

## ENR 2 AIR TRAFFIC SERVICES AIRSPACE

## ENR 2.1 FIR, RVSM AND TMA'S

## 2.1.1 LISBOA FIR

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>Lisboa FIR</b> 4300N 01300W - 4200N 01000W along border PORTUGAL_SPAIN - 3558N 00723W - 3558N 01200W - 321505.55N 0143811.43W then a clockwise arc radius 100 NM centered on 330407N 0162130W - 341504.16N 0174605.06W - 3630N 01500W - 4200N 01500W - 4300N 01300W	FL 999 GND/MSL		ACC Lisboa	Lisboa Control (EN, PT)		* Excluding Lisboa, Porto, Faro and Madeira TMAs and CTRs.  VFR flights not accepted above FL200 except in segregated airspace.
<b>Over Portuguese Territory</b>				HO	119.550MHZ	
Mouth of River Minho - Portuguese / Spanish border to Mouth of River Gadiana - along South and West Portuguese Coast to origin, plus 12NM of Portuguese Territorial Waters.	FL 999 FL 660	G		HO	120.250MHZ	
	FL 660 FL 095	C		HO	120.600MHZ	
	FL 095 GND	G*		HO	124.350MHZ	
<b>Over High Seas</b>				H24	125.550MHZ	
Limits of the FIR excluding the Continental Airspace	FL 999 FL 055	C		H24	128.900MHZ	
	FL 055 MSL	G*		HO	127.255MHZ	
				HO	131.125MHZ	
				HO	131.325MHZ	
				H24	132.250MHZ	
				HO	132.300MHZ	
				HO	132.700MHZ	
				HO	127.255MHZ	
				HO	132.850MHZ	
				HO	134.855MHZ	
				HO	135.455MHZ	
				HO	136.025MHZ	
				HO	259.750MHZ	
				H24	285.150MHZ	
				H24	294.700MHZ	
				HO	316.900MHZ	
				HO	338.000MHZ	
				HO	338.800MHZ	
				HO	362.050MHZ	
				HO	375.250MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks		
1			2	3	4	5		
Lisboa FIR (cont.)				H24	357.500MHZ			
				H24	121.500MHZ -A)	Emergency		
				H24	243.000MHZ -A)	Emergency		
					ACC Lisboa	Lisboa Information (EN, PT)		
			H24	A)	A)	Each Sector of the ACC provides FIS within their lateral limits on the allocated frequencies.  * Excluding Porto, Faro and Madeira TMAs and CTRs.		
			H24	B)	B) Military FREQ also available for civil flights, while operating within MIL airspace, for FIS purposes.			
			H24	123.750MHZ				
			H24	130.900MHZ				
			H24	131.050MHZ				
			H24	242.000MHZ				
			H24	247.250MHZ				
			H24	358.350MHZ				
			HJ	C)	C)	FIS will be provided on 123.750 MHZ below FL55, within continental airspace, excluding:  -Faro and Porto TMA's -The circle of 30NM centred on Lisboa ARP abutting on west bound of TMA limit.		
			Lisboa VOLMET (EN, PT)			Meteorological Service. Details on <a href="#">GEN 3.5.3</a>		
			H24	126.400MHZ				
			Lisboa Information (EN, PT)					
H24	127.900MHZ		Location: 39 10 24.78N 009 03 15.11W Coverage: 80NM - FL200 Gen. Purpose : System SELCAL					

