

Creating a tailored SID.

With *Arinc Decoder*

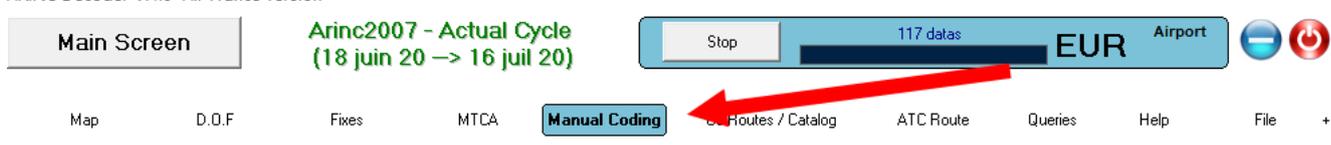


I want to create a SID (standard Instrument Departure) at Orly airport, leaving from runway 02, going straight away to MOSUD.

Take off in runway axis, intercept PO411 (an existing terminal waypoint of LFPO, Lognes Airport) heading 090° and exit via MOSUD.

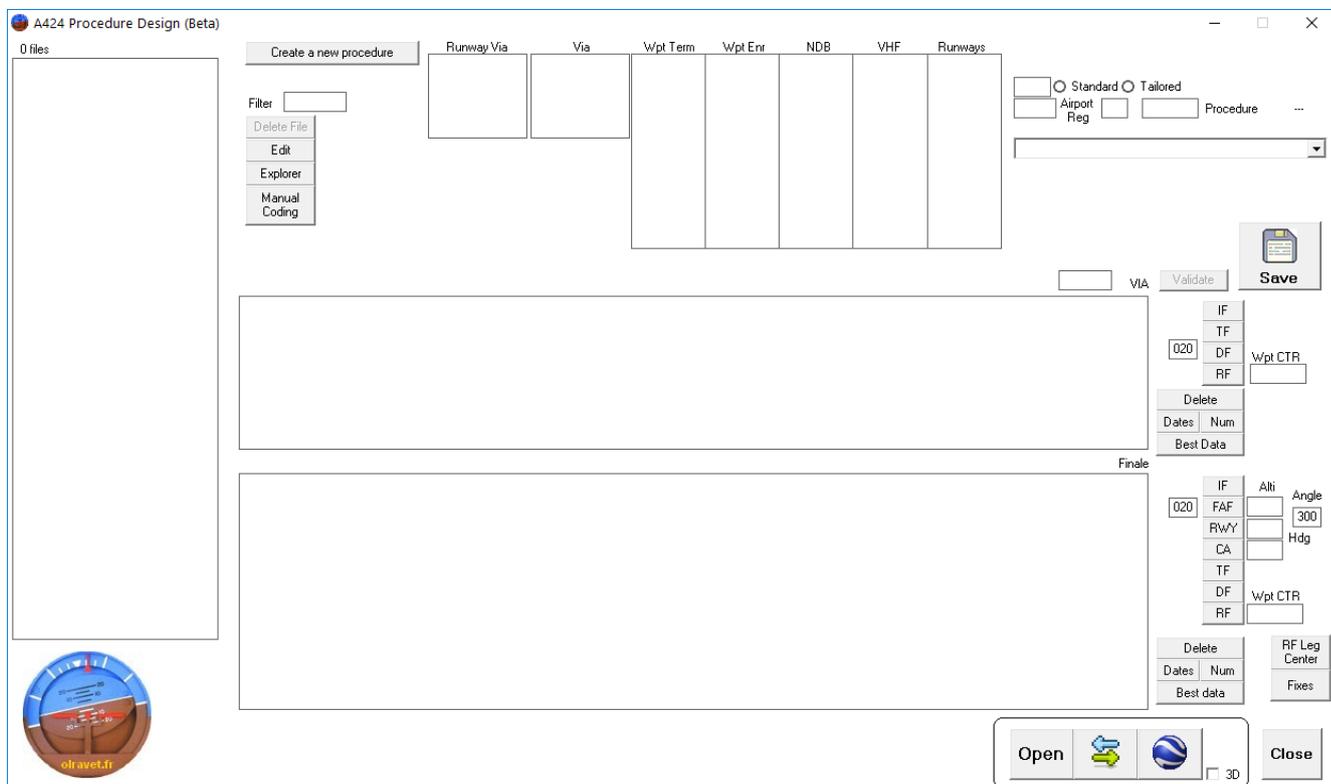
(of course, this procedure is absolutely out of all environmental designs...)

