



LAMBAY RACES & HOWTH HOWTH REGATTA

SAILING INSTRUCTIONS





























LAMBAY RACES WEEKEND 2017

Organised by Howth Yacht Club Ltd.

Fri 2nd and Sat 3rd June & Family Fun Day on Sun 4th June



Special Notices

- 1. If, due to unsuitable weather, it is not possible to run the Lambay Races on Saturday 3 June, it is the intention of the Race Committee to run the Races on Sunday 4 June 2017. The times of the Warning Signal for Saturday 3 June and all other Sailing Instructions shall be applicable.
- 2. In the event of adverse weather conditions, the Offshore committee boat will have the use of some courses applicable to the Inshore Fleet, which do not round Lambay, and these may be used if required.

1. Rules

The races shall be governed by the Racing Rules of Sailing (RRS), ISA Prescriptions, the Notice of Race, these Sailing Instructions and any amendments thereto. Competitors in races for One Design classes shall comply with their relevant Class Rules. Competitors in IRC and ECHO handicap classes shall comply with the rules of those handicapping systems. In the event of a conflict the Sailing Instructions shall prevail.

2. Notices to Competitors

Notices to competitors will be posted on the Official Notice Board located in the archway beside the Marina Office.

3. Change of Sailing Instruction

Changes to Sailing Instructions will be posted not later than two hours before the scheduled start of the first race so affected. Flag L displayed on the flagpole at the top of the marina bridge denotes that a change of Sailing Instructions has been made.

4. Signals Made Ashore

Signals made ashore will be displayed on the flagpole at the top of the marina bridge.

When flag AP is displayed ashore "one minute" is replaced with "not less than 45 minutes" in Race Signal AP. This changes RRS "Race Signals". Boats are requested not to leave the harbour until flag AP is lowered.

5. Schedule of Races

5.1 OFFSHORE Schedule of Races and Class Flags. Race Officer David Lovegrove

High Water (Howth) 19.22 Ht:3.34m

FRIDAY 2 JUNE

OFFSHORE Committee Boat Starts - Channel 77

<u>Class</u>	<u>Flag</u>	<u>Start</u>
Class 1	No. 1	The warning signal for the 1 st start will be at 1825
Class 2	No. 2	Subsequent starts will be at 5 minute intervals
White Sail Cruiser A	No. 4	
White sail Cruiser B	No. 5	
Shipman	W	

OFFSHORE Starting Area

The starting area will be North of Ireland's Eye.

OFFSHORE Starting Line

The starting line shall be between an orange mark (to be passed to port) and a red/white pole (or mainmast) on the Committee Boat which will display a yellow flag.

OFFSHORE Course Designation

The course will be selected by the Race Officer and relayed to competitors via VHF (channel 77) and will be displayed on the Committee Boat.

OFFSHORE Finish Line

The offshore Finish Line will be the HYC Club Finish Line, (between the Red Vertical Line on the East Pier Starter's Hut and Mark FA).

SATURDAY 3 JUNE

Shipman

OFFSHORE Committee Boat Starts - Channel 77 H.W. 07.35 3.51M L.W. 13.52 1.04M

ClassFlagStartClass 1No. 1The warning signal for the 1st start will be at 1155.Class 2No. 2Subsequent starts will be at 5 minute intervalsWhite Sail Cruiser ANo. 4White sail Cruiser BNo. 5

OFFSHORE Starting Area

The starting area will be North of Ireland's Eye.

OFFSHORE Starting Line

The starting line shall be between an orange mark (to be passed to port) and a red/white pole (or mainmast) on the Committee Boat which will display a yellow flag.

OFFSHORE Course Designation

Courses shall be designated by numerals displayed on boards on the Committee Boat. The course applicable to each race will be displayed for not less than 4 minutes before its start. This changes RRS 27.1.

Marks are described by letter(s) and the subscript p or s thereafter directs that they be left to port or starboard respectively. A windward mark, Z (black inflatable) will be laid approximately to windward of the starting line. This is the first mark on all courses. A white flag displayed on the Committee Boat indicates that either the windward mark has not been laid or that boats shall ignore it and proceed directly to the next mark on the course.

