



# IALA INFORMATION

## TABLE OF DGNSS STATIONS

**Edition 1.9**

July 2022



# DOCUMENT HISTORY

---

Revisions to this IALA Document are to be noted in the table prior to the issue of a revised document.

Date	Page / Section Revised	Requirement for Revision
4 October 2019	Introduction added, updated Japan and Spain	
4 December 2019	Georgia included	
January 2020	Chinese Taipei updated	
6 July 2020	Updated USA, Stopped all DGPS services since June 2020	
19 Oct 2020	Norway included, adjusted New Zealand, Australia stopped all services since July 2020, added announcement services UK and Ireland, editorial adjustments and deleted all countries with no service	
28 June 2021	Australia information updated	
13 July 2021	New Zealand information updated	
22 Oct 2021	Spain information updated	
11 Mar 2022	China information updated	
1 April 2022	UK and Ireland information updated, Stopped all DGPS services since April 2022	
22 Jul 2022	Amendments on Cuba information	



# CONTENTS

---

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
1.1	Radiobeacon DGPS .....	5
<b>2</b>	<b>Arabian gulf .....</b>	<b>6</b>
<b>3</b>	<b>Australia .....</b>	<b>7</b>
<b>4</b>	<b>Azerbaija .....</b>	<b>8</b>
<b>5</b>	<b>Bangladesh .....</b>	<b>9</b>
<b>6</b>	<b>Belgium .....</b>	<b>10</b>
<b>7</b>	<b>Bermuda.....</b>	<b>11</b>
<b>8</b>	<b>Brazil .....</b>	<b>12</b>
<b>9</b>	<b>Bulgaria .....</b>	<b>14</b>
<b>10</b>	<b>Canada .....</b>	<b>15</b>
<b>11</b>	<b>China .....</b>	<b>17</b>
<b>12</b>	<b>Hong Kong .....</b>	<b>20</b>
<b>13</b>	<b>Czech .....</b>	<b>21</b>
<b>14</b>	<b>Denmark / Faroe Islands .....</b>	<b>22</b>
<b>15</b>	<b>Egypt .....</b>	<b>23</b>
<b>16</b>	<b>Estonia .....</b>	<b>24</b>
<b>17</b>	<b>Finland .....</b>	<b>25</b>
<b>18</b>	<b>France.....</b>	<b>26</b>
<b>19</b>	<b>French Guiana .....</b>	<b>27</b>
<b>20</b>	<b>Georgia.....</b>	<b>28</b>
<b>21</b>	<b>Germany.....</b>	<b>29</b>
<b>22</b>	<b>Iceland.....</b>	<b>30</b>
<b>23</b>	<b>India .....</b>	<b>31</b>
<b>24</b>	<b>Ireland.....</b>	<b>34</b>
<b>25</b>	<b>Italy .....</b>	<b>35</b>
<b>26</b>	<b>R.O.Korea .....</b>	<b>36</b>
<b>27</b>	<b>Latvia.....</b>	<b>38</b>
<b>28</b>	<b>Lithuania .....</b>	<b>39</b>
<b>29</b>	<b>Malysia .....</b>	<b>40</b>
<b>30</b>	<b>Netherlands.....</b>	<b>41</b>
<b>31</b>	<b>New Zealand.....</b>	<b>42</b>
<b>32</b>	<b>Norway.....</b>	<b>43</b>
<b>33</b>	<b>Oman .....</b>	<b>45</b>



# CONTENTS

---

34	Panama .....	46
35	Poland .....	47
36	Portugal.....	48
37	Romania .....	49
38	Russia .....	50
39	Saudi Arabia .....	53
40	Serbia .....	54
41	Singapore .....	55
42	Spain .....	56
43	Sweden.....	58
44	Chinese Taipei .....	59
45	Thailand .....	60
46	Turkey .....	61
47	Ukraine.....	62
48	United Kingdom.....	63
49	Puerto rico.....	65
50	Vietnam.....	66



# INTRODUCTION

---

## 1 INTRODUCTION

This document contains a list of operational marine radiobeacon Differential Global Positioning System (DGPS) stations provided to enable marine receivers to obtain improved position accuracy and integrity.

The information contained in this list has been provided by the national competent authority to inform mariners, manufacturers and other maritime stakeholders. National competent authorities are invited to keep IALA up to date of any changes or amendments<sup>1</sup>.

### 1.1 RADIOBEACON DGPS

A marine radiobeacon DGPS is used to enable marine receivers to calculate improved position accuracy and integrity. A marine radiobeacon reference station compares its own known, surveyed, location to the position estimate provided by a high-grade GPS receiver located at the station. On the basis that the sources of error are correlated between the reference station and near-by users, the difference between the calculated position estimate and the true location can be used by the local user's receiver to improve the accuracy of their position.

More information on marine radiobeacon DGPS and Differential Global Navigation Satellite Systems (DGNSS) can be found in IALA Recommendation R0121 and Guideline G1112. Guidance is also provided on how to calculate the usable range and coverage of a marine radiobeacon in Guideline G1119.

---

<sup>1</sup> Please email any changes to the IALA Secretariat using [contact@iala-aism.org](mailto:contact@iala-aism.org)



## 2 ARABIAN GULF

Table of DGNSS Stations			Country: ARABIAN GULF (Bahrain, Kuwait, United Arab Emirate)				Date of issue: January 2002 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at (µV/m)						
Bahrain	480 481	140	26° 07.00' N 50° 39.00' E	240	75	Yes	Yes	3 6 7 9 16	298	200	
Kuwait	482 483	141	29° 07.21' N 48° 08.20' E	248	75	Yes	Yes	3 6 7 9 16	295	200	
UAE (Ras Al Khaimah)	484 485	142	25° 59.00' N 56° 04.00' E	250	75	Yes	Yes	3 6 7 9 16	292	200	
UAE (Abu Dhabi)	486 487	143	24° 06.00' N 52° 56.00' E	250	75	Yes	Yes	3 6 7 9 16	314	200	



### 3 AUSTRALIA

Table of DGNSS Stations			Country: AUSTRALIA			Date of issue: January 2002 Date of last update: June 2021					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu\text{V}/\text{m}$ )						
Karratha	001	701	20° 42' 24.840" S 116° 46' 26.152" E	370		Yes	Yes	3 5 7 9 16	304	200	Remain operational by 2022/23



## 4 AZERBAIJA

Table of DGNSS Stations			Country: AZERBAIJAN				Date of issue: December 2012 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu$ V/m)						
Baku	185 186	95	40° 19' N 50° 36' E	500	62	Yes	Yes	1 3 16	309.5	200	