## 2.1.2 RVSM AIRSPACE

## 2.1.2.1 LP-RVSMT1

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>RVSM AIRSPACE</b> 42 00N 015 00W - 43 00N 013 00W 42 00N 010 00W - 39 28N 011 46W 33 15N 016 28W - SNT VOR / DME (33 05 25N 016 21 02W) - 31 30N 017 02W - Arc of Circle of 100NM radius centred at <a href="#">PST</a> NDB (33 04 07N 016 21 30W ) - 34 15N 017 46W - 36 30N 015 00W - to origin.	FL410 FL290	C	ACC Lisboa	Lisboa Control (EN, PT)		
				HO	132.850MHZ	
				HO	119.550MHZ	
				HO	120.600MHZ	
				HO	124.350MHZ	
				H24	125.550MHZ	
				HO	127.255MHZ	
				H24	128.900MHZ	
				HO	131.125MHZ	
				HO	131.325MHZ	
				H24	132.250MHZ	
				HO	132.300MHZ	
				HO	132.700MHZ	
				HO	127.255MHZ	
				HO	134.855MHZ	
				HO	135.455MHZ	
				HO	136.025MHZ	
				HO	259.750MHZ	
				H24	285.150MHZ	
				H24	294.700MHZ	
				HO	316.900MHZ	
				HO	338.000MHZ	
				HO	338.800MHZ	
				HO	362.050MHZ	
				H24	357.500MHZ	
				HO	375.250MHZ	
				H24	121.500MHZ	Emergency
				H24	243.000MHZ	Emergency

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
RVSM AIRSPACE (cont.)			FIS	Lisboa Information (EN, PT)		FIS
				H24	A)	A) Each Sector of the ACC provides FIS within their lateral limits on the allocated frequencies.  * Excluding Lisboa, Porto, Faro and Madeira TMAs and CTRs.
				H24	B) 123.750MHZ	B) Military FREQ also available for civil flights, while operating within MIL airspace, for FIS purposes.
				H24	130.900MHZ	
				H24	131.050MHZ	
				H24	242.000MHZ	
				H24	247.250MHZ	
				H24	358.350MHZ	

## 2.1.3 Lisboa FIR Sectors

## 2.1.3.1 Lisboa FIR Sectors

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>LISBOA FIR SECTORS</b> The lateral limits of Lisboa FIR.  The Lisboa FIR is composed of 8 (eight) sectors * :	FL999 GND/MSL		ACC Lisboa	Lisboa Control (EN, PT)		* The configuration scenario of Lisboa FIR sectorization that might be in use in a specific period of time results from the combination of the sectors described hereunder to respond to the traffic demand and operational needs.
<b>1</b> <b>Upper North Sector</b> 415308N 0085015W along border PORTUGAL_SPAIN - 402358N 0064906W - 392300N 0080100W - 385400N 0100000W - 392055N 0094705W - 401159N 0092633W - 402256N 0092205W - 403856N 0091505W - 404940N 0091111W - 415308N 0085015W	FL 999 FL 345		ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.
				HO	127.255MHZ	Primary
				HO	135.455MHZ	Secondary
				HO	362.050MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks	
1			2	3	4	5	
<p>1.1</p> <p><b>LOWER NORTH SECTOR</b></p> <p>415308N 0085015W along border PORTUGAL_SPAIN - 402358N 0064906W - 392300N 0080100W - 385400N 0100000W - 392055N 0094705W - 401159N 0092633W - 402256N 0092205W - 403856N 0091505W - 404940N 0091111W - 415308N 0085015W</p>	<p>FL345** GND/MSL</p>		<p>ACC Lisboa</p>	<p>Lisboa Control (EN,PT)</p>		<p>VFR flights not accepted above FL200 except in segregated airspace.</p> <p>** The Upper limit (FL345) can be raised or lowered to respond to the traffic demand and operational needs.</p> <p>Excluding those portions of Lisboa and Porto TMAs within these limits.</p>	
