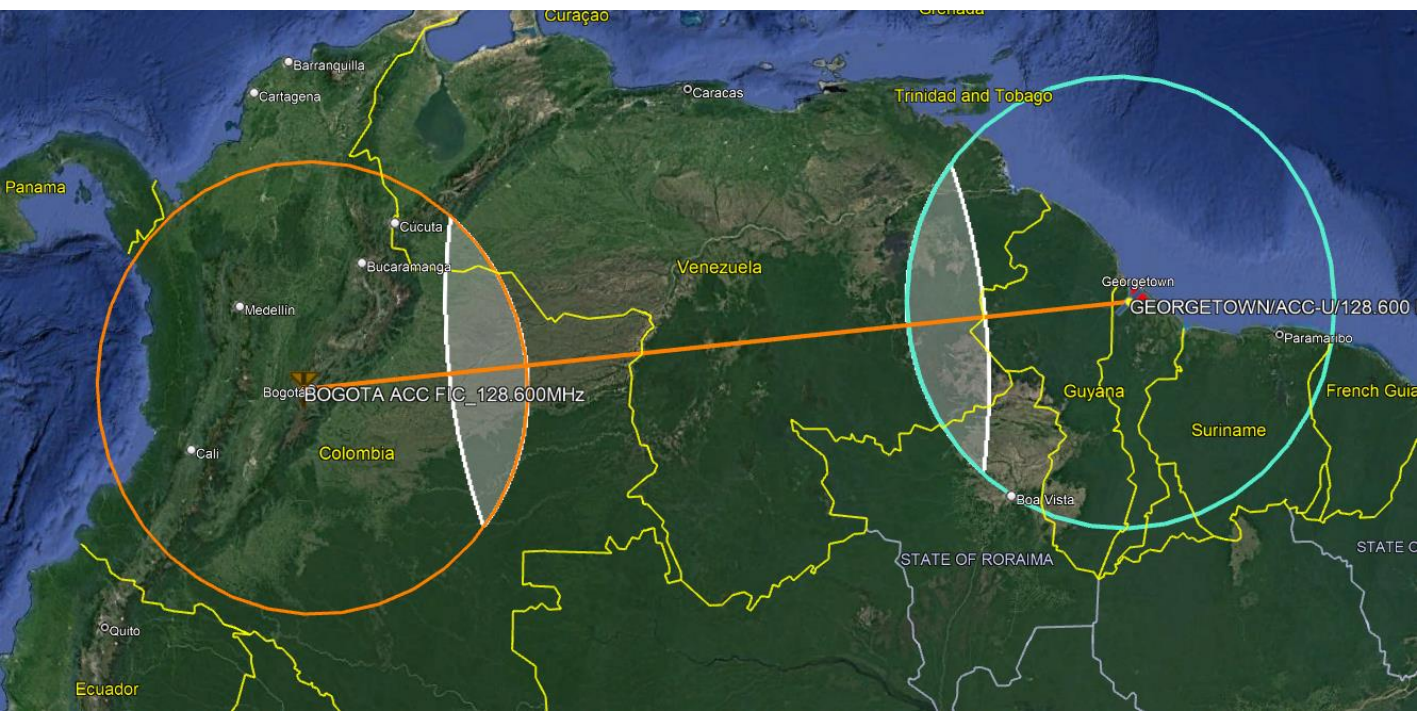
Test for the frequency ...128.600MHz **Go to adj. frequency calc.** **Go to Summary** Plot interference - All

Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Service		
1	R 702217	128.600	261	45000	261		06D30'00" N	ACC-U		
Region	SAM	Country	Guyana		Location	GEORGETOWN	Longitude	058D15'00" W		
Not compatible with record #2							Margin	-89 NM	Not compatible	
							ACC Upper Circular	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.										
Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Service		
2	R 701964	128.600	261	45000	261		04D42'00" N	ACC-U		
Region	SAM	Country	Colombia		Location	BOGOTA ACC FIC	Longitude	074D08'00" W		
The distance is measured between the location of the station in record 1 and the location of the station in the current record							Actual distance	955 NM	Required distance	1044 NM
							Margin	-89 NM	Not compatible	
							ACC Upper Circular	Ext. range	Plot interference	
First record is station being tested, records below are stations against which the first station has been tested.										

Applying Area Service Example 1 Cont.

A frequency with key code 702217 (*Guyana, GEORGETOWN, 128.600*) is not compatible with a frequency with key code 701964 (*Colombia, 128.600 MHz*).

The required distance is 1044 NM, but the actual distance is 955 NM. Its margin is 89 NM.