ARINC Decoder V.4.6 Air France version



Procedure Design

On the new module press  you will get this window...



Create a New Procedure...

Create a new procedure

Proc Name, indicate for example... MOSUD 1 Alpha is MOS1A

LFPO and it's a SID...

MOS1A

Airport
LFPO LF

SID
 STAR
 Approach

Get the basic data

Press "Get the basic data"

ARINCDecodeur

Name

OK

Annuler

SID - LFPO - MOS1A

Validate the name.

And give the information of the type of the procedure... here it could be a Conventional or RNAV one, I check RNAV. The runway VIA will be for RWY 02...

Validate

Save

Runway Via

rw02

RNAV
 Conv
 EDSID

The first line can be a CA (Course to Altitude) in runway axis, 400 feet above airport, then a CF (Course to Fix) to a terminal Fix (that we can create, or select in a list of the existing waypoints).

I don't actually know the runway axis, I put 20° I'll change it later

Runway Via RNAV
 Conv
 EQSID
rw02

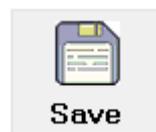
010
CF Hdg 20
CA
TF
DF Wpt CTR
RF

Delete
Best data
Dates
RE Num
RF Leg Center
Fixes

Press on "CA" and the first line appear...

SEURP LFPOLFDMOS1A SRW02 010 CA 0200 2007

Because we are OK with that... let's save it.



Digressions

We want to exactly know what the runway axis is ...

Runways
Rw02
Rw06
Rw07
Rw20
Rw24
Rw25

Press on "RW02" in the runway list.



And just after on the « compass »

Press on « RW20 » (which is the other side of runway 02)



Press again on

Data are here

Track & Distances

From: RW02, 0° E

To: RW20, 0° E

Latitude: N48430315, Longitude: E002223611, Format: Arinc 424

Latitude: N48441688, Longitude: E002231309, Format: Arinc 424

Latitude: N48° 43' 03.15", Longitude: E 2° 22' 36.11", Format: Deg Min Sec

Latitude: N48° 44' 16.88", Longitude: E 2° 23' 13.09", Format: Deg Min Sec

Latitude: 48.7175416666667, Longitude: 2.37669722222222, Format: Deg decimal

Latitude: 48.7380222222222, Longitude: 2.38696944444444, Format: Deg decimal

Latitude: N48.43, Longitude: E002.22.6, Format: Deg Min.1/10 min

Latitude: N48.44.3, Longitude: E002.23.2, Format: Deg Min.1/10 min

Track: [] Distance: [] Units: Nm Meters Feet

Distance: 2399.64 m (1.296 Nm) (7872.8 ft)

Initial Heading: 18.35° (18.35° mag)

Final Heading: 18.36° (18.36° mag)

WGS84

Make a line between those two points.

ETP [Equi Time Point No wind]

MSA R=25Nm, MSA R=10Nm, MTCA 1Nm, MTCA 5Nm, MTCA 10Nm, MTCA 15

Plot peak altitude

We see here the magnetic axis is between 18.35 and 18.36° (no mag var in France, actually)

So the CA heading will be 18.4°

End of the digression...

Click on your line

A424 Procedure Design (Beta)

Runway/Via: RW02

Via: []

Wpt Term: 10POY, 12POY, 13POY, 14POY, 17POY, 21NM, 2NM, 35POY, 41POY, 44POY, 64POY, 71POY, 73POY, 75POY

Wpt Enr: 09T0U, 10EPR, 155NM, 19LTP, 200R, 20RBT, 26TBO, 32CLM, 33LSE, 34LSE, 42LSE, 45LSE, 45NM, 4600E

NDB: ABY, AG, AGO, ALM, AMB, AR, AS, ASM, AT, AV, BDM

VHF: ABB, AGN, AJO, AMB, ANG, ARE, AR, AVN, AZP, BLM, BMC, BNE, BRY

Runways: RW02, RW06, RW07, RW20, RW24, RW25

SID: EUR, Standard, Tailored

VIA	Row	P/T	Fix	T/D	Hdg	AD	AR1	AR2	Ang	RNP	Spd	Distance	CTR-turn	Arc Radius	Rec Nav	VIA
RW02	10	CA			20.0											
SEURP	LFPO	LFPO	MOSTIA	58002	010											2007