OFFSHORE Courses - Committee Boat Starts (Mark descriptions/positions are on page 6)

1: Zs Ls Gs Qs Js FAs 2: Zs Ls Gs Ap Qs Js FAs 3: Zs Ls Os Np Gs Qs Js FAs 4: Zs Ls Ks Ap Os Np Gs Qs Js FAs 5: Zs Lp Gs Qs Js FAs 6: Zs Lp Hp As Gs Qs Js FAs 7: Zs Lp Hp Ns Gs Qs Js FAs 8: Zs Lp Kp Tp Gs Qs Js FAs 9: Zp Lp Gs Qs Js FAs 10: Zp Lp Ip Es Gs Qs Js FAs 11: Zp Tp Ns Lp Es Ip Es Gs Qs Js FAs 12: Zp Tp Ms Lp Es Ip Es Gs Qs Js FAs 13: Zp Ls Gs Qs Js FAs 14: Zp Ls Hp Es Gs Qs Js FAs 15: Zp Ls Mp Ts Gs Qs Js FAs 16: Zp Ls Mp Ts Up Es Gs Qs Js FAs 18: Zp Ls Np Ts Gs Qs Js FAs 17: Zp Ls Gs Qs Js FAs 19: Zp Ls Np Ts Mp Es Gs Qs Js FAs 20: Zp Ls Mp Es Mp Es Gs Qs Js FAs 21: Zp Lp Gs Qs Js FAs 22: Zp Lp Ts Ap Es Gs Qs Js FAs 23: Zp Lp Ap Es Os Ms Gs Qs Js FAs 24: Zp As Ep Lp Ap Es Os Ms Gs Qs Js FAs 25: Zp Lp Gs Qs Js FAs 26: Zp Lp Es Ap Gs Qs Js FAs 27: Zp Lp Es Np Gs Qs Js FAs 28: Zp Lp Es Np Os Ap Gs Qs Js FAs 29: Zp Op Lp Ts Gs Qs Js FAs 30: Zp Op Lp Ap Ts Gs Qs Js FAs 31: Zp Op Lp Up Tp Gs Qs Js FAs 32: Zp Op Np Up Lp Ap Ts Gs Qs Js FAs 33: Zp Op Ls Hp Gs Qs Js FAs 34: Zp Op Ls Up Gs Qs Js FAs 35: Zp Op Ls Np Ts Hp Gs Qs Js FAs 36: Zp Gp Ls Mp Ts Hp Gs Qs Js FAs 37: Zp Hp Ls Es Hp Gs Qs Js FAs 38: Zp Hp Ls Ts Mp Gs Qs Js FAs 39: Zp Hp Ls Ts Mp Es Hp Gs Qs Js FAs 40: Zp Hp Ls Ts Mp Es Pp Gs Qs Js FAs 41: Zp Hp Lp Ts Gs Qs Js FAs 42: Zp Hp Lp Ts Np Gs Qs Js FAs 43: Zp Hp Lp Es Mp Gs Qs Js FAs 44: Zp Hp Lp Ts Np Es Mp Gs Qs Js FAs 45: Zp Hp Lp Es Ap Gs Qs Js FAs 46: Zp Hp Lp Ks Hp Gs Qs Js FAs 47: Zp Hp Lp Os Mp Gs Qs Js FAs 48: Zp Hp Lp Es Ap Os Mp Gs Qs Js FAs

Please Note S.I. 25 – Navigation Marks and Obstructions

OFFSHORE Finishing Line

The finish line shall be between a red/white pole [or mainmast] on the Committee Boat [on station at Mark FA] displaying a blue flag and the red vertical line on the East Pier Starter's Hut.

























5.2 INSHORE Schedule of Races and Class Flags.

FRIDAY 2 JUNE H.W. 19.22 Ht.3.34M

INSHORE Committee Boat Starts - Channel 69

<u>Class</u> <u>Flag</u> <u>Start</u>

Class 3 No 3

Squib K The warning signal for the 1st start will be at 1825 Puppeteer 22 A Subsequent starts will be at 5 minute intervals

Ruffian 23 U HYC 17's C

INSHORE Starting Area

The starting area will be in Howth Sound

INSHORE Starting Line

The Starting Line will be the HYC Starting Line

INSHORE Course Designation

The course will be selected by the Race Officer and relayed to competitors via VHF (channel 69) and will be displayed on the Starter's Hut.