					HO	132.300MHZ	Primary
					HO	132.850MHZ	Secondary
					HO	338.000MHZ	
<p>2.</p> <p><b>UPPER CENTRE SECTOR</b></p> <p>402358N 0064906W along border PORTUGAL_SPAIN - 375957N 0071223W - 380000N 0090000W - 380000N 0091200W - 380000N 0092800W - 380000N 0100000W - 385400N 0100000W - 392300N 0080100W - 402358N 0064906W</p>	<p>FL 999 FL 345</p>		<p>ACC Lisboa</p>	<p>Lisboa Control (EN,PT)</p>		<p>VFR flights not accepted above FL200 except in segregated airspace.</p> <p>By agreement with Madrid the portion within the area limited by 3910N00708W- portuguese spanish border to 3953N00652W- 3947N00638W- 3931N00626W- south limit of UN975 to origin, ATS will be provided by Lisboa ACC.</p>	
					HO	134.855MHZ	Primary
					HO	135.455MHZ	Secondary
					HO	259.750MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
2.1 <b>LOWER CENTRE SECTOR</b>						
402358N 0064906W along border PORTUGAL_SPAIN - 375957N 0071223W - 380000N 0090000W - 380000N 0091200W - 380000N 0092800W - 380000N 0100000W - 385400N 0100000W - 392300N 0080100W - 402358N 0064906W	FL345** GND/MSL		ACC Lisboa	Lisboa Control (EN,PT)		Excluding those portions of Lisboa TMA within these limits.  VFR flights not accepted above FL200 except in segregated airspace.  By agreement with Madrid the portion within the area limited by 3910N00708W- portuguese spanish border to 3953N00652W- 3947N00638W- 3931N00626W- south limit of UN975 to origin, ATS will be provided by Lisboa ACC.  ** The upper limit (FL345) can be raise or lowered to respond to the traffic demand and operational needs.
				HO	136.025MHZ	Primary
				HO	132.850MHZ	Secondary
				HO	338.800MHZ	
3 <b>SOUTH SECTOR</b>						
375957N 0071223W along border PORTUGAL_SPAIN - 370730N 0072318W - 364016N 0072311W - 355800N 0072300W - 355800N 0104400W - 380000N 0092800W - 380000N 0091200W - 380000N 0090000W - 375957N 0071223W	FL 999 GND/MSL		ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.  Excluding Faro TMA within these limits.
				H24	125.550MHZ	Primary
				HO	132.700MHZ	Secondary
				H24	357.500MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>4</b> <b>DEMOS SECTOR</b> 420000N 0150000W - 430000N 0130000W - 420126N 0100405W - 415222N 0085536W - 415308N 0085015W - 404940N 0091111W - 403856N 0091505W - 402256N 0092205W - 401159N 0092633W - 392055N 0094705W - 385400N 0100000W - 390000N 0101300W - 392221N 0113544W - 393000N 0150000W - 420000N 0150000W	FL 999 MSL		ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.
				H24	128.900MHZ	Primary
				HO	124.350MHZ	Secondary
				HO	294.700MHZ	
<b>5</b> <b>VERAM SECTOR</b> 385400N 0100000W - 380000N 0100000W - 380000N 0092800W - 355800N 0104400W - 355800N 0120000W - 360323N 0123329W - 364621N 0134031W - 363000N 0150000W - 393000N 0150000W - 392221N 0113544W - 390000N 0101300W - 385400N 0100000W	FL 999 MSL		ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.
				HO	131.325MHZ	Primary
				HO	124.350MHZ	Secondary
				HO	375.250MHZ	



Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
6  <b>MADEIRA SECTOR</b>  3558N 01200W - 3215N 01438W then a clockwise arc radius 100NM centered on 3304N 01622W - 3415N 01746W - 3630N 01500W - 364621N 0134031W - 360323N 0123329W - 3558N 01200W	FL 999 GND/MSL		ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.  TFC flying within Madeira Sector experiencing RDO COM FAILURE with Lisboa CTL on 132.25MHZ is REQ to CTC Lisboa CTL on 131.125MHZ. If CTC not established must proceed as FLW: -TFC overflying to Canarias, Santa Maria or Casablanca FIR must CTC the concerned FIR. TFC to Madeira AD or Porto Santo AD must CTC Madeira APP on 119.600MHZ
				H24	132.250MHZ	Primary
				HO	131.125MHZ	Secondary
				H24	285.150MHZ	

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## 2.1.4 LISBOA FIR TMA's

## 2.1.4.1 LISBOA FIR TMA's Sectors

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<p><b>LISBOA TMA</b></p> <p>400045N 0083905W then a clockwise arc radius 22NM centered on 393956N 0082934W - 393959N 0080100W - 392300N 0080100W - 385000N 0080100W - 382200N 0082400W - 381201N 0084025W - 380736N 0084738W - 380000N 0090000W - 380000N 0100000W - 385400N 0100000W - 384533N 0092709W then a counter-clockwise arc radius 7.5NM centered on 385241N 0092407W - 384724N 0091717W then a counter-clockwise arc radius 7.5NM centered on 385241N 0092407W - 384940N 0091519W - 385655N 0091127W - 385738N 0091104W - 390810N 0090525W - 392055N 0085505W - 393605N 0084259W - 394325N 0083705W - 400045N 0083905W</p> <p>The Lisboa TMA comprises six sectors * :</p>	FL 245 300MGND/MSL 450M - FL55	C	ACC Lisboa			<p>Excluding that portion of Lisboa CTR within these limits.</p> <p>VFR flights not accepted above FL200 except in segregated airspace.</p> <p>* The configuration scenario of Lisboa TMA configuration that might be in use in a specific period of time results from the combination of the sectors described hereunder to respond to the traffic demand and operational needs.</p>
<p>1</p> <p><b>LISBOA TMA Sector</b></p> <p>The controlled airspace within the lateral limits of Lisboa TMA as described in <a href="#">ENR 2.1 para 2.1.4.1</a></p>	FL245 FL055	C	ACC Lisboa	Lisboa Control (EN,PT)		<p>VFR flights not accepted above FL200 except in segregated airspace.</p> <p>Excluding that portion of APP Sector, within these limits</p>
				HO	120.600MHZ	Primary
				HO	120.250MHZ	Secondary
				HO	316.900MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>2</b> <b>LISBOA TMA Upper Sector</b> The controlled airspace within the lateral limits of Lisboa TMA as described in ENR 2.1 para. 2.1.4.1	FL245 FL145	C	ACC Lisboa	Lisboa Control (EN,PT)		VFR flights not accepted above FL200 except in segregated airspace.  Excluding that part of APP Sector, within these limits.
				HO	120.600 MHZ	Primary
				HO	316.900 MHZ	
<b>3</b> <b>LISBOA TMA Lower Sector</b> The controlled airspace within the lateral limits of Lisboa TMA as described in ENR 2.1 para. 2.1.4.1	FL145 FL055	C	ACC Lisboa	Lisboa Control (EN,PT)		Excluding that portion of APP Sector, within these limits.
				HO	120.250MHZ	Primary
				HO	316.900 MHZ	
<b>4</b> <b>LISBOA APP Sector</b> A arc of circle of 30NM radius centred on ARP abutting on west bound of TMA limit.	FL085 300M AGL/MSL450M AGL/MSL	C	ACC Lisboa	Lisboa Approach (EN,PT)		Excluding that portion of Cascais and Lisboa CTR, within these limits
				H24	119.100MHZ	Primary
				H24	119.550 MHZ	Secondary
				H24	316.900MHZ	
				H24	121.500MHZ	Emergency
<b>5</b> <b>LISBOA APP Sector 1</b> A arc of circle of 30NM radius centred on ARP abutting on westbound of TMA limit	FL085 2000FT AMSL	C	ACC Lisboa	Lisboa Control (EN,PT)		
				HO	119.100 MHZ	Primary
				HO	316.900 MHZ	
				HO	121.500 MHZ	Emergency
				HO	243.000 MHZ	Emergency

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>6</b> <b>LISBOA APP Sector 2</b> A arc of circle of 30NM radius centred on ARP abutting on westbound of TMA limit  The APP Sector presents different lower limits established in accordance with two different radius centred at ARP (384627 N0090803W) as follows: a) 300M (1000FT) GND/MSL lower limit for the circle of 9NM. b) 450 M (1500FT) GND/MSL lower limit for the hollow circle circumscribed by arc circles of 9NM and 30NM.	2000FT AMSL 300M AGL/MSL 450M AGL/MSL	C	ACC Lisboa	Lisboa Control (EN,PT)		Excluding that portion of Cascais and Lisboa CTR within these limits
				HO	119.550 MHZ	Primary
				HO	316.900MHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>Faro TMA</b> 373551N 0075731W - 372455N 0075304W - PORTUGAL_SPAIN - 370730N 0072318W - 364016N 0072311W then a clockwise arc 35NM centred on 370049N 0075830W - 373551N 0075731W	FL245 300M GND/MSL	C	ACC Lisboa and APP Faro	_____		VFR flights not accepted above FL200 except in segregated airspace. Excluding that portion of Faro CTR within these limits.
	FL245 FL115		ACC Lisboa	Lisboa Control (EN, PT)		
	H24		125.550MHZ	Primary		
	H24		132.700MHZ	Secondary		
	H24		357.500MHZ			
	FL115 300M GND/MSL		APP Faro	Faro Approach (EN, PT)		
	H24		119.400MHZ			
	H24		376.750MHZ			
	H24		121.500MHZ	Emergency		
	H24		243.000MHZ	Emergency		

