

**ENR 3.5 OTHER ROUTES****3.5.1 Santa Maria Oceanic and LISBOA FIR Special Routes****TANGO ROUTES**

## GENERAL REMARKS:

Brought out at the NATSPG / 25 meeting (Special Routes) and further agreed by Portugal and United Kingdom relevant ATC authorities, the routes T12, and T16 have been implemented for the use of northbound / southbound traffic between Canarias islands and northern Europe, through Santa Maria oceanic and Lisboa FIRs, considering that:

1. The routes may only be flown in NAT HLA under the terms and conditions of operators NAT HLA MNPS approval, when necessary ATFM measures may be applicable.
2. The Canarias Preferential Routing System (CPRS) must be observed for traffic (southbound) demanding Canarias islands.
3. Optimum cruising levels for fuel conservation planning purposes may not be always available.
4. Military activities may occasionally suspend the use of these routes - notification of suspension through NOTAM class one.

Route Designator {RNAV Specification}		[Route Usage Notes]							
Significant Point Name		Significant Point Coordinates							Remarks
{RNAV Specification}	Track MAG  ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
T12		Route Availability (*) H24 (**) LISBOA ACC is ATC responsible for ATS Route Segments ASMAR / SOPOP and SOPOP / ARMED (***) ARMED is the transfer point between LISBOA ACC and SANTA MARIA OAC (****) MAG TRACK GREAT CIRCLE btn ASMAR and ARMED							
▲ ASMAR		39 22 21N 011 35 44W							
		73.8NM		FL 245  FL 055			Even	Odd	(*) (**) (***) (****)
△ SOPOP		40 26 24N 012 23 12W							
		143.5NM		FL245  FL 055			Even	Odd	(*) (**) (***) (****)
▲ ARMED		42 30 00N 014 00 00W							

Route Designator {RNAV Specification}		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates							Remarks	
{RNAV Specification}	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
T16 Route Availability (*) H24 (**) LISBOA ACC is ATC responsible for ATS Route Segment PORTO SANTO / NAVIX (***) SANTA MARIA OAC is ATC responsible for ATS Route Segments NAVIX/ ETESO and GONAN (****) After GONAN the responsible ATC is SHANWICK OAC (from / to OMOKO) (*****) Great Circle ATS Route									
▲ PORTO SANTO DVOR/DME (SNT)		33 05 25N 016 21 02W							
		146.0NM		FL245  FL 055			Even	Odd	(*) (**) (****) (*****)
▲ NAVIX		35 31 14N 016 14 04W							
		269.3NM		FL 999  FL 055			Even	Odd	(*) (***) (****) (*****)
▲ ETESO		40 00 00N 016 00 00W							
		312.7NM		FL 999  FL 055			Even	Odd	(*) (***) (****) (*****)
▲ GONAN		45 00 00N 014 00 00W							
3.5.2 LISBOA FIR - ‘Y’ Routes									

### 3.5.2.1 FARO and LISBOA TMA Transition Routes

#### TRANSITION ROUTES

#### GENERAL REMARKS:

TRANSITION ROUTES are established within Faro and Lisboa TMA to join the FMS RNAV ARR / DEP procedure routes to the ATS route structure (ATS service system) and to connect waypoints to HLDG supporting those routes procedures; these routes shall only be used with the related ARR / DEP procedures.