INSHORE Finishing Line

The Inshore Finish Line will be the HYC Club Finish Line, (between the Red Vertical Line on the East Pier Starter's Hut and Mark FA).

SATURDAY 3 JUNE

INSHORE Committee Boat Starts - Channel 69 H.W. 07.35 Ht. 3.51M L.W. 13.52 Ht. 1.04M

<u>Class</u> <u>Flag</u> <u>Start</u>

Class 3 No. 3

Squib K The warning signal for the 1st start will be at 1125 Puppeteer 22 A Subsequent starts will be at 5 minute intervals Ruffian 23 U

INSHORE Starting Area

The starting area will be North West of Ireland's Eye.

INSHORE Starting Line

The Starting Line shall be between an orange mark (to be passed to port) and a red/white pole or mainmast of the Committee Boat, which will display an orange flag.

INSHORE Course Designation

Courses shall be designated by numerals displayed on boards on the Committee Boat. The course applicable to each race will be displayed for not less than 4 minutes before its start. This changes RRS 27.1.

Marks are described by letter(s) and the subscript p or s thereafter directs that they be rounded to port or starboard respectively, except those marks in a \square (box) which are passing marks. A windward mark, Z (yellow inflatable) will be laid approximately to windward of the starting line. This is the first mark on all courses. A white flag displayed on the Committee Boat indicates that either the windward mark has not been laid or that boats shall ignore it and proceed directly to the next mark on the course.

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Race Officer: Harry Gallagher.

















INSHORE Courses - Committee Boat Starts (Mark descriptions/positions are on page 6)

51: Zs Ms Ls Hp SsFB 52: Zs Ms Ls Is Hp SsFB 54: Zs Mp Ws Ps Up Mp Ss FB 53: Zs Mp Cp Ip Up Ss FB 55: Zp Ps Lp Is SsFB 56: Zp Ps Lp Hp As Is SsFB 58: Zp Ws Up Ws Up Pp Is FB 57: Zp Ws Up Ws Up Pp Cp Vs Is SsFB 60: Zp Ep Lp Wp Hs SsFB 59: Zp Ep Lp Wp Ss FB 61: Zp Ps Ap Wp Hs SsFB 62: Zp Ep Ps Ap Wp Hs Cp Ss FB 64: Zp Ps Ls Wp Is SsFB 63: Zp Ps Ls Is Ss FB 65: Zp Vp Cp Dp Vp Wp Op Cp Dp SsFB 66: Zp Vp Cp Dp Vp Wp Op Vp Cp Dp Vp Cp Dp SsFB 67: Zp Kp Ls Is SsFB 68: Zp Kp Ls Wp Is SsFB 69: Zp Vp Wp Dp Wp Dp Cp Ss FB 71: Zp Lp Hp Is SsFB 70: Zp Vp Wp Dp Wp Dp Wp Ip Cp Ss FB72: Zp Lp Pp Is SsFB 73: Zp Us Dp Hp Pp Is SsFB 74: Zp Hp Pp Is Wp Cp Vp Pp Is SsFB 75: Zp Ip Lp Is SsFB 76: Zp Ip Lp Es Up Is SsFB 77: Zp Ip Pp Cp Vp Pp Cp Is SsFB 78: Zp Ip Pp Cp Pp Hs Is SsFB 79: Zp Ip Lp Ip SsFB 80: Zp Kp Lp Ip SsFB 82: Zp Op Np Cp Ss FB 81: Zp Op Np Cp Vp Cp Ss FB 84: Zs Ps Ls Pp Is SsFB 83: Zs Ps Ls Ts Vp Is SsFB 85: Zp Ps As Es Op Es Is SsFB 86: Zs Ps As Pp As Pp Is SsFB 87: Zs Ps Ls Es Hp Is SsFB 88: Zs Ps Ls Es Pp Is SsFB 89: Zp Cp Op Wp Op Wp Cp Dp SsFB 90: Zp Cp Op Wp Op Wp Cp Dp Cp Dp Ss FB 91: Zs Ps Lp Ip SsFB 92: Zs Ps Lp Os Pp Ss FB 93: Zp Cp Dp Wp Ip Op Pp Wp Dp Wp Ss FB 94: Zp Cp Op Pp Wp Dp Wp Ss FB 95: Zs Ps Lp Ap Ip SsFB 96: Zs Ps Lp Es Ap Ip SsFB 97: Zp Wp Ip Pp Dp Pp Wp Dp Vp SsFB 98: Zp Wp Ip Pp Ip Pp Ss FB