## 5 BANGLADESH

Table of DGNS Stations			Country: BANGLADESH				Date of issue: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu$ V/m)						
Dohazari, Chittagong	301		22° 09' 53.58"N 092° 03' 16.57" E	300	110	YES	YES	2 3 5 7 9 16	305.0	200	
Monirampur, Jessore	201		23° 00' 59.23"N 089° 14' 03.65"E	300	128	YES	YES	2 3 5 7 9 16	295.0	200	
Rupchandrapur, Mymensingh	101		24° 48' 50.87" N 090° 26' 28.24"E	300	127	YES	YES	2 3 5 7 9 16	300.0	200	

### Remarks

1. Stations operating time 09:00-17:00



## 6 BELGIUM

Table of DGNSS Stations			Country: BELGIUM			Date of issue: January 2002 Date of last update: September 2018					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu$ V/m)						
Oostende	640	420	51° 13' 19" N 02° 55' 52" E	220	50	Yes	Yes	1 3 7 9 16 27	312	200	



## 7 BERMUDA

Table of DGNSS Stations			Country: BERMUDA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu\text{V}/\text{m}$ )						
St. Davids Head		950	32° 22' 06" N 64° 38' 95" W	277	75	Yes	Yes	1 3 5 7 16	323	100	



## 8 BRAZIL

Table of DGSS Stations			Country: BRAZIL				Date of issue: January 2002 Date of last update: August 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu$ V/m)						
Abrolhos	461	242	17° 57' 47" S 038° 41' 45" W	370	20	Yes	No	1 2 3 6 16	290	100	1,2
Calcanhar	467	223	05° 09' 40" S 035° 29' 11" W	370	20	Yes	No	1 2 3 6 16	305	100	1,2
SantaMarta	466	269	28° 36' 14" S 048° 48' 45" W	370	20	Yes	No	1 2 3 6 16	310	100	1,2
Canivete	463	204	00° 30' 34" S 050° 24' 53" W	300	20	Yes	No	1 2 3 6 16	310	100	1, 2
Moela	462	259	24° 03' 05" S 046° 15' 53" W	370	20	Yes	No	1 2 3 6 16	305	100	1,2
Paranagua	470	262	25° 29' 42" S 048° 19' 34" W	370	20	Yes	No	1 2 3 6 16	320	100	1,2
Rasa	469	252	23° 03' 49" S 043° 08' 46" W	370	20	Yes	No	1 2 3 6 16	315	100	1,2
SãoMarcos	460	211	02° 29' 19" S 044° 18' 06" W	370	20	Yes	No	1 2 3 6 16	300	100	1,2
Rio Grande	464	278	32° 08' 58" S 052° 06' 08" W	370	20	Yes	No	1 2 3 6 16	290	100	1,2
São Tomé	465	248	22° 02' 33" S 041° 03' 14" W	370	20	Yes	Yes	3 6 9 16	300	200	1, 2



Table of DGNSS Stations			Country: BRAZIL			Date of issue: January 2002 Date of last update: August 2015					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at (µV/m)						
Sergipe	468	224	10° 58' 10" S 037° 02' 12" W	370	20	Yes	No	1 2 3 6 16	320	100	1, 2

Remarks

1. All reference position of DGNSS antennas refer to WGS84 Datum and are nationwide adjusted so that in the event of a station outage, the user receiver with automatic station tuning capability changeover to neighbouring station(s) corrections without experiencing sudden shifts in its position
2. The inherent accuracy of the system is 3 metres, added to a degradation proportional to 2 ppm x distance to the reference station



## 9 BULGARIA

Table of DGNSS Stations			Country: BULGARIA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		km	at ( $\mu\text{V}/\text{m}$ )						
Cavarna	900 901	540	43° 25' 06"N 28° 22' 30" E	200		YES	YES		300.0		



## 10 CANADA

Table of DGNSS Stations			Country: CANADA			Date of issue: January 2002 Date of last update: September 2018					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Alert Bay, BC	300 301	909	50° 35.19' N 126° 55.49' W	500	75	Yes	Yes	3 6 7 9 16	309.0	200	1, 2
Cape Race, NL	338 339	940	46° 45.70' N 53° 10.82' W	500	75	Yes	Yes	3 6 7 9 16	315.0	200	1, 2
Cape Ray, NL	340 341	942	47° 38.07' N 59° 14.23' W	500	75	Yes	Yes	3 6 7 9 16	288.0	200	1, 2
Cardinal, ON	308 309	919	44° 47.28' N 75° 25.28' W	125	100	Yes	Yes	3 6 7 9 16	306.0	200	1, 2
Fox Island, NS	336 337	934	45° 19.77' N 61° 04.76' W	325	75	Yes	Yes	3 6 7 9 16	307.0	200	1, 2
Hartlen Point, NS	330 331	937	44° 35.54' N 63° 27.12' W	500	75	Yes	Yes	3 6 7 9 16	298.0	200	1, 2
Lauzon, QC	316 317	927	46° 48.74' N 71° 09.56' W	350	100	Yes	Yes	3 6 7 9 16	309.0	200	1, 2
Partridge Island, NB	326 327	939	45° 14.39' N 66° 03.22' W	475	75	Yes	Yes	3 6 7 9 16	295.0	200	1, 2
Cape Norman, NL	342 343	944	51° 29.93' N 55° 49.49' W	525	75	Yes	Yes	3 6 7 9 16	310.0	200	1, 2
Pont Escuminac, NB	332 333	936	47°04.40' N 64° 47.90' W	475	75	Yes	Yes	3 6 7 9 16	319.0	200	1, 2



Table of DGNSS Stations			Country: CANADA			Date of issue: January 2002 Date of last update: September 2018					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Sandspit, BC	306 307	906	53° 14.12' N 131° 48.54' W	425	75	Yes	Yes	3 6 7 9 16	300.0	200	1, 2
Rigolet, NL	344 345	946	54° 10.68' N 58° 26.64' W	450	75	Yes	Yes	3 6 7 9 16	299.0	200	1, 2
Rivière-du-Loup, QC	318 319	926	47° 45.62' N 69° 36.34' W	200	100	Yes	Yes	3 6 7 9 16	300.0	200	1, 2
St-Jean-sur-Richelieu, QC	312 313	929	45° 19.28' N 73° 18.62' W	225	100	Yes	Yes	3 6 7 9 16	296.0	200	1, 2
Moisie, QC	320 321	925	50° 11.71' N 66° 06.64' W	300	100	Yes	Yes	3 6 7 9 16	313.0	200	1, 2
Amphitrite Point, BC	302 303	908	48° 55.46' N 125° 32.53' W	375	75	Yes	Yes	3 6 7 9 16	315.0	200	1, 2
Richmond, BC	304 305	907	49° 05.74' N 123° 10.61' W	150	75	Yes	Yes	3 6 7 9 16	320.0	200	1, 2
Western Head, NS	334 335	935	43° 59.40' N 64° 39.72' W	400	75	Yes	Yes	3 6 7 9 16	312.0	200	1, 2
Warton, ON	310 311	918	44° 44.84' N 81° 06.69' W	200	100	Yes	Yes	3 6 7 9 16	286.0	200	1, 2