## 3.5.2.2 FARO

Route Designator {RNAV Specification}		[Route Usage Notes]							
Significant Point Name		Significant Point Coordinates						Remarks	
{RNAV Specification}	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
Y101 (RNAV 5)		(*)Route Availability: H24							
▲ USALU		37 13 20N 008 18 01W							
	/ 169°	17.0NM		FL 245  FL 095	5000FT ALT	10NM		Odd	(*) {C}
△ ODEMI		37 29 51N 008 23 02W							

Route Designator {RNAV Specification}		[Route Usage Notes]							
Significant Point Name		Significant Point Coordinates						Remarks	
{RNAV Specification}	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Y102 (RNAV 5)		(*) Route Availability: H24							
▲ USALU		37 13 20N 008 18 01W							
	/ 219°	28.0NM		FL 245  FL 095	5000FT ALT	10NM		Odd	(*) {C}
△ XAPAS		37 35 50N 007 57 00W							

Route Designator {RNAV Specification}		[Route Usage Notes]							
Significant Point Name		Significant Point Coordinates				Remarks			
{RNAV Specification}	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
Y103 (RNAV 5)		(*) Route Availability: H24							
▲ GIMAL		36 45 52N 008 00 21W							
	/ 188°	15.0NM		FL 245  FL 095	3000FT ALT	10NM		Odd	(*) {C}
▲ FARO DVOR/DME (VFA)		37 00 49N 007 58 30W							

Route Designator {RNAV Specification}				[Route Usage Notes]					
Significant Point Name	Significant Point Coordinates			Remarks					
{RNAV Specification}	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Y105 (RNAV 5)		(*) Route Availability: H24							
▲ GENRO		37 11 35N 007 36 53W							
	/ 183°	13.4NM		FL 245  FL 095	4000FT ALT	10NM		Odd	(*) {C}
△ ERTIS		37 25 00N 007 36 53W							

Route Designator {RNAV Specification}				[Route Usage Notes]					
Significant Point Name	Significant Point Coordinates			Remarks					
{RNAV Specification}	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Y136 (RNAV 5)		(*) Route Availability: H24							
▲ GENRO		37 11 35N 007 36 53W							
	/ 253°	09.4NM		FL 245 FL 095	4000FT ALT	10NM		Odd	(*) {C}
▲ NIRAK		37 14 45N 007 25 43W							

## 3.5.2.3 LISBOA

Route Designator {RNAV Specification}				[Route Usage Notes]										
Significant Point Name	Significant Point Coordinates			Remarks										
{RNAV Specification}	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks					
	↓ / ↑						↓	↑						
Y207 (RNAV 5)	(*) Route Availability: H24													
▲ EKMAR	38 33 27N 009 31 17W													
	/ 236°	12.1NM		FL 245 FL 095	3000FT ALT	10NM		Odd	(*) {C}					
△ ODLIX	38 40 44N 009 19 02W													
	/ 213°	14.5NM		FL 245 FL 095	7000FT ALT	10NM		Odd	(*) {C}					
▲ LISBOA DVOR/DME (LIS)	38 53 16N 009 09 46W													
	/ 217°	56.2NM		FL 245 FL 095	7000FT ALT	10NM		Odd	(*) {C}					
▲ FATIMA DVOR/DME (FTM)	39 39 56N 008 29 34W													