Applying Area Service Example 1 Cont.

A frequency with key code 702217 (Guyana, GEORGETOWN, 128.600) is not compatible with a frequency with key code 701964 (Colombia, 128.600 MHz).

If added GEORGETOWN FIR (Poly ID: 99196) to the frequency ACC-U frequency in Guyana (GEORGETOWN, 128.600 MHz, ACC-U, key code 702217), what will be the outcome of the compatibility test?

If added Poly ID (99196)

Refer to Appendix G of the user manual for Poly ID



Applying Area Service Example 1 Cont.

If added GEORGETOWN FIR (Poly ID: 99196) to the frequency ACC-U frequency in Guyana (GEORGETOWN, 128.600 MHz, ACC-U, key code 702217), what will be the outcome of the compatibility test?

Regional COM list | Show all records | Test for the frequency ...128.600MHz | Go to adj. frequency calc. | Go to Summary | Plot interference - All

Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Longitude	Service
1	R	702217	128.600	261	45000	GEORGETOWN	06D30'00" N	058D15'00" W	ACC-U
Region	SAM	Country	Guyana						DOC ACC-U C-260/450
Not compatible with record #2 Margin -89 NM Not compatible ACC Upper Circular 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	R	701964	128.600	261	45000	BOGOTA ACC FIC	04D42'00" N	074D08'00" W	ACC-U
Region	SAM	Country	Colombia						DOC ACC-U C-260/450
The distance is measured between the location of the station in record 1 and the location of the station in the current record Actual distance 955 NM Required distance 1044 NM Margin -89 NM Not compatible ACC Upper Circular Ext. range Plot interference									
First record is station being tested, records below are stations against which the first station has been tested.									

A frequency with key code 702217 (Guyana, GEORGETOWN, 128.600) is not compatible with a frequency with key code 701964 (Colombia, 128.600 MHz). The required distance is 1044 NM, but the actual distance is 955 NM. **Its margin is 89 NM.**



2 / 3 records | Regional COM list | Show all records | Test for the frequency ...128.600MHz | Go to adj. frequency calc. | Go to Summary | Plot interference - All

Frequencies with a margin greater than 300 NM are not shown

Key	R	Frequency	Range	Height	Radio Horizon	Sectorname	Latitude	Longitude	Service
1	R	702217	128.600	261	45000	99196	06D30'00" N	058D15'00" W	ACC-U
Region	SAM	Country	Guyana						DOC ACC-U A-450
Not compatible with record #2 Margin -18 NM Not compatible ACC Upper 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	R	701964	128.600	261	45000	BOGOTA ACC FIC	04D42'00" N	074D08'00" W	ACC-U
Region	SAM	Country	Colombia						DOC ACC-U C-260/450
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 765 NM Required distance 783 NM Margin -18 NM Not compatible ACC Upper Circular Ext. range Plot interference									
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.									

