

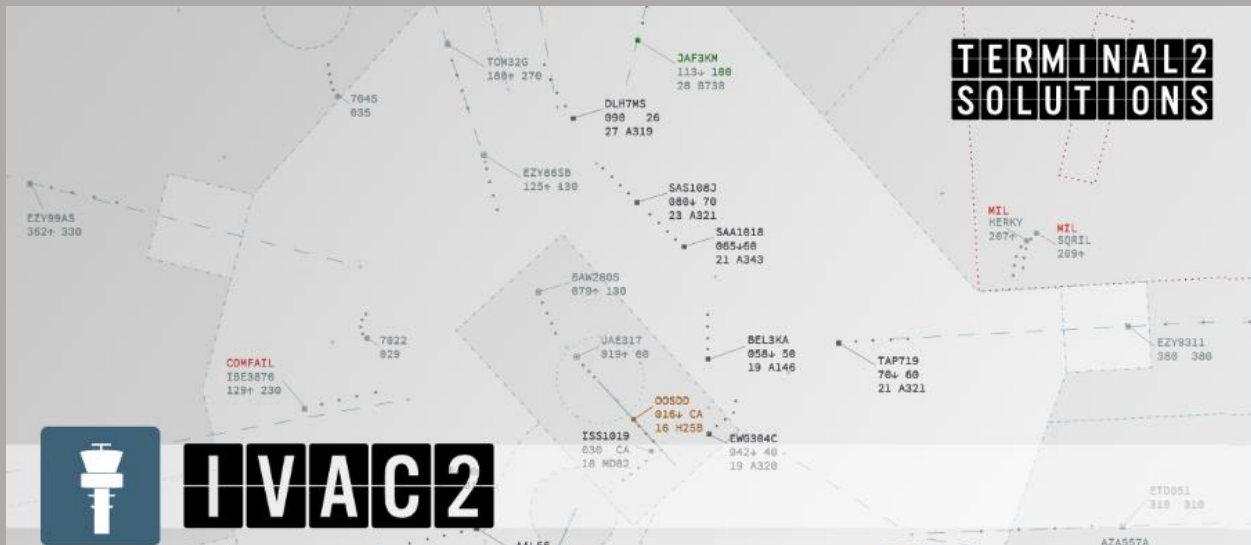


# GCC DIVISION



## IVAO XG Division IVAC2 Human Machine Interface (HMI) Handbook

Version 1.0  
28/05/2017





## Welcome to IVAC2!

Here you can find all required information, tutorial what you need to be familiar with the new interface. You will face with big differences from the former software. The most important one that here you cannot edit the „sectorfiles” or Colors because they are defined by the DataPrep Team members. The software will download automatically the latest version, Please check all topic below and if you have any questions or suggestions please ask us on our forum in the specific IVAC2 Topic.

This documentation will lead you through our FIRs specifications but for the software manual please refer here:

<http://doc.terminal2solutions.com/>

We've been working hard to deliver the best and most realistic possibility but please note that continues changes/improvements are expected in our FIRs.

Are you ready for something new and realistic?

Let's start the journey!



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## MAPs

MAPs			
AAN TMA	ACC	Al Ain TMA	AUH TMA
Dubai TMA	Fujairah TMA	GEO	NAV
OMDB	OMDW	OMFJ	OMSJ
RKT TMA			
AL ILS 01	T	RNAV 01	T
SID 19	T	STAR 01	T
AL VOR Z 19	T		

In the MAPs menu you will find all available elements what you can put into the display like the FIRs, SIDs, STARs etc...(In ivac1 the sid/star/artcc/menu)

There are 2 categories in the map groups: TMA (like Dubai TMA) and Airports (like OMDB), also there are separated groups for ACC, GEO and NAV.

In the TMA groups, you can find the sectors, active sectors (filled) for the specific area while in the Airport groups you can find the procedures like sid, star, centerlines, taxiway labels, stand labels etc...

ACC groups is created for maps with connection to the whole airspace, there you can find the APTs, FIX1 (includes the important fixes only), nav aids.

GEO is for the restricted, prohibited, dangerous airspaces, coastlines

NAV is for VFR Points, NDB – VOR Infos.



## Labels

Labels are totally different from the previous version.