3.5.3 VFR Routes in Lisboa TMA

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
<b>Tunnel South - TS (Southbound)</b>									
△ Cabo Espichel	38 25 27N 009 11 09W								
	—° 190°	5		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	—° 167°	4		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	—° 156°	6		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Cova do Vapor	38 39 54N 009 15 21W								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
<b>Tunnel North - TN (Northbound)</b>									
△ Cabo Espichel	38 25 27N 009 11 09W								
	010° —°	5		2000 FT 2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	347° —°	4		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	320° —°	7		1500FT 1500FT		3			ATP Bugio Lighthouse CTC Cascais TWR FREQ 120.300 MHz
△ Bugio Lighthouse (Farol do Bugio)	38 39 37N 009 17 56W								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates			Remarks					
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Tunnel East - TE (Eastbound)									
△ Venda Nova Dam (Barragem de Venda Nova)	38 31 00N 008 33 21W								
	— ° 093°	7		1500 FT 1500 FT		3			ATP Venda Nova Dam CTC Lisboa Information FREQ 123.750MHz
△ Railway Zambujal / Pinheiro (Linha Férrea Zambujal / Pinheiro)	38 30 58N 008 42 01W								
	— ° 093°	9		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Setúbal Harbour (Porto de Setúbal)	38 30 54N 008 53 32W								
	— ° 093°	4		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Intersection of roads N10 and N1017 (Cruzamento de Estradas N10 e N1017)	38 30 52N 008 58 14W								
	— ° 092°	10		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	— ° 167°	4		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	— ° 156°	6		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Cova do Vapor	38 39 54N 009 15 21W								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Tunnel West - TW (Westbound)									
△ Venda Nova Dam (Barragem de Venda Nova)	38 31 00N 008 33 21W								
	273° —°	7		2000 FT  2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Railway Zambujal / Pinheiro (Linha Férrea Zambujal / Pinheiro)	38 30 58N 008 42 01W								
	273° —°	9		2000 FT  2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Setúbal Harbour (Porto de Setúbal)	38 30 54N 008 53 32W								
	273° —°	4		2000 FT  2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Intersection of roads N10 and N1017 (Cruzamento de Estradas N10 e N1017)	38 30 52N 008 58 14W								
	273° —°	10		2000 FT  2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	347° —°	4		1500 FT  1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	320° —°	7		1500FT  1500FT		3			ATP Bugio Lighthouse CTC Cascais TWR FREQ 120.300 MHz
△ Bugio Lighthouse (Farol do Bugio)	38 39 37N 009 17 56W								



Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Tunnel Southeast - TSE (Southeastbound)									
△ Brejos da Carregueira - Carvalhal	38 19 45N 008 45 36W								
	— ° 154°	6		1500 FT 1500 FT		3			ATP Carvalhal CTC Lisboa Information FREQ 123.750 MHz
△ Sado River Estuary - Comporta (Estuário do Rio Sado)	38 25 07N 008 49 25W								
	— ° 154°	7		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Setúbal Harbour (Porto de Setúbal)	38 30 54N 008 53 32W								
	— ° 093°	4		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Intersection of roads N10 and N1017 (Cruzamento de Estradas N10 e N1017)	38 30 52N 008 58 14W								
	— ° 092°	10		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	— ° 167°	4		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	— ° 156°	6		1000 FT 1000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Cova do Vapor	38 39 54N 009 15 21W								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Tunnel Northwest - TNW (Northwestbound)									
△ Brejos da Carregueira - Carvalhal	38 19 45N 008 45 36W								
	334° —°	6		2000 FT 2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Sado River Estuary - Comporta (Estuário do Rio Sado)	38 25 07N 008 49 25W								
	334° —°	7		2000 FT 2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Setúbal Harbour (Porto de Setúbal)	38 30 54N 008 53 32W								
	273° —°	4		2000 FT 2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Intersection of roads N10 and N1017 (Cruzamento de Estradas N10 e N1017)	38 30 52N 008 58 14W								
	273° —°	10		2000 FT 2000 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Lagoa de Albufeira	38 30 46N 009 10 23W								
	347° —°	4		1500 FT 1500 FT		3			Monitor Lisboa APP FREQ 119.100 MHz
△ Fonte da Telha	38 34 19N 009 11 39W								
	320° —°	7		1500FT 1500FT		3			ATP Bugio Lighthouse CTC Cascais TWR FREQ 120.300 MHz
△ Bugio Lighthouse (Farol do Bugio)	38 39 37N 009 17 56W								

**Note:** Tunnel - Route Structure (corridor) for VFR traffic, defined longitudinally by a central axis extending laterally 1.5NM and vertically limited by a specified altitude.

See also ENR 1.2.1 VFR Routes in Lisboa TMA.