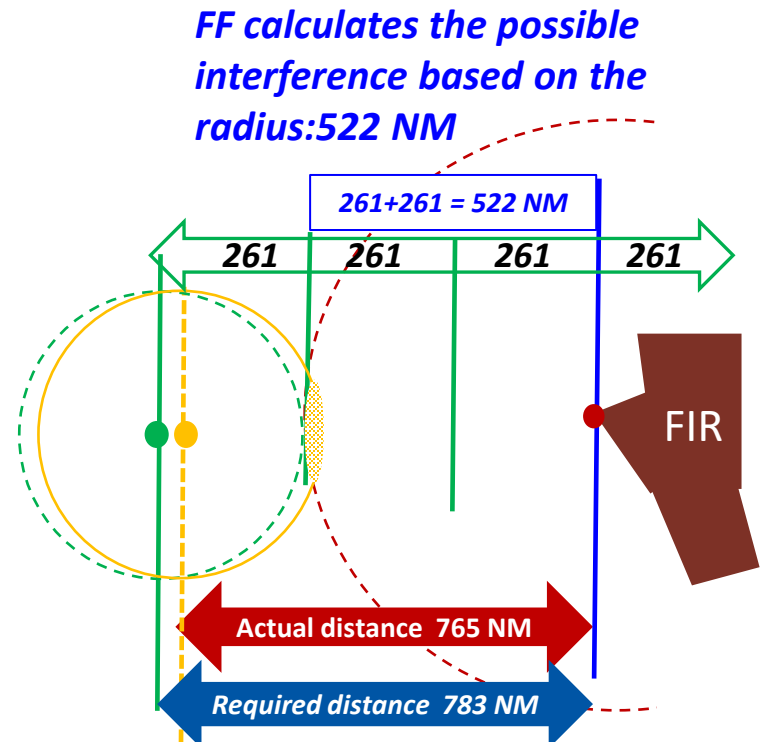
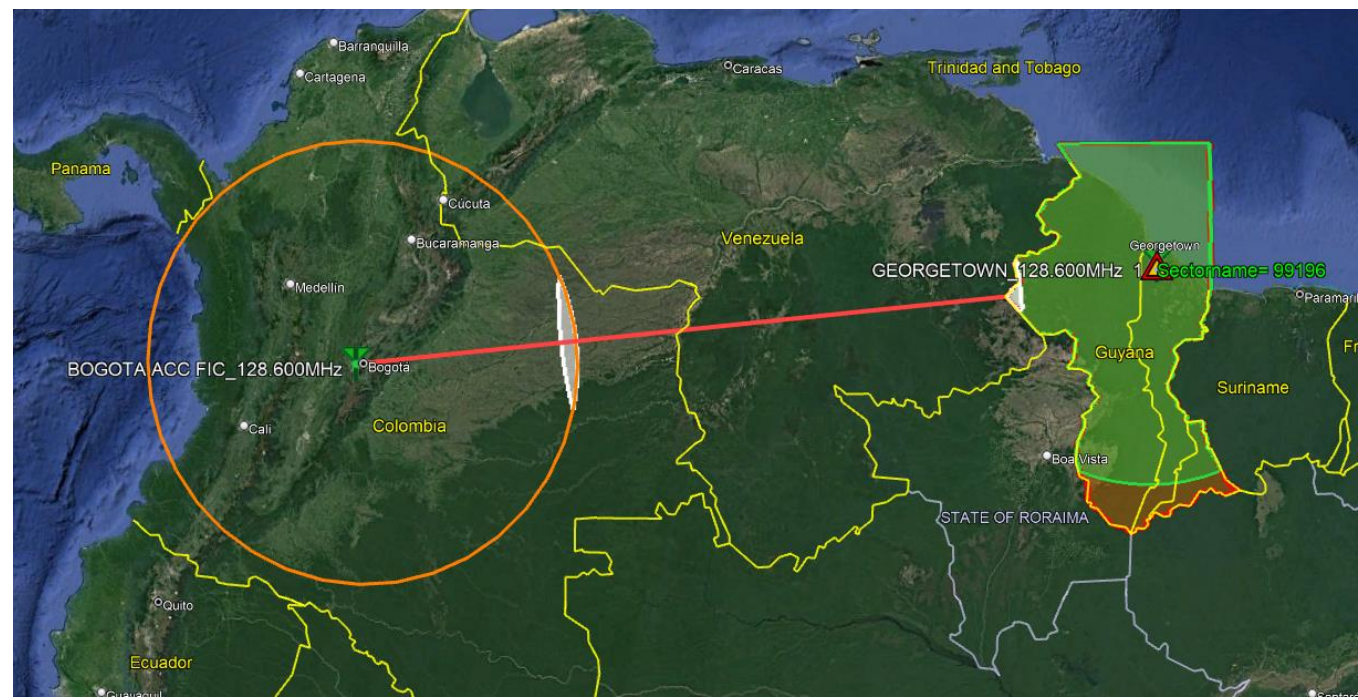
A frequency with key code 702217 (Guyana 128.600 MHz) applying Georgetown FIR (Poly ID 99196) is not compatible with a frequency with key code 701964 (Colombia, 128.600 MHz). **But its margin is reduced from 89 NM to 18 NM.**



Applying Area Service Example 1 Cont.