Remarks

1. No DF identifier
2. Range based on field strength measurement





## 11 CHINA

Table of DGNS Stations			Country: CHINA				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Dasanshan	602 603	601	38° 52' N 121° 50' E	300	75	Yes	Yes	9 16	301.5	200	
Laotieshan	604 605	602	38° 44' N 121° 08' E	300	75	Yes	Yes	9 16	307.5	200	
Qinhuangdao	606 607	603	39° 55' N 119° 37' E	300	75	Yes	Yes	9 16	287.5	200	
Shanggulin	608 609	604	38° 50' N 117° 30' E	300	75	Yes	Yes	9 16	310.5	200	
Yingkou	610 611	605	40° 17' N 122° 06' E	300	75	Yes	Yes	9 16	291.5	200	
Chengshanjiao	612 613	606	37° 24' N 122° 41' E	300	75	Yes	Yes	9 16	317	200	
Wangjiamai	614 615	607	36°04' N 120°26' E	300	75	Yes	Yes	9 16	313.5	200	
Yanweigang	620 621	610	34° 29' N 119° 47' E	300	75	Yes	Yes	9 16	291	200	
Haozhigang	622 623	611	32° 01' N 121° 43' E	300	75	Yes	Yes	9 16	304	200	
Dajishan	624 625	612	30° 49' N 122° 10' E	300	75	Yes	Yes	9 16	307.5	200	



Table of DGNSS Stations			Country: CHINA				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Dinghai	626 627	613	30° 01' N 122° 04' E	300	75	Yes	Yes	9 16	310	200	
Shitang	628 629	614	28° 16' N 121° 37' E	300	75	Yes	Yes	9 16	295	200	
Tiandashan	630 631	615	25° 28' N 119° 42' E	300	75	Yes	Yes	9 16	313	200	
Zhenhaijiao	632 633	616	24° 16' N 118° 08' E	300	75	Yes	Yes	9 16	320	200	
Lingkun	634 635	617	27° 58' N 120° 54' E	300	75	Yes	Yes	9 16	286.5	200	
Dafeng	636 637	618	33° 16' N 120° 46' E	300	75	Yes	Yes	9 16	297	200	
Dezhoudao	640 641	620	23° 20' N 116° 45' E	300	75	Yes	Yes	9 16	317	200	
Sanzaodao	642 643	621	22° 00' N 113° 24' E	300	75	Yes	Yes	9 16	291	200	
Naozhoudao	644 645	622	20° 54' N 110° 36' E	300	75	Yes	Yes	9 16	301	200	
Fangchenggang	646 647	623	21° 35' N 108° 19' E	300	75	Yes	Yes	9 16	287	200	
Baohujiao	652 653	626	20° 00' N 110° 55' E	300	75	Yes	Yes	9 16	310.5	200	



Table of DGNSS Stations			Country: CHINA				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Sanya	654 655	627	18° 17' N 109° 21' E	300	75	Yes	Yes	9 16	295	200	
Yangpugang	656 657	628	19° 43' N 109° 12' E	300	75	Yes	Yes	9 16	313	200	
Dayawan	648 649	624	20° 42.4' N 114° 33.2' E	300	75	Yes	Yes	9 16	296	200	



## 12 HONG KONG

Table of DGNSS Stations			Country: HONG KONG			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Kau Yi Chau	852 853		22° 17' N 114° 04' E	50	50	Yes	Yes	1 3 5 7 16	289	200	



### 13 CZECH

Table of DGNSS Stations			Country: CZECH			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Obříství	850 851		50° 18' 04" N 014° 29' 02" E	200	75	Yes	Yes		295	100	



## 14 DENMARK / FAROE ISLANDS

Table of DGNSS Stations			Country: DENMARK / FAROE ISLANDS			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Blavandshuk	705 706	452	55° 33' N 008° 05' E	277	50	Yes	Yes	3 6 7 9 16	290	100	1
Hammerodde	700 701	451	55° 17' N 014° 46' E	330	50	Yes	Yes	3 6 7 9 16	289.5	100	1
Skagen	710 711	453	57° 44' N 010° 35' E	270	50	Yes	Yes	3 6 7 9 16	296	100	1
Thorshavn	715 716	454	62° 01' N 006° 50' W	370	50	Yes	Yes	3 6 7 9 16	287.5	100	1

### Remarks

1. Normal operation with 24 hour monitoring



## 15 EGYPT

Table of DGNSS Stations			Country: EGYPT			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Alexandria	440 441	320	31° 09' 28" N 029° 50' 77" E	278		Yes	Yes	3 6 7 9 16	284	200	
MersaMatruh	448 449	324	31° 21' 55" N 027° 14' 80" E	278		Yes	Yes	3 6 7 9 16	307	200	
Port Said	442 443	321	31° 16' 34" N 032° 17' 57" E	324		Yes	Yes	3 6 7 9 16	290	200	
Quseir	450 451	325	26° 08' 26" N 034° 15' 65" E	482		Yes	Yes	3 6 7 9 16	314.5	200	
RasGharib	446 447	323	28° 21' 10" N 033° 06' 61" E	278		Yes	Yes	3 6 7 9 16	298	200	
Ras Umm Sid	444 445	322	27° 50' 90" N 034° 18' 80" E	234		Yes	Yes	3 6 7 9 16	293.5	200	



## 16 ESTONIA

Table of DGNSS Stations			Country: ESTONIA				Date of issue: January 2002 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Narva	841	531	59° 28' N 028° 02' E	150	50	Yes	Yes	3 9 16	295.5	100	
Ristna	840	530	58° 56' N 022° 03' E	150	50	Yes	Yes	3 9 16	307	100	