Please Note S.I. 25 - Navigation Marks and Obstructions

INSHORE Finishing Line

The finishing line is located in the vicinity of the Spit Mark (S) and the South Rowan Buoy (R) and shall be between a black inflatable mark (FB) and the mainmast (or red/white pole) on the adjacent Committee Boat displaying a blue flag.

6. Re-crossing Start/Finish Lines

All boats shall keep clear of the starting lines until their warning signal. Boats shall not re-cross a finishing line, except to finish having completed a penalty. Boats, having started and cleared their starting line, shall not re-cross that line while starts are in progress. Boats shall not cross any other starting line while starts are in progress. The Protest Committee may penalise a boat failing to comply with this sailing instruction with a score of its discretion, including DSQ.

7. Starting Time Limit

A boat starting later than ten minutes after her starting signal will be scored DNS. This changes RRS Appendix A4.1.

8. <u>Finishing Time Limit</u> Friday 2 June

The Time Limit for all races is 2100. If a boat in a class finishes within this limit, the time limit for that class shall be extended to 2115.

Saturday 3 June

The Time Limit for all races is 1700. If a boat in a class finishes within this limit, the time limit for that class shall be extended to 1730. In the event of postponement(s) and/or general recall(s) the time limit(s) for races so affected shall be correspondingly extended. A boat which fails to finish within the time limit will be scored DNF. This changes RRS 35 and Appendix A4.1

























9. Shortening Course Friday 2 June

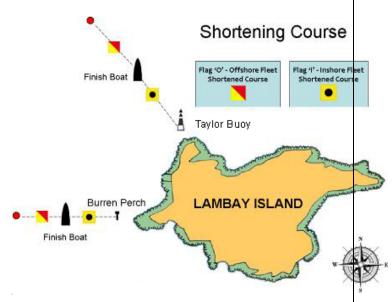
RRS 32 shall apply to all races

Saturday 3 June

RRS 32 is changed in that the Race Committee may, at their discretion, shorten the course at any mark. They may also shorten the course at the Taylor Buoy or the Burren Perch at Lambay Island.

Should this be necessary, a Committee Boat/Finish Boat will take station north of the Taylor Buoy or west of the Burren Perch and display flag "S" superior to a flag indicating the fleet or fleets to be shortened – flag "I" for the Inshore Fleet and flag "O" for the Offshore Fleet. The class flag for the relevant class(es) to be shortened, will also be displayed.

Boats of the Inshore Fleet shall finish by passing between the Taylor Buoy or Burren Perch and the Committee Boat - boats of the Offshore Fleet shall pass between the committee boat and the Orange Buoy finish mark.



Instructions may also be given over the radio on both channels 77 and 69.

10. Protests

Protests and Requests for Redress shall be delivered to the Race Office within the Protest Time Limit. Protest forms are available from the Race Office.

The Protest Time Limit is 90 minutes from the time of finish of the last boat in the Offshore or Inshore fleets as appropriate. This time limit shall be extended to two hours in the event of the race being finished at either the Taylor Buoy or the Burren Perch at Lambay Island. These times will be posted on the Official Notice Board.

The time and place of Protest Hearings will be posted on the Official Notice Board within 15 minutes of the protest time limit. The listing of a boat on this schedule shall constitute informing her of a hearing under RRS 63.2. Parties involved shall present themselves and their witnesses at the time and place indicated on the schedule.

A request to reopen a hearing shall be delivered to the Protest Committee not later than 30 minutes after the party was informed of the decision. This changes RRS 66.

11. Navigation Marks and Obstructions

The Navigation Marks in and around Howth Sound shall be left as follows -

South Rowan Buoy: to be passed to the West and South
Rowan Rocks Buoy: to be passed to the East and South

HYC Spit Mark: to be passed to the East

Any part of Ireland's Eye or Lambay capable of being touched while racing is designated as an obstruction to sea room.