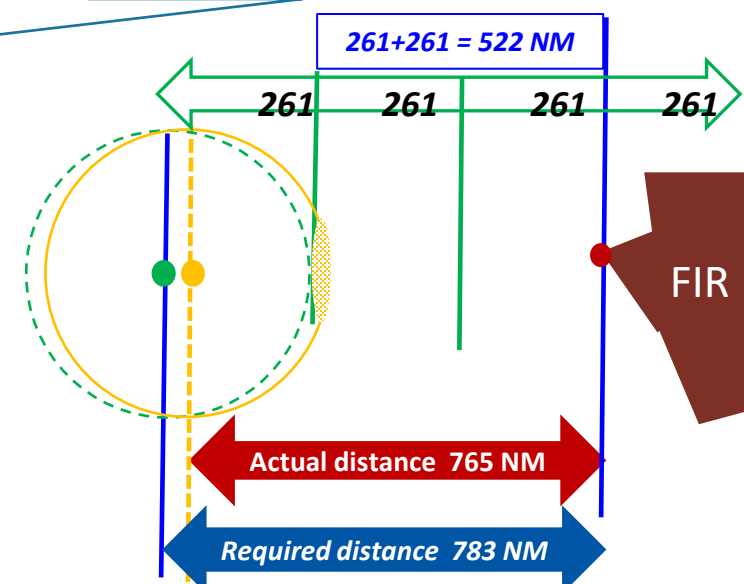
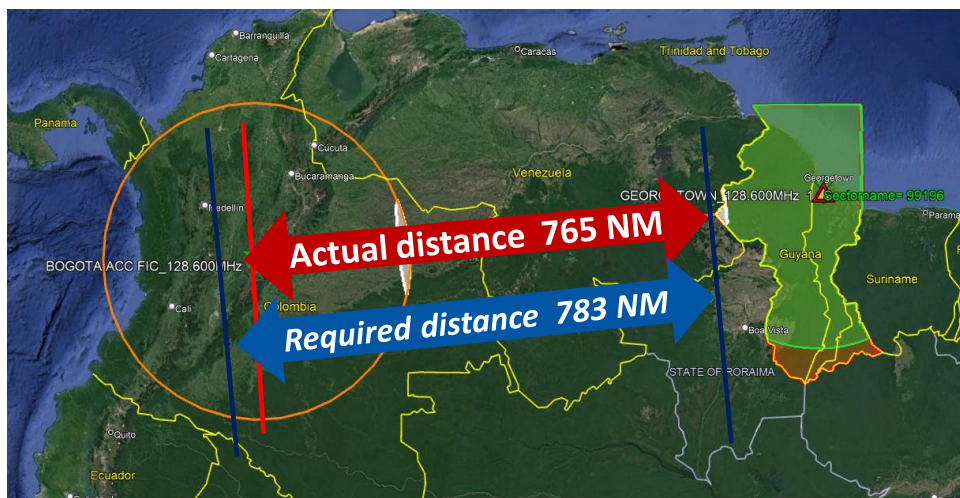
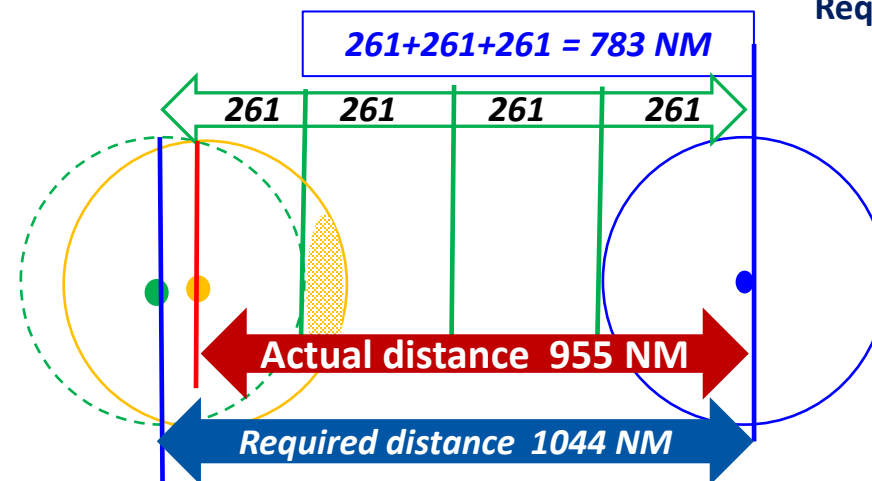
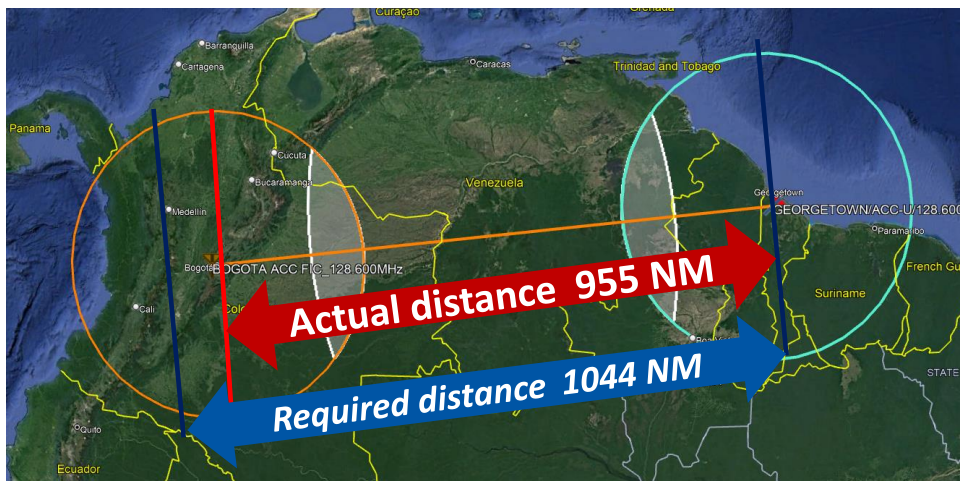
If added GEORGETOWN FIR (Poly ID: 99196) to the frequency ACC-U frequency in Guyana (GEORGETOWN, 128.600 MHz, ACC-U, key code 702217), what will be the outcome of the compatibility test?