There are 5 types of airborne labels:

- unconcerned (it is not set as next for you, it won't be controlled by you)
- concerned (it is expected to enter into your sector)
- assumed (assumed by you)
- released (aircraft released from your sector)
- filtered (when you use altitude filter)

Also exists 3 types of ground labels:

- Arrival (arrival traffic on the ground based on his FP)
- Departure (departure traffic on the ground based on his FP)
- Unknown (no FP sent or DEP and ARR are the same in the FP)

In our FIRs there are 3 different style labels: ACC – for Centre controllers, APP – for approach controllers and TWR – for tower controllers. They have a bit different structures, functions but easy to work with them.

In the labels you will see that we have numerous functions (left click), second (right click) even third functions (second right click).

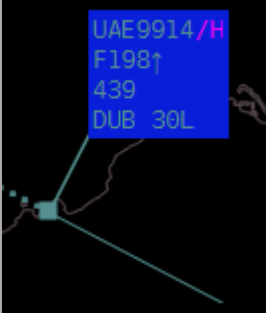
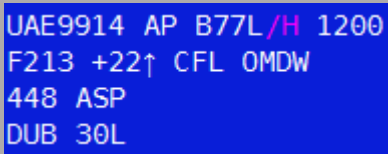
The first thing you will experience that we have now possibility of extended – selected label, if you move your mouse onto the label you will see it.



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## TWR

Unconcerned	unselected	selected
		
Zero line	alert, warning (like emerg, STCA,), rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend	actual flight level, rate of climb/descend, cleared flight level, destination
Third line	ground speed	ground speed, assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.



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Concerned	unselected	selected
Zero line	alert, warning (like emerg, STCA,), rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend	actual flight level, rate of climb/descend, cleared flight level, destination
Third line	ground speed	ground speed, assigned hdg/waypoint, assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY

Functions (first is the left click, second is the double click)

callsign: callsign menu, double action: assume

SI (current atc unit): NEXT,

AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.

RWY: arrival runway


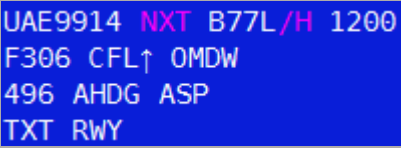


Transfer action



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Assumed	unselected	selected
		
Zero line	alert, warning (like emerg, STCA,), rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, next atc unit acft, wtc, squawk
Second line	actual flight level, rate of climb/descend	actual flight level, rate of climb/descend, cleared flight level, destination
Third line	ground speed	ground speed, assigned hdg/waypoint, assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY

Functions (first is the left click, second is the double click)

callsign: callsign menu

NXT (next atc unit): NEXT,

AFL (actual flight level): extrapolate (show route on map)

CFL: cleared flight level

ADES (Destination): open flightplan.

AHDG: cleared HDG/Waypoint

ASP: assigned speed

TXT: operator text

RWY: arrival runway



# GCC DIVISION



Released	unselected	selected
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend	actual flight level, rate of climb/descend, cleared flight level, destination
Third line	ground speed	ground speed, assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.

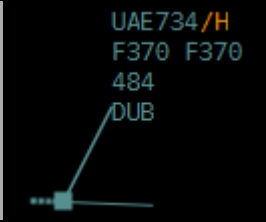
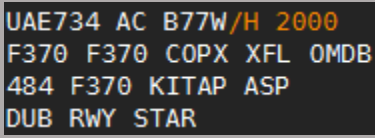




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## APP

Unconcerned	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared exit point, cleared exit level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

AFL (actual flight level): extrapolate (show route on map)

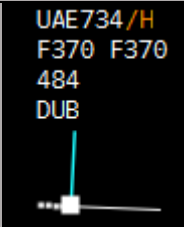
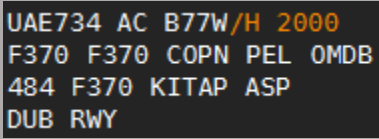
COPX (Exit point): extrapolate (show route on map)

ADES (Destination): open flightplan.



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Concerned	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared entry point, pilot entry level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, SID, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu, double action: assume

SI (current atc unit): NEXT,

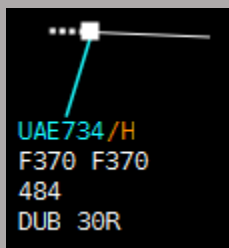
AFL (actual flight level): extrapolate (show route on map)

COPN (Cleared entry point): Cleared entry point

PEL (Pilot entry level): Pilot entry level

ADES (Destination): open flightplan.