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>Madeira TMA</b> 324423N 0172945W then a counter-clockwise arc radius 40NM centered on 324450N 0164220W - 320506N 0163606W - 330526N 0153326W then a counter-clockwise arc radius 40NM centered on 330525N 0162102W - 334510N 0162713W - 324423N 0172945W	FL245 300M GND/MSL	C	ACC Lisboa and APP Madeira	_____		VFR flights not accepted above FL200 except in segregated airspace. Excluding that portion of Porto Santo and Madeira CTRs within these limits.
	FL245 FL115		ACC Lisboa	Lisboa Control (EN, PT)		
				H24	132.250MHZ	Primary
				H24	131.125MHZ	Secondary
				H24	285.150MHZ	
	FL115 300M GND/MSL		APP Madeira	Madeira Approach (EN, PT)		
				H24	119.600MHZ	Primary
				H24	120.450MHZ	Secondary
				H24	279.050MHZ	
				H24	121.500MHZ	Emergency
				H24	243.000MHZ	Emergency

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks		
1			2	3	4	5		
<p><b>Porto TMA</b></p> <p>415308N 0085015W along border PORTUGAL_SPAIN - 415145N 0072708W - 410213N 0075854W then a clockwise arc radius 35NM centered on 411623N 0084116W - 404940N 0091111W - 415308N 0085015W</p> <p>6.1 The Porto TMA presents three different lower limits, as follows:</p> <p>a) 300M (1000FT) GND/MSL, within Radar Vectoring Area. (See <a href="#">ENR 1.6 - "Radar Vectoring Chart - Lisboa"</a>)</p> <p>b) FL55, for the hollow circle circumscribed by Radar Vectoring Area and arc circle of 35NM centred on <a href="#">PRT</a> VOR/DME.</p> <p>c) FL65, beyond arc circle of 35NM centred on <a href="#">PRT</a> VOR/DME.</p>	FL245 300M GND/MSL FL55 / FL65	C	ACC Lisboa and APP Porto			<p>Excluding Porto CTR within these limits.</p> <p>VFR flights not accepted above FL200 except in segregated airspace.</p>		
	FL245 FL115		ACC Lisboa	Lisboa Control (EN, PT)				
					H24		132.300MHZ	Primary
					H24		338.000MHZ	
					HO		132.850MHZ	Secondary
	FL115 300M GND/MSL FL55 / FL65			APP Porto	Porto Approach (EN, PT)			
					H24		121.100MHZ	Primary
					H24		118.850MHZ	Secondary
					H24		121.500MHZ	Emergency
					H24		277.800MHZ	Primary
			H24	243.000MHZ	Emergency			



## 2.1.5 SANTA MARIA OCEANIC FIR

## 2.1.5.1 Santa Maria Oceanic FIR and Control Areas

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>Santa Maria Oceanic FIR</b> 4500N04000W - 4500N01300W - 4300N01300W - 4200N01500W - 3630N01500W - 3415N01746W - arc of circle with 100NM radius centred at <a href="#">PSI</a> NDB (anti clock- wise) 313930N0172453W - 3000N02000W -3000N02500W - 2400N02500W -1700N03730W - 2218N04000W -to origin.	UNL MSL FL55 GND/MSL	G	ACC Santa Maria			Excluding the airspace classified "A" and "C" within these limits.
				Santa Maria Radar (EN, PT)		Within or in vicinity of Santa Maria TMA
				H24	132.150MHZ	Primary frequency  Locations : Flores Island 39 27 12.95N 031 12 37.39W  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
				H24	129.400MHZ	Backup frequency  Locations : Flores Island 39 27 12.95N 031 12 37.39W  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
				H24	121.500MHZ	Emergency frequency  Location : Santa Maria Island 36 58 46.33N 025 05 27.39W