When rounding Lambay, boats shall pass outside the Taylor Buoy and Burren Perch and are advised to give both a wide berth.

Competitors are reminded of a trawler wreck in Howth Sound, south of the Carrageen Rocks on Ireland's Eye, which is submerged at most stages of the tide.



























12. Radio Communications

Competitors are advised to keep a listening watch on VHF Channel 77 for Offshore Committee Boat and Channel 69 for Inshore Committee Boat where information relevant to racing may be broadcast. Should this information be broadcast, it shall not constitute outside assistance and shall not be the subject of any protest. Failure to broadcast this information shall not be the basis for any claim for redress. The Squib class rules are changed by this Sailing Instruction to allow use of VHF radio.

Competitors who retire from a race shall inform the Race Committee promptly by radio on Channel 77 or 69 as appropriate. Competitors without radio should inform the Race Office or Marina Office on coming ashore.

13. Prize Giving

The prize giving for the Friday evening races will be held as soon as possible after racing. The approximate time of the prize-giving for the Lambay races will be 1730hrs on Saturday 3 June.

14. Safety

Competitors participate entirely at their own risk; see Fundamental Rule 4, Decision to Race and the ISA Safety Booklet. Open boat entrants are referred to relevant class regulations. The wearing of suitable personal flotation devices in all boats is strongly recommended at all times.

The responsibility for the safety of competing boats and their crews lies solely with the said competitors. Howth Yacht Club Ltd. and/or the Organising Committee will not accept any liability for material damage, personal injury or death sustained in conjunction with, prior to, during, or after racing.

Boats shall keep clear of Race Committee vessels [committee boat, mark laying boats, patrol boats] from the time the Committee Boat is on station prior to starting racing.

15. Insurance

Each participating boat shall be insured with adequate, valid, third party liability insurance.

EMERGENCY PROCEDURES AFLOAT

If an incident occurs during the regatta, the following procedure should be followed:

Go to VHF Channel 16 and broadcast the following (three times):

- 1) MAYDAY if the boat is in distress
- 2) PAN PAN if the boat requires outside assistance
- 3) PAN PAN MEDICO if medical assistance is required

In every case state:

- 1. The nature of the incident/ injury
- 2. The name and position of the boat

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Other issues can be reported to the respective Committee Boat, through your course VHF Channel 69 or 77 and advise the Race Officer of the problem.



























Mark Descriptions/Positions

<u>ID</u>	Description	<u>Shape</u>	Colour	<u>Lat. (N)</u>	Long. (W)			
Α	Apex	Conical	Black	53 26.76	06 03.26			
С	Cush	Conical	Black	53 24.61	06 05.45			
D	Dunbo	Conical	Yellow	53 24.73	06 03.85			
Е	East	Conical	Black	53 26.00	06 02.20			
FA	East Pier Finish	Cylindrical	Yellow	53 23.70	06 03.78			
FB	Howth Sound Finish	Inflatable	Black	53 24.20	06 04.29			
G	Garbh	Conical	Black	53 25.00	06 02.32			
Н	Hub	Conical	Black	53.25.71	06 04.43			
I	Island	Conical	Black	53 24.70	06 04.36			
J	Thulla	Conical	Black	53 23.80	06 03.40			
K	Stack	Conical	Black	53 24.60	06 03.11			
L	Lambay Island							
Μ	Malahide	Conical	Black	53 27.23	06 05.59			
N	North	Inflatable	Black	53 27.99	06 03.40			
0	Osprey	Conical	Orange	53 25.41	06 03.52			
Р	Portmarnock	Conical	Black	53 25.63	06 05.80			
Q	Rowan Rocks	IALA	BYB	53 23.88	06 03.22			
R	South Rowan	IALA	Green	53 23.78	06 03.88			
S	Spit	Conical	Black	53 24.42	06 04.51			
Т	Talbot	Conical	Black	53 27.31	06 01.30			
U	Ulysses	Conical	Orange	53 26.22	06 04.97			
V	Viceroy	Conical	Orange	53 25.12	06 04.78			
W	West	Conical	Black	53 24.96	06 06.07			
Υ	Ireland's Eye							
Z	Windward (Offshore Starts)	Inflatable	Black					
Z	Windward (Inshore Starts)	Inflatable	Yellow					
Short	ened Course Finish	Small Ora	-					
	Taylor Buoy	North Card		53 30.13	06 01 52			
	Burren Perch	West Cardi	nal	53 29.21	06 02 28			