ASP (assigned speed): double action: STAR


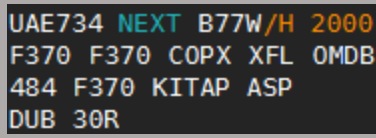


Transfer action



# GCC DIVISION



Assumed	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current next unit , acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared entry point, pilot entry level, destination
Third line	ground speed, assigned speed.	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, SID, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

NEXT (next atc unit): NEXT,

AFL (actual flight level): extrapolate (show route on map)

CFL: cleared flight level

XCOP (cleared exit point): cleared exit point

XFL (cleared exit flight level): cleared exit flight level

ADES (Destination): open flightplan.

AHDG: cleared HDG/Waypoint, double action: SID

ASP: assigned speed, double action: STAR

TXT: operator text

RWY: arrival runway, double action: STAR



# GCC DIVISION



Released	unselected	selected
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared exit point, cleared exit level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

AFL (actual flight level): extrapolate (show route on map)

COPX (Exit point): extrapolate (show route on map)

ADES (Destination): open flightplan.



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## ACC

Unconcerned	unselected	selected
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared exit point, cleared exit level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt),	TXT (we set the arrival apt), STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

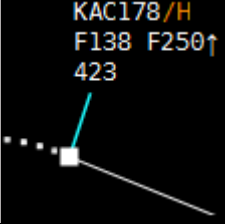
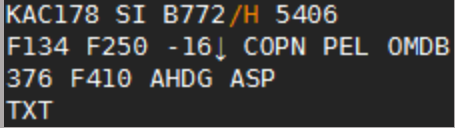
AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.



# GCC DIVISION



Concerned	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared entry point, pilot entry level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt),	TXT (we set the arrival apt), SID, STAR

Functions (first is the left click, second is the double click)

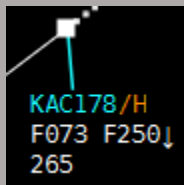
callsign: callsign menu, double action: assume

SI (current atc unit): NEXT,

AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.

RWY: arrival runway


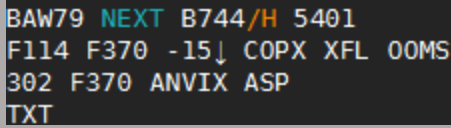


Transfer action



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Assumed	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, next atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared exit point, cleared exit level, destination
Third line	ground speed, assigned speed.	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, SID, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

NEXT (next atc unit): NEXT,

AFL (actual flight level): extrapolate (show route on map)

CFL: cleared flight level

COPX (cleared exit point): COPX

XFL (cleared exit level): XFL

ADES (Destination): open flightplan.

GS: ARWY (arrival runway)

AHDG: cleared HDG/Waypoint, double action: SID

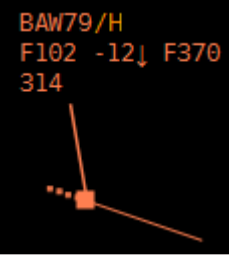
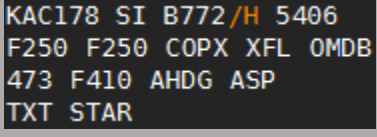
ASP: assigned speed, double action: STAR

TXT: operator text



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Released	unselected	selected
		
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign, wtc	callsign, current atc unit (SI), acft, wtc, squawk
Second line	actual flight level, rate of climb/descend, cleared flight level	actual flight level, rate of climb/descend, cleared flight level, cleared exit point, cleared exit level, destination
Third line	ground speed	ground speed, requested flight level, cleared waypoint/HDG (AHDG), assigned speed
Fourth line	TXT (we set the arrival apt), RWY	TXT (we set the arrival apt), RWY, STAR

Functions (first is the left click, second is the double click)

callsign: callsign menu

SI (current atc unit): NEXT, double action: next me

AFL (actual flight level): extrapolate (show route on map)

ADES (Destination): open flightplan.