Validate, Save, Runway Via: RW02, HDG: 18.4, Wpt CTR: []

Open, Close

Red boxes mean that those data are mandatory and are missing (a course to altitude without altitude is nonsense)

Select the 20 in HDG box, replace it by 18.4 and press HDG above, it will turn in green...

T/D	Hdg	A
	18.4	

Press validate (at the right side of the line) and it's OK !!

The Altitude to reach should be 400 ' above field level.

Airport ICAO		Name		IATA	IFR	Longest RWY	Summary Mask Angle 	
LFPO		PARIS/ORY		ORY	Y	11900 (3627m)		
Latitude	Longitude	Mag Var	Altitude	Datum	Speed limit			
N48432381	E002224648	0° E	291'	WGS-84	FL100 /250Kts			
Transition Altitude					Military/Civil	TU+1	D.S.T	Update
5000'							Yes	1705

Filed altitude is 291, let's go for 691 '

And Plus in AD

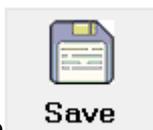
: Empty		2NM			
+: At or Above		35POY			
-: At or below		41POY			
B: Between Alt1 & Alt2		44POY			
G: At intercept Alt2		64POY			
J: At or above intercept Alt2		71POY			
		73POY			
		79POY			
Fix	T/D	Hdg	AD	Alt1	Alt2
		18,4	+	691	

When happy, press « Validate »

Validate

and save

Save



Now we turn right, course 090° to PO411...

Select it in the list

Wpt Term
PO270
PO272
PO300
PO301
PO303
PO404
PO405
PO406
PO408
PO409
PO410
PO411
PO412
PO420

020

CF

CA

Hdg

090

Indicate now the course to take (090)

And press "CF" .

After is the exit at MOSUD... same we select it (it's an ENRoute Waypoint)

Wpt Enr

MORIL	▲
MOROK	
MOSIS	
MOSUD	
MOTAG	
MOTAL	
MOTIK	
MOTIM	
MOTOX	
MOTUK	
MOTUR	
MOU27	
MOULE	
MOVFX	▼

And push "DF"