Every effort is made to ensure this data is accurate and should be used as an <u>indication</u> of the location of marks

Courses designed with the aid of Soft Touch Programmes

GENERAL

When entering/leaving Howth Harbour, stay on the right hand side of the fairway and harbour entrance i.e. always pass port to port. Also, Howth Sound is a restricted channel and accordingly boats shall not impede trawlers.

The attention of all participants is drawn to the car parking regulations in the vicinity of the Club. The Harbour Authority rigidly enforces these. Traffic restrictions will in place in Howth on 4^{th} June. It is recommended that competitors use public transport, particularly the DART, where possible.

Competitors are granted temporary membership of Howth Yacht Club for the day of the Lambay Races; subject only to the provisions of the Club rules for withdrawing or withholding said membership.



















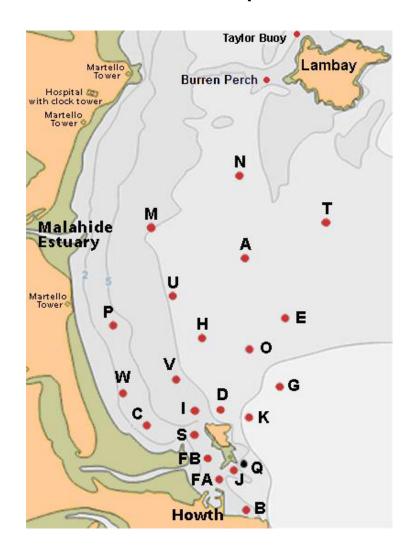


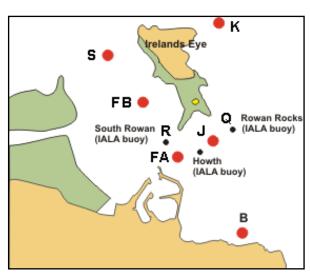






Course Maps





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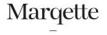
























Race Marks - 2017 Relative Bearings Table - Magnetic (Approx.)