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
Santa Maria Oceanic FIR (cont.)				Santa Maria Radio (EN, PT)		Pilots must be aware that when in contact with Santa Maria Radio they are not speaking to a Controller but with a Radio Operator
				H24	426302	INMARSAT short codes for contacting Santa Maria Radio Station via SATCOM
				H24	426305	
				H24	127.900MHZ	NAT General Purpose Frequency  Primary frequency for Oceanic Clearance requests for flights departing Azores and for Meteorological information requests.  Locations :  Santa Maria Island 36 58 46.33N 025 05 27.39W  Flores Island 39 27 12.95N 031 12 37.39W  Theoretic coverage from each antenna: 270NM FL300
H24	132.075MHZ	NAT General Purpose Frequency Within the antenna's range it is the primary frequency for Oceanic Clearance request and delivery and should also be used for initial contact with Santa Maria Radio, to request HF frequencies on use Location: Lisboa 39 10 24.76N 009 03 15.11W				

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
Santa Maria Oceanic FIR (cont.)				00:00/08:00 21:00/24:00	3016KHZ	NAT A Family This family should, whenever possible, be assigned to aircraft whose route or portion of route transits Gander, New York, Santa Maria and Shanwick areas, especially those aircraft flying routes with reporting points coordinates between 43N and 47N. During off peaks periods, and when watch is reduced on other families, Family A should remain the primary assignment for aircraft flying southerly routes.
				H24	5598KHZ	
				H24	8906KHZ	
				10:00 / 21:00	13306KHZ	
				12:00 / 18:00	17946KHZ	
				00:00 / 08:00	2962KHZ	NAT E Family  This Family should, whenever possible, be assigned to aircraft whose route or portion of route transits New York and Santa Maria areas, especially those aircraft flying routes with reporting points coordinates south of 43N. During off peak periods, and in case of reduction of the number of available families, the guard of this family might be discontinued.
				00:00 / 19:00 23:00 / 24:00	6628KHZ	
				00:00 / 19:00 23:00 / 24:00	8825KHZ	
				09:00 / 19:00	11309KHZ	
				11.00 / 19:00	13354KHZ	
				00:00 / 08:00	3491KHZ	These frequencies should be assigned to those aircraft flying routes with reporting points coordinates entirely within Santa Maria area. During off peak periods, and in case of reduction of the number of available families, the guard of these frequencies might be discontinued.
				00:00 / 18:00	6667KHZ	
				NOTE 1 : Whenever required Santa Maria Radio Station will use the available frequencies outside the defined hours of operation.  NOTE 2 : On duty Supervisor will previously coordinate the new hours of frequency use whenever required.  NOTE 3 : SELCAL available for all frequencies		

2.1.5.2 Control Areas within Santa Maria Oceanic FIR

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>Control Areas within Santa Maria Oceanic FIR</b>						
<b>1. Santa Maria OCA</b>						
The Santa Maria Oceanic FIR limits	UNL FL55	A	ACC Santa Maria			Excluding Santa Maria TMA within these limits.
				Santa Maria Radar (EN, PT)		Within or in vicinity of Santa Maria TMA
				H24	132.150MHZ	Primary frequency Locations : Flores Island 39 27 12.95N 031 12 37.39W  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
				H24	129.400MHZ	Backup frequency  Locations : Flores Island 39 27 12.95N 031 12 37.39w  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
				H24	121.500MHZ	Emergency frequency  Location : Santa Maria Island 36 58 46.33N 025 05 27.39W
				Santa Maria Radio (EN, PT)		Pilots must be aware that when in contact with Santa Maria Radio they are not speaking to a Controller but with a Radio Operator
				H24	426302	INMARSAT short codes for contacting Santa Maria
				H24	426305	Radio Station via SATCOM