A frequency with key code 702217(Guyana 128.600 MHz) applying Georgetown FIR (Poly ID 99196) is not compatible with a frequency with key code 701964 (Colombia, 128.600 MHz). **But its margin is reduced from 89 NM to 18 NM.**



Applying Area Service Example 1 Cont.

Actual Distance
Required Distance



Exercises

Export Submission

Export Submissions

The registered frequency needs to report to Regional officer

Frequency Finder

File Edit View Insert Format Records Scripts Window Help

FF_2023.01 Runtime Active Region ==AFI COM list 3 for VHF COM air/ground frequency assignments in the band 117.975 - 137 MHz User Manual

Start Home Global COM list 3 Active Find New or Mod or Del Freq. TEST FREQUENCY Calculation results

AFI COM list 3 RESET QUERY MAPPING Export COM list 3

total found 10376 1 Query

Quick Find Reset

MOD Key Region Frequency Country

N	?	AFI	118.025	ICAOTEST AFI	ZZA	TEST
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Special Functions - Export submissions -

1

Click "Export submission" to report New, Mod or Del frequency to regional officer

Through a dialogue box, the State (user) can consult the excel file prior submission to the ICAO Regional Office (RO);

2

For the workshop please email to Fabiola Chouha and not the RO so that we can then delete the Tested entries from your local database

This PC > Windows (C:) > frequencyfinder > SaveSubmissions

Name	Date modified	Type	Size
VHFCOM ZZA 10-05-2022 114104 AM.xlsx	10/05/2022 11:43 AM	Microsoft Excel Work...	5
...

3. Attach the excel file to your e-mail and send it to the Regional officer



Exercises

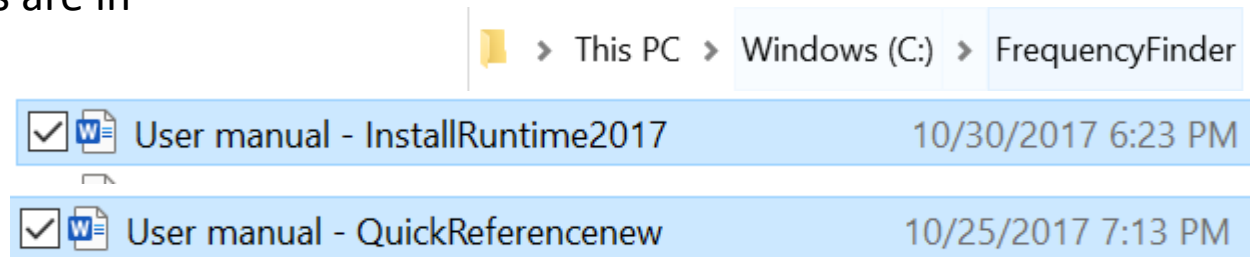
Special functions

- *Export COM list 3*
- *Undo Submission(s)*

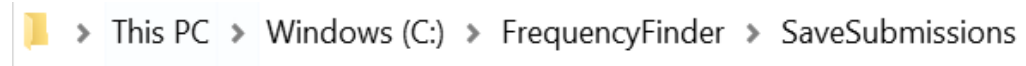
Reference Materials and websites

- Frequency Spectrum Management Panel
 - [The latest frequency finder runtime version](#)
 - [The latest Doc 9718](#) Handbook on Radio Frequency Spectrum Requirements for Civil Aviation Volume II – Frequency assignment planning criteria for aeronautical radio communication and navigation systems (Planning criteria and terminology (2.6), and more)
- User Manual: Click **User Manual** on the Start page and VHF COM home page (This includes Appendix G - Poly ID)

- Other user manuals are in



- Saved submissions are in





Thank You!