	Α	В	С	D	E	G	Н	I	J	K	M	N	0	Р	Q	s	Т	U	٧	W
Α		186º	211 ⁰	196 ⁰	146 ⁰	168 ⁰	220 ⁰	207 ⁰	188 ⁰	184 ⁰	295 ⁰	002 ⁰	192º	234 ⁰	185 ⁰	203 ⁰	071°	248 ⁰	215 ⁰	229 ⁰
В	006°		315 ⁰	352 ⁰	019 ⁰	024 ⁰	350°	336 ⁰	357 ⁰	010 ⁰	347 ⁰	005°	002 ⁰	327 ⁰	010°	331 ⁰	022 ⁰	347 ⁰	340°	321 ⁰
С	031 ⁰	135 ⁰		084 ⁰	054 ⁰	079°	029 ⁰	086°	124 ⁰	092 ⁰	358 ⁰	020°	056°	348 ⁰	119 ⁰	115 ⁰	043 ⁰	010°	038°	312 ⁰
D	016 ⁰	172º	264 ⁰		043 ⁰	078°	347 ⁰	272 ⁰	170°	110°	344 ⁰	011°	023 ⁰	309°	161º	233 ⁰	036°	342 ⁰	312 ⁰	287 ⁰
Ε	326 ⁰	199º	234 ⁰	223 ⁰		190°	264 ⁰	233 ⁰	204 ⁰	207º	307°	346°	238 ⁰	261 ⁰	202º	225 ⁰	028 ⁰	284 ⁰	246 ⁰	252 ⁰
G	348 ⁰	204 ⁰	259 ⁰	258 ⁰	010°		305 ⁰	263 ⁰	214 ⁰	236 ⁰	325 ⁰	354 ⁰	306 ⁰	287 ⁰	211 ⁰	249 ⁰	021 ⁰	314 ⁰	281 ⁰	275 ⁰
Н	040°	170°	209 ⁰	167 ⁰	084 ⁰	125 ⁰		191º	168 ⁰	151º	342 ⁰	021 ⁰	125 ⁰	267 ⁰	164 ⁰	187 ⁰	055 ⁰	334 ⁰	205 ⁰	238 ⁰
I	027 ⁰	156º	266 ⁰	092º	053°	083 ⁰	011 ⁰		148 ⁰	101º	353 ⁰	018°	048 ⁰	318 ⁰	140°	177°	043 ⁰	357 ⁰	350°	293°
J	008°	177º	304 ⁰	350°	024 ⁰	034 ⁰	348 ⁰	328 ⁰		018 ⁰	345 ⁰	006°	004 ⁰	323 ⁰	062 ⁰	317 ⁰	026 ⁰	345 ⁰	334 ⁰	312 ⁰
K	004 ⁰	190°	272 ⁰	290°	027 ⁰	056°	331 ⁰	281 ⁰	198 ⁰		337 ⁰	003°	350°	304 ⁰	190°	259 ⁰	028 ⁰	332 ⁰	304 ⁰	288 ⁰
M	115°	167º	178 ⁰	164 ⁰	127 ⁰	145 ⁰	162 ⁰	173 ⁰	165 ⁰	157º		066°	152 ⁰	184 ⁰	163º	173°	094 ⁰	166º	173°	193 ⁰
N	182 ⁰	185 ⁰	200°	191º	166°	174 ⁰	201 ⁰	198 ⁰	186 ⁰	183 ⁰	246 ⁰		187 ⁰	211 ⁰	184 ⁰	196 ⁰	125 ⁰	214 ⁰	202 ⁰	214 ⁰
0	012 ⁰	182º	236 ⁰	203 ⁰	058°	126 ⁰	305 ⁰	228 ⁰	184 ⁰	170°	332 ⁰	007°		280°	180°	215 ⁰	040°	319 ⁰	256°	260°
Р	054 ⁰	147 ⁰	168 ⁰	129 ⁰	081º	107 ⁰	087 ⁰	138 ⁰	143 ⁰	124 ⁰	004 ⁰	031 ⁰	100°		139 ⁰	149 ⁰	058°	042 ⁰	132 ⁰	192 ⁰
Q	005 ⁰	190º	299 ⁰	341 ⁰	022 ⁰	031 ⁰	344 ⁰	320°	242 ⁰	010 ⁰	343 ⁰	004 ⁰	360°	319 ⁰		308°	024 ⁰	342 ⁰	329 ⁰	308°
S	023 ⁰	151º	295 ⁰	056 ⁰	045 ⁰	069 ⁰	007 ⁰	024 ⁰	137 ⁰	082 ⁰	353 ⁰	016 ⁰	035 ⁰	329 ⁰	128 ⁰		039°	357 ⁰	342 ⁰	304 ⁰
T	251 ⁰	202 ⁰	223 ⁰	216 ⁰	208 ⁰	201 ⁰	235 ⁰	223 ⁰	206 ⁰	208 ⁰	274 ⁰	305 ⁰	220°	238 ⁰	204 ⁰	219 ⁰		249 ⁰	229 ⁰	236°
U	068°	167 ⁰	190°	162 ⁰	104 ⁰	134 ⁰	154 ⁰	177 ⁰	165 ⁰	152 ⁰	346 ⁰	034 ⁰	139 ⁰	222 ⁰	162 ⁰	177 ⁰	069°		180°	213 ⁰
٧	035 ⁰	160°	218 ⁰	132 ⁰	066 ⁰	101 ⁰	025 ⁰	170°	154 ⁰	124 ⁰	353 ⁰	022 ⁰	076 ⁰	312 ⁰	149 ⁰	173 ⁰	049 ⁰	000°		264 ⁰
W	049 ⁰	141º	132 ⁰	107°	072 ⁰	095 ⁰	058 ⁰	113 ⁰	132 ⁰	108 ⁰	013 ⁰	034 ⁰	080°	012 ⁰	128 ⁰	129 ⁰	056°	033 ⁰	084 ⁰	