## 3.5.4 VFR Routes in Porto TMA

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates			Remarks					
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Esposende Tunnel									
△ BELOS - Barcelos Bridge	41 31 40N 008 36 31W (RDL017 DME16 PRT)								
	278 ° /098°	8		2000FT /		3			
△ ZENDE - Mouth of Cávado River	41 32 26N 008 47 32W (RDL348 DME17 PRT)								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Rates Tunnel									
△ FAMAL - A3 / A7 Motorway Crossing	41 22 54N 008 30 02W (RDL056 DME11 PRT)								
	309 ° /129°	5		1900FT /		3			PPR from Porto ATC
△ GONDI - Gondifelos	41 25 42N 008 35 09W (RDL030 DME10 PRT)								
	309 ° /129°	11		1400FT /		3			
△ ZENDE - Mouth of Cávado River	41 32 26N 008 47 32W (RDL348 DME17 PRT)								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates			Remarks					
	Track MAG	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
	↓ / ↑						↓	↑	
Barcelos Tunnel									
△ FAMAL - A3 / A7 Motorway Crossing	41 22 54N 008 30 02W (RDL056 DME11 PRT)								

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
△ BELOS - Barcelos Bridge	334 ° /154°	10		2000FT /		3			
41 31 40N 008 36 31W (RDL017 DME16 PRT)									

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
<b>Crestuma Tunnel</b>									
△ CREST - Crestuma Dam									
41 04 23N 008 29 13W (RDL0147 DME15 PRT)									
	001 ° /181°	10		2000FT /		3			
△ ALFEN - IC 24 Motorway Crossing									
41 14 25N 008 29 43W (RDL0107 DME09 PRT)									
	001 ° /181°	8		2000FT /		3			
△ FAMAL - A3 / A7 Motorway Crossing									
41 22 54N 008 30 02W (RDL056 DME11 PRT)									

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
<b>Barca Tunnel</b>									
△ BOTIK - Botica Street									
41 14 29N 008 39 54W (RDL0156 DME02 PRT)									
	273 ° /093°	2		1400FT /		3			Radio communications Failure Visual Holding position awaiting light signals to enter the traffic circuit.
△ JUMBO - N14 / IC24 Motorway Crossing									
41 14 28N 008 37 26W (RDL0127 DME03 PRT)									

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates							Remarks	
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
	273 ° /093°	6		1600FT /		3			
△ ALFEN - IC 24 Motorway Crossing      41 14 25N 008 29 43W (RDL0107 DME09 PRT)									

**Note:** Tunnel - Route Structure (corridor) for VFR traffic, defined longitudinally by a central axis extending laterally 1.5NM and vertically limited by a specified altitude.

3.5.5 VFR Routes in Faro TMA

Route Designator		[Route Usage Notes]							
Significant Point Name	Significant Point Coordinates								Remarks
	Track MAG ↓ / ↑	Dist (NM)	(COP)	Upper limit / Lower limit	Minimum flight altitude	Lateral limits (NM)	FL series		Controlling unit {Airspace class} Remarks
							↓	↑	
<b>East-West Tunnel</b>									
△ Fuseta	37 03 30N 007 44 50W								
	277 ° /097°	4		2000FT /		3			Westbound track Coordination Point Prior entering the Tunnel
△ Quelfes	37 03 45N 007 49 15W								
	273 ° /093°	2		2000FT /		3			
△ Pechão	37 03 45N 007 51 49W								
	283 ° /103°	6		2000FT /		3			
△ São João da Venda	37 04 45N 007 58 45W								
	293 ° /113°	3		2000FT /		3			
△ Almancil	37 05 40N 008 01 50W								
	258 ° /078°	5		2000FT /		3			Eastbound track Coordination Point Prior entering the Tunnel
△ Vilamoura (Marina)	37 04 31N 008 07 20W								

**Note 1:** Flying altitudes higher than 2000FT may, exceptionally, be accepted when traffic conditions permit and are subject to ATC Approval.

**Note 2:** Tunnel - Route Structure (corridor) for VFR traffic, defined longitudinally by a central axis extending laterally 1.5NM and vertically limited by a specified altitude.