## 17 FINLAND

Table of DGNSS Stations			Country: FINLAND				Date of issue: January 2002 Date of last update: November 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Haarajoki	607	407	60° 31' N 025° 10' E	250	50	Yes	Yes	3 6 7 9 16	292.5	100	
Klamila	606	406	60° 30' N 027° 26' E	250	50	Yes	Yes	3 6 7 9 16	287	100	
Kokkola	608	408	63° 52' N 023° 11' E	250	50	Yes	Yes	3 6 7 9 16	290.5	100	
Mäntyluoto	601	401	61° 36' N 021° 28' E	250	50	Yes	Yes	3 6 7 9 16	287.5	100	
Marjaniemi	605	405	65° 02' N 024° 34' E	250	50	Yes	Yes	3 6 7 9 16	314.5	100	
Outokumpu	603	403	62° 41' N 029° 01' E	70	50	Yes	Yes	3 6 7 9 16	304.5	100	
Porkkala	600	400	59° 58' N 024° 23' E	250	50	Yes	Yes	3 6 7 9 16	293.5	100	
Puumala	602	402	61° 24' N 028° 14' E	70	50	Yes	Yes	3 6 7 9 16	290.0	100	
Turku	604	404	60° 26' N 022° 13' E	200	50	Yes	Yes	3 6 7 9 16	301.5	100	
Savonlinna	609	409	62° 05' N 028° 39' E			planned		3 6 7 9 16	286	100	



## 18 FRANCE

Table of DGNSS Stations			Country: FRANCE				Date of issue: January 2002 Date of last update: March 2019				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Cap Bear (BEAR)	468	338	42° 31' N 003° 08' E	200	50	Yes	Yes	1 3 5 7 9	304.5	100	
Cap Ferret (FERR)	466	336	44° 39' N 001° 15' W	200	50	Yes	Yes	1 3 5 7 9	310	100	
Heauville (HEAU)	460	330	49° 34' N 001° 46' W	200	50	Yes	Yes	1 3 5 7 9	299	100	
Olonne (SABL)	464	334	46° 31' N 001° 48' W	200	50	Yes	Yes	1 3 5 7 9	307	100	
Pont de Buis (PNDB)	462	332	48° 18' N 004° 05' W	200	50	Yes	Yes	1 3 5 7 9	308.5	100	
Porquerolles (PORQ)	469	339	42° 59' N 006° 12' E	250	50	Yes	Yes	1 3 5 7 9	286.5	100	



## 19 FRENCH GUIANA

Table of DGNSS Stations			Country: FRENCH GUIANA			Date of issue: May 2004 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Cayenne (CAYN)	475	986	04° 56.95' N 052° 18.55' W	200	50	Yes	Yes	1 3 5 7 9	307	100	



## 20 GEORGIA

Table of DGNSS Stations			Country: GEORGIA				Date of issue: December 2019 Date of last update: December 2019				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Poti	101	N/A	42° 08' 0.7" N 041° 39' 40" E	50	N/A	Yes	No	1	N/A	N/A	



## 21 GERMANY

Table of DGNSS Stations			Country: GERMANY				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Helgoland	762	492	54° 11' N 007° 53' E	285	50	Yes	Yes	3 6 7 9 16	298.5	100	
Koblenz	760	490	50° 22' N 007° 38' E	225	50	Yes	Yes	3 6 7 9 16	302.5	100	
Zeven	763	493	53° 17' N 009° 15' E	285	50	Yes	Yes	3 6 7 9 16	303.5	100	
GroßMohrdorf	761	491	54° 22' N 012° 55' E	285	50	Yes	Yes	3 6 7 9 16	308.0	100	
Iffezheim	764	494	48° 50' N 008° 07' E	225	50	Yes	Yes	3 6 7 9 16	293.5	100	
Bad Abbach	765	495	48° 56' N 012° 02' E	225	50	Yes	Yes	3 6 7 9 16	314.5	100	
Mauken	766	496	51° 43' N 012° 49' E	225	50	Yes	Yes	3 6 7 9 16	313.5	100	



## 22 ICELAND

Table of DGNSS Stations			Country: ICELAND				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Bjargtangar	624 625	412	65° 30.15' N 024° 31.89' W	250	50	Yes	Yes	3 6 7 9 16	300	100	
Djupivogur	630 631	415	64° 39.15' N 014° 16.60' W	250	50	Yes	Yes	3 6 7 9 16	291	100	
Raufarhofn	628 629	414	66° 27.01' N 015° 57.25' W	250	50	Yes	Yes	3 6 7 9 16	289.5	100	
Reykjanes	622 623	411	63° 48.93' N 022° 42.26' W	250	50	Yes	Yes	3 6 7 9 16	293.5	100	
Skagatá	626 627	413	66° 07.16' N 020° 05.92' W	250	50	Yes	Yes	3 6 7 9 16	289	100	
Skardsfjara	632 633	416	63° 31.07' N 017° 58.73' W	250	50	Yes	Yes	3 6 7 9 16	287	100	



## 23 INDIA

Table of DGNS Stations			Country: INDIA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Okha	400 401	100	22° 28' 35.282" N 069° 04' 11.115" E	185	100	Yes	Yes	3 5 7 9 16	296	100	
Porbandar	402 403	101	21° 37' 21.219" N 69° 37' 12.004" E	185	100	Yes	Yes	3 5 7 9 16	293	100	
Gopnath	404 405	102	21° 12' 11.879" N 072° 06' 31.199" E	185	100	Yes	Yes	3 5 7 9 16	299	100	
Hazira	408 409	104	21° 05' 31.433" N 72° 38' 34.607" E	185	100	Yes	Yes	3 5 7 9 16	314	100	
Utan Point	406 407	103	19° 16' 42.182" N 072° 46' 50.854" E	185	100	Yes	Yes	3 5 7 9 16	306	100	
Ratnagiri	420 421	110	16° 59' 16.374" N 073° 16' 20.599" E	185	100	Yes	Yes	3 5 7 9 16	308	100	
Aguada	410 411	105	15° 29' 32.178" N 073° 46' 20.849" E	185	100	Yes	Yes	3 5 7 9 16	288	100	
Suratkal Point	412 413	106	13° 00' 17.027" N 074° 47' 23.386" E	185	100	Yes	Yes	3 5 7 9 16	320	100	
Azhikode (Periyar River)	414 415	107	10° 12' 13.038" N 076° 09' 27.305" E	185	100	Yes	Yes	3 5 7 9 16	301	100	
Minicoy Island	418 419	109	08° 16' 09.958" N 073° 01' 33.265" E	185	100	Yes	Yes	3 5 7 9 16	306	100	