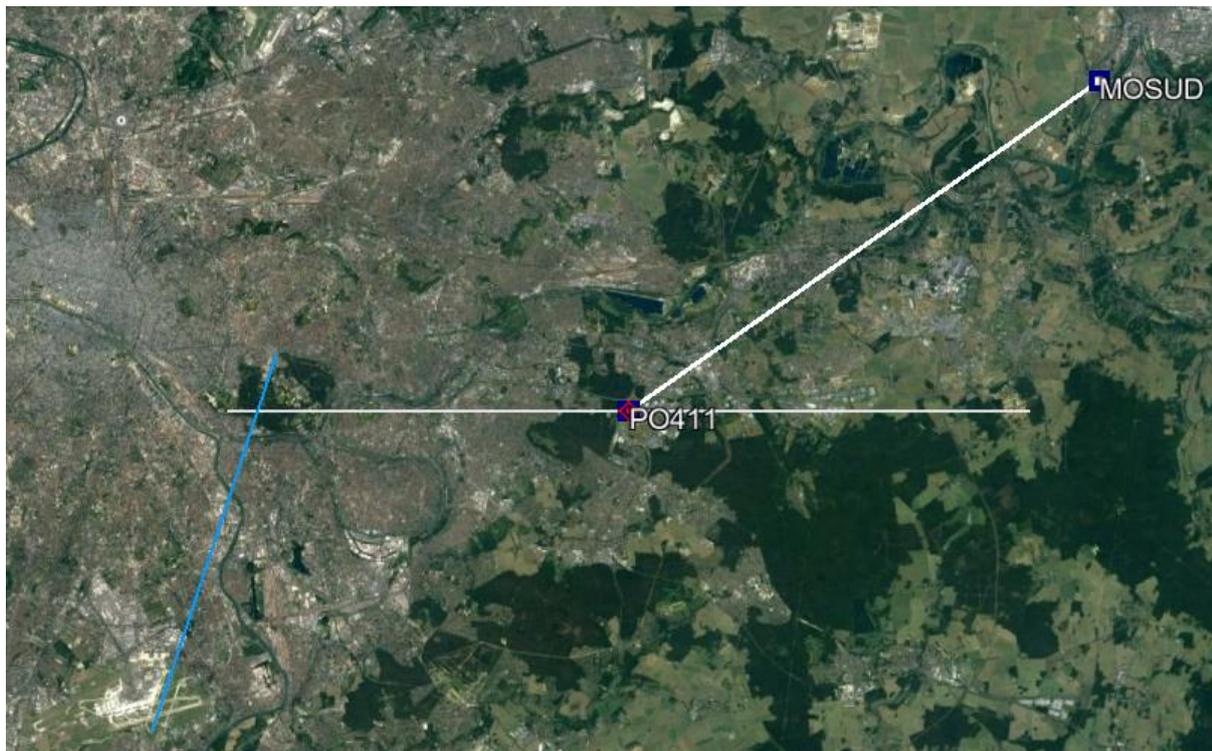
Things will be computed and after validating (right side) that will be ok for saving.

Same for the second line, when we select it we see that some data are missing...

The CF needs a recommended navaid (at LFPO we have POY) and because the line after is a DF it is mandatory to fly over the fix. (A424 rules)

VIA	Row	P/T	Fix	T/D	Hdg	AD	Alt1	Alt2	Ang	RNP	Spd	Distance	CTR-turn	Arc Radius	Rec Nav
RW02	20	CF	PO411	E Y	90.0										POY

After that, Validate + Save and let's check...



SID - LFPO - MOS1A

Paris / Orly

Mag Var : 00.0° E (Apt)

Via	Seq	Pt	Fix	Typ	F/O	TD	Mag	Crs	Alt 1	Alt 2	Vert Angle	RNP	Speed Limit	Distance Time	Rec Navaid	Cycle	Updte
RW02	10	CA					18.4°	+	691							R Com Rt	2007
RW02	20	CF	PO411		FO		90°								POY	R Com Rt	2007
RW02	30	DF	MOSUD													R Com Rt	2007

All people living in the east of Paris were certainly dreaming of this...

If I don't want to overfly PO411 I can "fly over it" but the path terminator will be TF.

Not a problem.

Change the DF by a TF.

Edit	FI
Explorer	RF
Manual Coding	TF
	VA
	VD
	VI
	VM
	VR

VIA	Row	P/T	Fix	T/D	Hdg	A
RW02	30	TF	MOSUD	E		

When validated we see that some data are mandatory and are missing... heading and distance.

VIA	Row	P/T	Fix	T/D	Hdg	AD	Alt1	Alt2	Ang	RNP	Spd	Distance	CTR-turn	Arc Radius	Rec Nav
RW02	30	TF	MOSUD	E											

Just be lazy and click on "best data"

Best Data

T/D	Hdg	AD	Alt1	Alt2	Ang	RNP	Spd	Distance	CTR-turn	Arc Radius	Rec Nav
	54,8							11,6			

VIA

Things will be computed and after validating (right side) that will be ok for saving and plotting.

SID - LFPO - MOS1A **Paris / Only** **Mag Var : 00.0° E (Apt)**

Via	Seq	Pt	Fix	Typ	F/D	TD	Mag	Crs	Alt 1	Alt 2	Vert Angle	RNP	Speed Limit	Distance Time	Rec Navaid	Rec Cycle	Updte
RW02	10	CA					18,4°	+	691							R Com Rt	2007
RW02	20	CF	PO411				90°								POY	R Com Rt	2007
RW02	30	TF	MOSUD				54,8°							11,6 Nm		R Com Rt	2007