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## GND

Departure	unselected	selected
	UAE843 ⏻	UAE843 NEXT R S B77W/H 1200 TXT CFL CWP
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign	callsign, next atc unit (SI), dep runway, sid
Second line		acft, wtc, squawk
Third line		TXT, CFL, CWP

Functions (first is the left click, second is the double click)

callsign: callsign menu

NEXT (next atc unit): NEXT, double action: next me

R: Departure runway

S: SID (opens DCL window)

acft: flight plan

TXT: operator text

CFL: cleared flight level

CWP: cleared waypoint

UAE843 NEXT  
1200  
TXT CFL CWP

Unknown selected label



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Arrival	unselected	selected
Zero line	alert, warning, (like emerg, STCA,) rof(request on frequency), dupe	alert, warning (like emerg, STCA,), rof(request on frequency), dupe
First line	callsign	callsign, next atc unit (SI), arrival gate
Second line		acft, wtc, squawk
Third line		TXT, CFL, CWP

Functions (first is the left click, second is the double click)

callsign: callsign menu

NEXT (next atc unit): NEXT,

GATE: Arrival gate

acft: flight plan

TXT: operator text

CFL: cleared flight level

CWP: cleared waypoint



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## Special labels



### Pointed (visible for all controllers)

used when you want to indicate that an aircraft requires attention



### Marked (visible only for you)

used if you want to highlight the traffic for some reason



### PSR (squawk standby)

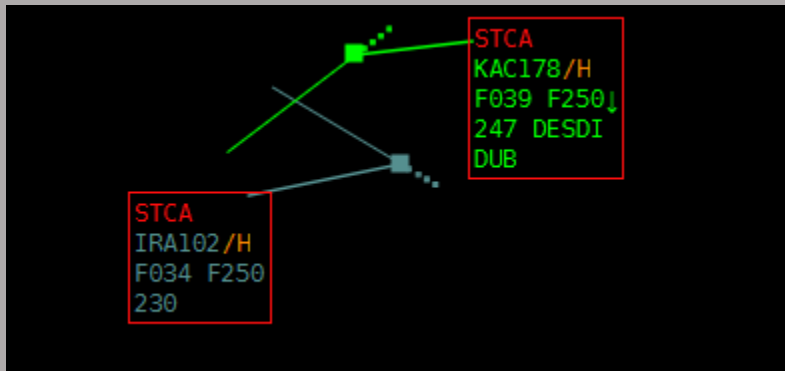


### ROF (Request on Frequency)

When the next controller would have this aircraft on frequency earlier, or you forgot about it 😊



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## STCA

This is what we never want to see 😊 It becomes visible when they approach each other by 5 nm or less

## Useful tips for labels

Always you need to set manually the next sector to be able to transfer the aircraft.

When you select the next atc unit, you will face with strange names, they are the short ATC Codes we use and they use in real, in OMAE we needed to use an abbreviation system but the logic is simple: First two letters -> last 2 letter of ICAO code (DB for example), Third letter is the position code (G – Ground, T- Tower, A-Approach, D- Departure), the fourth letter is the position specific code (North – N, Radar- R, South- S, Delivery- D). The foreign ATC units are just mentioned with their 4 code ICAO like OGCC, OEJD.

For the rest of the FIRs you will find some specific but easy to understand ones.

First 2 letters are the last 2 letters of the ICAO code (MS, HH, BI)

ACC for Oman -> OM\_W/OM\_E/OM\_N; ACC for Bahrain -> C/E/EL/N; GMP – Delivery, GMC – Ground, AIR – Tower, ARR – Approach, RAD -Radar, FIN- Final.

For the TEXT place, it is recommended to use the last 2 letters of the arrival airport's ICAO code.



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## Presets & Insets

In each of our FIRs you can find predefined settings or as called commonly “presets”, which are specified for the major positions and will set the radar screen up for you automatically.

Preset menu structure:

ACC:

- Default: This preset is a general overview on the FIR, and if you have set on several presets on top of each other you can clean them off with this one.
- ACC: A preset with the ACC position filled out.

AUH TMA:

- ARR13/ARR31: According to runway configurations these presets will turn up the appropriate SIDs and STARs, runway extended centreline, MVA (Minimum Vectoring Altitude)
- TWR: Preset for Tower position, which fills out the Control Zone, turns on the runway centerlines
- GND: Preset for Ground position: which zooms to the ground level, and turns up the gates, taxiways, runway markings, etc.

DXB TMA:

- ARR12/ARR30: According to runway configurations these presets will turn up the appropriate SIDs and STARs, runway extended centreline, MVA (Minimum Vectoring Altitude) and the highways arriving to BUBIN intersection from GISRA area.

INSETS:

- For every major airport you can find an inset, which opens up in a new window, and zooms to the ground level of the airport. This function is useful when you are controlling a radar position (ACC, APP, etc.). Via this way you don't have to be constantly zooming in and back from the ground level, you just have to move the mouse, that's it.



**GCC DIVISION**



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