Table of DGNSS Stations			Country: INDIA				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at (μV/m)						
PandiyanThivu	424 425	112	08° 47' 08.913" N 078° 11' 48.560" E	185	100	Yes	Yes	3 5 7 9 16	309	100	
Rameshwaram	446 447	123	09° 17' 01.893" N 079° 18' 31.828" E	185	100	Yes	Yes	3 5 7 9 16	311	100	
Nagapatinam	426 427	113	10° 45' 58.133" N 079° 51' 00.372" E	185	100	Yes	Yes	3 5 7 9 16	323	100	
Pondicherry	422 423	111	11° 54' 59.028" N 079° 49' 51.725" E	185	100	Yes	Yes	3 5 7 9 16	315	100	
Pulicat	430 431	115	13° 25' 15.943" N 080° 19' 36.393" E	185	100	Yes	Yes	3 5 7 9 16	319	100	
Krishnapatnam	432 433	116	14° 15' 17.533" N 080° 07' 33.235" E	185	100	Yes	Yes	3 5 7 9 16	297	100	
Antervedi	436 437	118	16° 19' 01.118" N 081° 43' 32.844" E	185	100	Yes	Yes	3 5 7 9 16	320	100	
Dolphin's Nose Vishakhapatnam	428 429	114	17° 40' 41.986" N 083° 17' 29.149" E	185	100	Yes	Yes	3 5 7 9 16	295	100	
Paradip	440 441	120	20° 15' 21.040" N 086° 39' 19.883" E	185	100	Yes	Yes	3 5 7 9 16	290	100	
Sagar Island	434 435	117	21° 39' 30.557" N 088° 02' 49.105" E	185	100	Yes	Yes	3 5 7 9 16	318	100	
East Island	442 443	121	13° 37' 52.039" N 093° 02' 49.902" E	185	100	Yes	Yes	3 5 7 9 16	313	100	





Table of DGNSS Stations			Country: INDIA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Keating Point	438 439	119	09° 15' 20.278" N 092° 46' 31.226" E	185	100	Yes	Yes	3 5 7 9 16	317	100	
Campbell Bay	444 445	122	07°29.91278' N 093°56' 11.74246" E	185	100	Yes	Yes	3 5 7 9 16	289	100	



## 24 IRELAND

Table of DGNSS Stations			Country: IRELAND				Date of issue: July 2002 Date of last update: April 2022				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Loop Head	-	-	52° 33'N 009° 55'W	-	-	No	No	-	-	-	1
Mizen Head	-	-	51° 27' N 009° 48' W	-	-	No	No	-	-	-	1
Tory Island	-	-	55° 16'N 008° 14'W	-	-	No	No	-	-	-	1

### Remarks

1. All DGNSS services were stopped from 31st March 2022



## 25 ITALY

Table of DGNSS Stations			Country: ITALY				Date of issue: January 2002 Date of last update: August 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Capo Ferro			41° 09'N 009° 31'E	277	75	Off	No	3 5 9 16	298	100	
Messina (Piale)			38° 13.5'N 015° 38.7'E	277	75	Off	No	3 5 9 16	295	100	
Monfalcone			45° 47.3'N 013° 32.2' E	277	75	Off	No	3 5 9 16	308	100	
Piombino			42° 55'N 010° 37' E	277	75	Off	No	3 5 9 16	304	100	
Vieste			41°53'N 016°11'E	277	75	Off	No	3 5 9 16	292.5	100	
Sellia Marina			38°52'N 016° 43'E	277	75	Off	No	3 5 9 16	290	100	



## 26 R.O.KOREA

Table of DGNSS Stations			Country: R.O.KOREA				Date of issue: November 2006 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Homigot	732 733	666	36° 04' 40.96" N 129° 33' 59.98" E	185	100	Yes	Yes	3 5 7 9 16	310	200	
Jumunjin	726 727	663	37° 53' 52.19" N 128° 50' 01.57" E	185	100	Yes	Yes	3 5 7 9 16	295	200	
Gocheongdo	728 729	664	36° 07' 30.74" N 125° 58' 06.53" E	185	100	Yes	Yes	3 5 7 9 16	295	200	
Geomundo	724 725	662	34° 00' 27.49" N 127° 19' 20.28" E	185	100	Yes	Yes	3 5 7 9 16	287	200	
Marado	730 731	665	33° 07' 00.95" N 126° 16' 08.92" E	185	100	Yes	Yes	3 5 7 9 16	290	200	
Palmido	722 723	661	37° 21' 30.00" N 126° 30' 40.55" E	185	100	Yes	Yes	3 5 7 9 16	313	200	
Ulleungdo	734 735	667	37° 31' 06.29" N 130° 47' 51.74" E	185	100	Yes	Yes	3 5 7 9 16	319	200	
Yeongdo	720 721	660	35° 03' 43.88" N 129° 04' 14.62" E	185	100	Yes	Yes	3 5 7 9 16	300	200	
Socheongdo	736 737	668	37° 45' 37.28" N 124° 43' 43.56" E	185	100	Yes	Yes	3 5 7 9 16	323	200	
Gageodo	738 739	669	34° 05' 41.62" N 125° 05' 56.10" E	185	100	Yes	Yes	3 5 7 9 16	298	200	



Table of DGNSS Stations			Country: R.O.KOREA				Date of issue: November 2006 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Jeojin	740 741	670	38° 33' 07.48" N 128° 23' 55.48" E	185	100	Yes	Yes	3 5 7 9 16	292	200	
Chuncheon	757 758	676	37° 59' 40.18" N 127° 42' 53.88" E	80	100	Yes	Yes	3 5 7 9 16	286	200	
Chungju	753 754	674	36° 58' 55.69" N 127° 45' 16.63" E	80	100	Yes	Yes	3 5 7 9 16	318	200	
Muju	747 748	671	35° 54' 12.46" N 127° 34' 58.98" E	80	100	Yes	Yes	3 5 7 9 16	322	200	
Pyeongchang	751 752	673	37° 20' 58.67" N 128° 29' 15.58" E	80	100	Yes	Yes	3 5 7 9 16	303	200	
Yeongju	749 750	672	36° 51' 56.54" N 128° 32' 41.56" E	80	100	Yes	Yes	3 5 7 9 16	289	200	
Seongju	755 756	675	35° 56' 17.26" N 128° 10' 59.94" E	80	100	Yes	Yes	3 5 7 9 16	296	200	



## 27 LATVIA

Table of DGNSS Stations			Country: LATVIA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Ventspils			57° 24' N 21° 32' E	74	50	Not in operation			308.5		1

### Remarks

1. Ventspils Reference station is out of order for several years.



## 28 LITHUANIA

Table of DGNSS Stations			Country: LITHUANIA			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Klaipeda		535	55° 43' 66" N 021° 05' 74" E	100	50	Yes	Yes	3 6 9 16	304.5	200	