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
1. Santa Maria OCA (cont.)			ACC Santa Maria	Santa Maria Radio (EN, PT)  H24	127.900MHZ	NAT General Purpose Frequency  Primary frequency for Oceanic Clearance requests for flights departing Azores and for Meteorological information requests.  Locations :  Santa Maria Island 36 58 46.33N 025 05 27.39W  Flores Island 39 27 12.95N 031 12 37.39W  Theoretic coverage from each antenna: 270NM FL300
				H24	132.075MHZ	NAT General Purpose Frequency Within the antenna's range it is the primary frequency for Oceanic Clearance request and delivery and should also be used for initial contact with Santa Maria Radio, to request HF frequencies on use  Location : Lisboa 39 10 24.76N 009 03 15.11W
				00:00/08:00 21:00/24:00	3016KHZ	NAT A Family  This family should, whenever possible, be assigned to aircraft whose route or portion of route transits Gander, New York, Santa Maria and Shanwick areas, especially those aircraft flying routes with reporting points coordinates between 43N and 47N. During off peaks periods, and when watch is reduced on other families, Family A should remain the primary assignment for aircraft flying southerly routes.
				H24	5598KHZ	
				H24	8906KHZ	
				10:00 / 21:00	13306KHZ	
				12:00 / 18:00	17946KHZ	

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
1. Santa Maria OCA (cont.)				00:00 / 08:00	2962KHZ	NAT E Family
				00:00 / 19:00 23:00 / 24:00	6628KHZ	This Family should, whenever possible, be assigned to aircraft whose route or portion of route transits New York and Santa Maria areas, especially those aircraft flying routes with reporting points coordinates south of 43N. During off peak periods, and in case of reduction of the number of available families, the guard of this family might be discontinued.
				00:00 / 19:00 23:00 / 24:00	8825KHZ	
				09:00 / 19:00	11309KHZ	
				11.00 / 19:00	13354KHZ	
				00:00 / 08:00	3491KHZ	These frequencies should be assigned to those aircraft flying routes with reporting points coordinates entirely within Santa Maria area. During off peak periods, and in case of reduction of the number of available families, the guard of these frequencies might be discontinued.
				00:00 / 18:00	6667KHZ	
				<p>NOTE 1 : Whenever required Santa Maria Radio Station will use the available frequencies outside the defined hours of operation.</p> <p>NOTE 2 : On duty Supervisor will previously coordinate the new hours of frequency use whenever required.</p> <p>NOTE 3 : SELCAL available for all frequencies</p>		

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1			2	3	4	5
<b>2. Santa Maria TMA</b>  394139N0244631W - arc of circle of 120NM radius centred at <a href="#">VMG</a> VOR clockwise to 355922N 0264135W - 373323N0320128W - arc of circle of 120NM radius centred at <a href="#">FRS</a> VOR clockwise to 412039N0302103W to origin.	FL285	A	ACC Santa Maria	Santa Maria Radar (EN, PT)		Within or in vicinity of Santa Maria TMA
	FL195	C		H24	132.150MHZ	Primary frequency
	FL195 300M GND/MSL			H24	129.400MHZ	Backup frequency
				H24	121.500MHZ	Emergency frequency
						Locations :  Flores Island 39 27 12.95N 031 12 37.39W  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
						Locations :  Flores Island 39 27 12.95N 031 12 37.39W  Santa Maria Island 36 58 46.33N 025 05 27.39W  <b>Note:</b> Radar Sector is also responsible for providing ATC Services on Santa Maria's TMA areas not covered by the Radar Antenna.
						Location :  Santa Maria Island 36 58 46.33N 025 05 27.39W

Name Lateral limits (WGS 84)	Vertical limits	Airsp. class.	Unit providing service	Call sign/ Languages used Hours of service	FREQ/ purpose	Remarks
1	2		3	4	5	
<b>3. Lajes Military Control Area</b>  Area bounded within 45NM radius of 384543N0270527W ( ARP ) except for that South portion beyond a line defined by 383415N 0280046W - 381219N 0262631W.	FL155 700FT GND/MSL	C	APP Lajes	Lajes Approach (EN, PT)		Excluding that portion of LAJES MIL CTR within these limits.  H24 - PPR (see <a href="#">LPLA AD 2.20 Local traffic regulations</a> )  Location: 38 45 04N 027 04 13W
				H24	121.50 MHZ	Emergency
				H24	123.30 MHZ	Radar discrete
				H24	134.10 MHZ	Radar discrete
				H24	135.00 MHZ	Primary
				H24	243.00 MHZ	Emergency
				H24	317.50 MHZ	Radar discrete
				H24	362.30 MHZ	Primary
				H24	385.40 MHZ	Radar discrete