## 29 MALYSIA

Table of DGNSS Stations			Country: MALYSIA				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Bagan Datuk	120 121	740	03° 59' N 100° 47' E	300	100	Yes	Yes	3 5 6 7 9 16	288	200	
Bandar Melaka	124 125	742	02° 11' N 102° 14' E	220	100	Yes	Yes	3 5 6 7 9 16	294	200	
Kuantan	122 123	741	03° 49' N 103° 20' E	340	100	Yes	Yes	3 5 6 7 9 16	291	200	
Kuala Besar	126 127	743	06° 13' N 102° 14' E	340	100	Yes	Yes	3 5 6 7 9 16	296	200	
Bintulu	821		03° 11' N 130° 2' E	450	40	On Trial	Yes	1 3 7 9 16	290	200	
Kuching	822		01° 43' N 110° 31' E	400	40	On Trial	Yes	1 3 7 9 16	305	200	





## 30 NETHERLANDS

Table of DGNSS Stations			Country: NETHERLANDS			Date of issue: January 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
GilzeRijen	652 653	426	51° 37'N 04° 55'E	185	50	Yes	Yes	3 6 7 9	302	200	
Hoek van Holland	650 651	425	51° 58' N 04° 06' E	220	50	Yes	Yes	2 3 5 7 9 16	312.5	200	
VlielandPhare	655 656	428	53° 18'N 05° 04' E	220	50	Yes	Yes	2 3 5 7 9	294	200	
IJmuiden Phare			52° 27'N 04° 34' E	90	50	Planned			301		



### 31 NEW ZEALAND

Table of DGNSS Stations			Country: NEW ZEALAND			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						

#### Remarks

1. No DGPS Service currently



## 32 NORWAY

Table of DGNSS Stations			Country: NORWAY				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Andenes	794	515	69° 19.7' N 016° 08.0' E	300	50	Operational	Yes	1 2 7 16 27	311	200	
Færder	780	500	59° 01.6' N 010° 31.5' E	300	50	Operational	Yes	1 2 7 16 27	310.5	200	
Fruholmen	797	518	71° 05.6' N 023° 58.9' E	300	50	Operational	Yes	1 2 7 16 27	309.5	200	
Halten	790	510	64° 10.4' N 009° 24.4' E	300	50	Operational	Yes	1 2 7 16 27	301	200	
Lista	783	503	58° 06.6' N 006° 34.0' E	300	50	Operational	Yes	1 2 7 16 27	304	200	
Sklinna	791	511	65° 12.1' N 010° 59.7' E	300	50	Operational	Yes	1 2 7 16 27	305.5	200	
Skomvær	793	513	67° 24.7' N 011° 52.5' E	300	50	Operational	Yes	1 2 7 16 27	286.5	200	
Svinøy	788	508	62° 19.7' N 005° 16.1' E	300	50	Operational	Yes	1 2 7 16 27	302.5	200	
Torsvåg	796	516	70° 14.7' N 019° 30.4' E	300	50	Operational	Yes	1 2 7 16 27	284	200	
Utsira	785	505	59° 18.5' N 004° 52.3' E	300	50	Operational	Yes	1 2 7 16 27	313	200	



Table of DGNSS Stations			Country: NORWAY				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Utvær	787	507	61° 02.2' N 004° 30.6' E	300	50	Operational	Yes	1 2 7 16 27	314	200	
Vardø	800	520	70° 23.3' N 031° 09.3' E	300	50	Operational	Yes	1 2 7 16 27	305.5	200	
Trondheim	801 802	521	63° 26' 39" N 10° 24' 14" E	300	50	Test or Preliminary	Yes	1 2 7 16 27	299.0	200	



### 33 OMAN

Table of DGNSS Stations			Country: OMAN			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Ras Al Hadd	490 491	150	22° 28'07" N 059° 47'00" E	500	100	Yes	Yes	3 5 6 7 9 16	300	200	
RasMadrasah	492 493	151	19° 02'52" N 057° 43'31" E	550	100	Yes	Yes	3 5 6 7 9 16	305	200	
Marbat	494 495	152	16° 57'60" N 054° 45'03" E	550	100	Yes	Yes	3 5 6 7 9 16	310	200	



### 34 PANAMA

Table of DGNSS Stations			Country: PANAMA			Date of issue: January 2004 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Gatun	903 904	971	09° 15.5' N 079° 56.2' W	50	70	Yes	Yes	3 9 16	307	200	
Miraflores	901 902	972	08° 59.6' N 079° 35.1' W	50	70	Yes	Yes	3 9 16	302	200	



## 35 POLAND

Table of DGNSS Stations			Country: POLAND			Date of issue: January 2004 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Dziwnów	741 742	481	54° 01' N 014° 44' E	220	50	Yes	Yes	3 7 9 16	283.5	100	1
Rozewie	743 744	482	54° 49' N 018° 20' E	250	50	Yes	Yes	3 7 9 16	301.0	100	1

### Remarks

1. National DGPS-PL is supported by 3 far field monitoring stations



### 36 PORTUGAL

Table of DGNSS Stations			Country: PORTUGAL			Date of issue: January 2004 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Cabo Carvoeiro	480 481	340	39° 21' N 09° 24' W	370	118	Yes	Yes	1 9	311.5	200	
Horta	484 485	342	38° 32' N 28° 37' W	545	123	Yes	Yes	1 9	308	200	
Porto Santo	486 487	343	33° 05' N 16° 20' W	370	115	Yes	Yes	1 9	287.5	200	
Sagres	482 483	341	37° 00' N 08° 00' W	370	118	Yes	Yes	1 9	305.5	200	





### 37 ROMANIA

Table of DGNSS Stations			Country: ROMANIA			Date of issue: January 2004 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Agigea	554 555	382	44° 06' 18" N 23° 37' 50" E	200	50	Yes	Yes	3 6 9 16	296.5	200	
Bechet	550 551	380	43° 45' 08" N 23° 57' 19" E	150	50	Test / Preliminary	Yes		291	200	



## 38 RUSSIA

Table of DGNSS Stations			Country: RUSSIA				Date of issue: January 2004 Date of last update: November 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Africa	052	052	56° 11.0' N 163° 21.0' E	200	20	Test			285.0	100	
Alevina	055	055	58° 50.0' N 151° 21.0' E	200	20	Test			300.0	100	
Astrahansky	028 029	028 029	45° 50.5' N 047° 38.6' E	200	20	Test			283.5	100	
Baltiisk	001	001	54° 38.3' N 019° 53.9' E	200	20	Test			286.5	100	
Basargina	053	053	43° 03.0' N 131° 57.0' E	200	20	Test			285.5	100	
Caranginsky	057	057	58° 33.0' N 163° 33.0' E	200	20	Test			301.5	100	
Corsakovsky	062	062	46° 37.0' N 142° 48.0' E	200	20	Test			313.5	100	
Crutogorova	060	060	55° 05.0' N 155° 35.0' E	200	20	Test			312.5	100	
Doobsky	022	022	44° 36.0' N 37° 58.0' E	200	20	Test			292.0	100	
Kaninsky	004	004	68° 39.0' N 43° 17.0' E	300	20	Test			284.5	100	



Table of DGNSS Stations			Country: RUSSIA				Date of issue: January 2004 Date of last update: November 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Kodoshskiy	037	037	44° 06.0' N 39° 02.0' E	200	20	Test			308.5	100	
Krasnoie	056	056	53° 06.8' N 140° 52.3' E	200	20	Test			301.0	100	
KrasnyPartizan	051	051	48° 59.0' N 140° 23.0' E	200	20	Test			284.0	100	
Lopatka	054	054	50° 52.0' N 156° 40.0' E	200	20	Test			299.5	100	
Mud'iugsky	003	003	64° 55.0' N 040° 14.0' E	300	20	Test			283.5	100	
Oleniy Island	024	024	72° 36.0' N 77° 39.0' E	250	20	Test			294.5	100	
Povorotny	058	058	42° 40.0' N 133° 02.0' E	200	20	Test			306.5	100	
Petropavlovsky	050	050	52° 53' N 158° 42' E	200	20	Test			283.5	100	
Russian Cat	061	061	64° 34.0' N 178° 33.0' E	200	20	Test			313.0	100	
Shepelevskiy	002	002	59° 59.0' N 029° 08.0' E	200	20	Test			298.5	100	
Shepelevskiy	005	005	59° 59.0' N 029° 08.0' E	200	20	Test			311.0	100	



Table of DGNSS Stations			Country: RUSSIA				Date of issue: January 2004 Date of last update: November 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Sterlegov Cape	003	003	75° 23.0' N 088° 45.0' E	280	20	Test			318.5	100	
Sulakskiy	008	008	43° 16.0' N 047° 32.0' E	200	20	Test			288.5	100	
Temiryukskiy	036	036	45° 20.0' N 037° 14.0' E	200	20	Test			285.0	100	
Tsyp. Navolock	009	009	69° 44.0' N 033° 06.1' E	300	20	Test			315.0	100	
Stolbovoy	027	027	74° 10.0' N 135° 27.0' E	300	20	Test			306.5	100	
Andreya	008	008	76° 47.0' N 110° 46.0' E	300	20	Test			291.5	100	
Van-der-Linda	063	063	50° 52.0' N 156° 40.0' E	200	20	Test			315.0	100	
Indigirka	029	029	64° 55.0' N 040° 14.0' E	280	20	Test			324.5	100	
Kamenka	009	009	64° 55.0' N 040° 14.0' E	300	20	Test			318.5	100	



### 39 SAUDI ARABIA

Table of DGNSS Stations			Country: SAUDI ARABIA			Date of issue: July 2002 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Jeddah	961		21° 28' N 39° 08' E	460	75	Yes	Yes	3 5 6 7 9 16	320	200	
Gizan	962		16° 53' N 42° 32' E	460	75	Yes	Yes	3 5 6 7 9 16	324	200	



## 40 SERBIA

Table of DGNSS Stations			Country: SERBIA				Date of issue: November 2014 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Makiš	685		44° 45' 19.44"N 020° 20' 34.44" E	200	100	Yes	Yes	1 3 7 9 16 27	287	100	



## 41 SINGAPORE

Table of DGNSS Stations			Country: SINGAPORE				Date of issue: January 2002 Date of last update: November 2014				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
PedraBranca (Horsburgh)	130 131	745	01° 19' N 104° 24' E	200	75	Yes	Yes	3 5 7 9 16	308	200	
PulauSatumu (Raffles)	132 133	746	01° 09' N 103° 44' E	200	75	Yes	Yes	3 5 7 9 16	298	200	



## 42 SPAIN

Table of DGNSS Stations			Country: SPAIN				Date of issue: January 2002 Date of last update: October 2021				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Cabo Machichaco	500	350	43° 27' N 002° 45' W	180	50	Yes	Yes	3 6 7 9 16	285.0	100	
Cabo Mayor	502	351	43° 29' N 003° 47' W	180	50	Yes	Yes	3 6 7 9 16	289.0	100	
Cabo Peñas	504	352	43° 39' N 005° 51' W	180	50	Yes	Yes	3 6 7 9 16	295.0	100	
Estaca de Bares	506	353	43° 47' N 007° 41' W	180	50	Yes	Yes	3 6 7 9 16	293.0	100	
Rota	510	355	36° 38' N 006° 23' W	180	75	Yes	Yes	3 6 7 9 16	303.5	100	
Tarifa	512	356	36° 00' N 005° 36' W	180	75	Yes	Yes	3 6 7 9 16	302.5	100	
Sabinal	516	358	36° 41' N 002° 42' W	180	75	Yes	Yes	3 6 7 9 16	298.5	100	
Cabo de la Nao	520	360	38° 44' N 000° 14' E	180	75	Yes	Yes	3 6 7 9 16	297.5	100	
Cabo Salou	528	364	41° 03' N 001° 10' E	180	75	Yes	Yes	3 6 7 9 16	291.0	100	
Punta Llobregat	530	365	41° 19' N 002° 09' E	180	75	Yes	Yes	3 6 7 9 16	288.5	100	





Table of DGNSS Stations			Country: SPAIN			Date of issue: January 2002 Date of last update: October 2021					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Mahon	524	362	39° 52' N 004° 18' E	180	75	Yes	Yes	3 6 7 9 16	293.0	100	

Remarks:

1. Each regional network has a remote reception for monitoring the correction signals on air



## 43 SWEDEN

Table of DGNSStations			Country: SWEDEN				Date of issue: January 2002 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Hjortensudde	733	467	58° 38' N 012° 40' E	125	50	Yes	Yes	3 6 9 16	302.0	100	
Hoburg	730	465	56° 55' N 018° 09' E	240	50	Yes	Yes	3 6 9 16	297.5	100	
Holmsjö	720	460	56° 27' N 015° 39' E	240	50	Yes	Yes	3 6 9 16	292	100	
Järnäs	724	462	63° 29' N 019° 39' E	240	50	Yes	Yes	3 6 9 16	289.0	100	
Kapellskar	728	464	59° 43' N 019° 04' E	240	50	Yes	Yes	3 6 9 16	307.5	100	
Kullen	732	466	56° 18' N 012° 27' E	200	50	Yes	Yes	3 6 9 16	293.0	100	
Göteborg	736	469	57° 37' N 011° 59' E	240	50	Yes	Yes	3 6 9 16	296.5	100	
Nynashamn	734	468	58° 56' N 017° 57' E	240	50	Yes	Yes	3 6 9 16	298.0	100	
Skutskär	726	463	60° 37' N 017° 26' E	240	50	Yes	Yes	3 6 9 16	299.5	100	
Otterbacken	738	470	58° 52' N 014° 06' E	240	50	Yes	Yes	3 6 9 16	288.5	100	



#### 44 CHINESE TAIPEI

Table of DGNSS Stations			Country: CHINESE TAIPEI			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Houlong	790 791	690	24° 38.7789' N 120° 46.4511' E	185	100	Fully operational	Yes	3 5 9 16	306	200	
Pudai	792 793	691	23° 22.9799' N 120° 08.3093' E	185	100	Fully operational	Yes	3 5 9 16	303	200	



## 45 THAILAND

Table of DGNSS Stations			Country: THAILAND			Date of issue: November 2014 Date of last update: November 2014					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Lang Suan, Chomphon		306	09° 56.62038' N 099° 09.57907' E	200	75	Yes	Yes	3 5 6 9 16	306	200	



## 46 TURKEY

Table of DGNSS Stations			Country: TURKEY			Date of issue: January 2002 Date of last update: September 2018					
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu\text{V}/\text{m}$ )						
Rumelifeneri	545 546	373	41° 14.19' N 29° 06.46' E	160	75	No	Yes	3 7 9 16	301	200	
Kumkale	547 548	374	36° 59.37' N 26° 10.83' E	160	75	No	Yes	3 7 9 16	307.5	200	



## 47 UKRAINE

Table of DGNS Stations			Country: UKRAINE				Date of issue: July 2005 Date of last update: September 2018				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Odeskyi Lighthouse	086	086	46° 23' N 30° 45' E	200	50	Yes	Yes	1 3 5 6 7 9 16 31 32 33 34 35 36 37	297.0	200	
Zmiinyi Lighthouse	085	085	45° 15' N 30° 12' E	200	50	Yes	Yes	1 3 5 6 7 9 16 31 32 33 34 35 36 37	294.5	200	
Yenikalskyi Lighthouse	095	095	45° 23' N 36° 39' E	-	-	-	Yes	1 3 5 6 7 9 16 31 32 33 34 35 36 37	288	200	



## 48 UNITED KINGDOM

Table of DGNSS Stations			Country: UK				Date of issue: July 2002 Date of last update: April 2022				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Butt of Lewis	-	-	58° 31' N 006° 16' W	-	-	No	No	3 7 9 16 27	-	-	1
Stirling	-	-	56° 04' N 004° 03' W	-	-	No	No	3 7 9 16 27	-	-	1
Flamborough	-	-	54° 07' N 000° 05' W	-	-	No	No	3 7 9 16 27	-	-	1
Girdle Ness	-	-	57° 08' N 002° 03' W	-	-	No	No	3 7 9 16 27	-	-	1
Lizard	-	-	49° 58' N 005° 12' W	-	-	No	No	3 7 9 16 27	-	-	1
Nash Point	-	-	51° 24' N 003° 33' W	-	-	No	No	3 7 9 16 27	-	-	1
North Foreland	-	-	51° 23' N 001° 27' E	-	-	No	No	3 7 9 16 27	-	-	1
Point Lynas	-	-	53° 25' N 004° 17' W	-	-	No	No	3 7 9 16 27	-	-	1
St. Catherine's	-	-	50° 35' N 001° 18' W	-	-	No	No	3 7 9 16 27	-	-	1
Sumburgh Head	-	-	59° 51' N 001° 16' W	-	-	No	No	3 7 9 16 27	-	-	1
Wormleighton	-	-	52° 12' N 001° 22' W	-	-	No	No	3 7 9 16 27	-	-	1



Remarks

1. All DGNSS services were stopped from the 31<sup>st</sup> of March 2022





## 49 PUERTO RICO

Table of DGNSS Stations			Country: PUERTO RICO			Date of issue: October 2005 Date of last update: February 2006					
Station name	Identification Numbers		Geographical Position Latitude Longitude (NAD83)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
Isabela, PR	034 035	817	18° 27.778391' N 067° 04.017435' W	125	75	Yes	Yes	3 6 7 9 16	295	100	



## 50 VIETNAM

Table of DGNSS Stations			Country: VIETNAM				Date of issue: December 2009 Date of last update: August 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at ( $\mu$ V/m)						
TruongSa	168 167	741	8° 38.77' N 111° 55.16' E	500	100	Yes	Yes	3 5 7 9 16	285	200	Ministry of Defense
MongCai	186 187*	743	21° 31.58' N 107° 58.09' E	500	100	Yes	Yes	3 5 7 9 16	286	200	Ministry of Defense
PhuQuoc	197* 198	746	10° 02.31' N 104° 01.01' E	500	100	Yes	Yes	3 5 7 9 16	288	200	Ministry of Defense
DaNang	199 200*	748	16° 02.40' N 108° 12.41' E	500	100	Yes	Yes	3 5 7 9 16	296	200	Ministry of Defense
NgheAn	175	749	18° 45.55' N 105° 39.67' E	500	100	Yes	Yes	3 5 7 9 16	287	200	Ministry of Defense
CamRanh	173	747	11° 57.68' N 109° 10.94' E	500	100	Yes	Yes	3 5 7 9 16	298	200	Ministry of Defense
DoSon	NA	NA	20° 41' 40" N 106° 47' 41" E	500	100	Yes	Yes	3 5 7 9 16	295	200	Ministry of Natural resources and Environment
VungTau	NA	NA	10° 23'46" N 107° 08' 44" E	500	100	Yes	Yes	3 5 7 9 16	295	200	Ministry of Natural resources and Environment



Table of DGNSS Stations			Country: VIETNAM				Date of issue: December 2009 Date of last update: August 2015				
Station name	Identification Numbers		Geographical Position Latitude Longitude (WGS84)	Nominal range		Station in operation	Integrity Monitoring	Transmitted message types	Freq. (kHz)	Bit Rate (bps)	Remarks
	Reference Stations	Transmitting Station		Km	at (μV/m)						
QuangNam	NA	NA	15° 47' 42" N 108° 24' 48" E	500	100	Yes	Yes	3 5 7 9 16	295	200	Ministry of Natural resources and Environment

Remarks

1. \* = Not yet in use
2. Integrity monitoring involves pre and post broadcast integrity
3. TruongSa, MongCai, PhuQuoc, DaNang, NgheAn and CamRanh are operated by Defense Mapping Agency.
4. Doson and VungTau are operated by SEAMAP.
5. QuangNam is operated by Department of Survey and Mapping VietNam(DOSM).