

VLF Stations List


























Here is a list of VLF transmitters suitable for SID monitoring. Unless otherwise stated, they transmit almost 24/7. Those stations are used either as a communication means with submarines or for time signal.


Note:

This list is a synthesis of several sources and may contain obsolete or erroneous information.

Do not hesitate to contact me  [Email](#) for any addition or correction.

Last Update: 23 Nov 2019

Call sign	Notes	Frequency	Location	Latitude	Longitude	Aerial View
VTX1		16300	South Vijayanarayanam, India Locator: MJ88vj	N 08° 23' 13.25" (+08.387015°)	E 077° 45' 9.94" (+077.752762°)	
JXN	(1)	16400	Novik, Norway Locator: JP66wx	N 66° 58' 27.67" (+66.974353°)	E 013° 52' 25.02" (+013.873617°)	
VTX2		17000	South Vijayanarayanam, India Locator: MJ88vj	N 08° 23' 13.25" (+08.387015°)	E 077° 45' 9.94" (+077.752762°)	
SAQ	(2)	17200	Grimeton, Sweden Locator: JO67ec	N 57° 06' 47.42" (+57.113171°)	E 012° 23' 50.20" (+012.397277°)	
RDL	(3)	18100	? Locator: -----	----- (-----°)	----- (-----°)	
VTX3		18200	South Vijayanarayanam, India Locator: MJ88vj	N 08° 23' 13.25" (+08.387015°)	E 077° 45' 9.94" (+077.752762°)	
VTX4		19200	South Vijayanarayanam, India Locator: MJ88vj	N 08° 23' 13.25" (+08.387015°)	E 077° 45' 9.94" (+077.752762°)	
GBZ		19580	Anthorn, UK Locator: IO84iv	N 54° 54' 41.91" (+54.911643°)	W 003° 16' 42.44" (-003.278456°)	
NWC		19800	Harold E. Holt, North West Cape, Exmouth, Australia Locator: OG78be	S 21° 48' 58.78" (-21.816328°)	E 114° 09' 56.11" (+114.165586°)	
ICV		20270	Isola di Tavorara, Italy Locator: JN40uw	N 40° 55' 23.26" (+40.923127°)	E 009° 43' 51.64" (+009.731011°)	
FTA	(4)	16800 <u>20900</u>	Sainte-Assise, France Locator: JN18gn	N 48° 32' 40.68" (+48.544632°)	E 002° 34' 45.94" (+002.579429°)	
NPM		21400	Pearl Harbour, Lualaba, HI Locator: BL01wk	N 21° 25' 12.60" (+21.420166°)	W 158° 09' 4.10" (-158.151140°)	
HWU	(5)	15100 18300 19100 <u>21750</u> 22600	Rosnay, France Locator: JN06or	N 46° 42' 47.26" (+46.713129°)	E 001° 14' 42.89" (+001.245248°)	
GQD		22100	Skelton, UK Locator: IO84nr	N 54° 43' 54.48" (+54.731799°)	W 002° 52' 58.92" (-002.883033°)	
NDT		22200	Ebino, Japan Locator: PM52jb	N 32° 04' 55.50" (+32.082084°)	E 130° 49' 40.66" (+130.827960°)	
DHO38	(6)	23400	Rhauderfehn, Germany Locator: JO33tb	N 53° 04' 44.04" (+53.078900°)	E 007° 36' 54.00" (+007.615000°)	
NAA		24000	Cutler, ME Locator: FN64ip	N 44° 38' 41.77" (+44.644936°)	W 067° 16' 53.90" (-067.281639°)	
NLK		24800	Oso Wash, Jim Creek, WA Locator: CN98ae	N 48° 12' 12.55" (+48.203487°)	W 121° 55' 0.58" (-121.916827°)	
unid25		25000	Mokpo, South Korea Locator: PM34fq	N 34° 40' 44.65" (+34.679068°)	E 126° 26' 43.38" (+126.445383°)	
NML	(7)	25200	La Moure, ND Locator: EN06ti	N 46° 21' 57.56" (+46.365990°)	W 098° 20' 8.30" (-098.335638°)	
TBB		26700	Bafa, Turkey Locator: KM37pj	N 37° 24' 45.81" (+37.412725°)	E 027° 19' 24.03" (+027.323342°)	
NRK/TFK		37500	Grindavik, Iceland Locator: HP83su	N 63° 51' 1.31" (+63.850365°)	W 022° 28' 0.38" (-022.466773°)	
JJY-40	(8)	40000	Mount Ootakadoya, Fukushima prefecture, Japan Locator: QM07ki	N 37° 22' 21.35" (+37.372598°)	E 140° 50' 56.06" (+140.848906°)	
SRC		40400	Varberg, Sweden Locator: JO67ec	N 57° 06' 47.42" (+57.113171°)	E 012° 23' 50.20" (+012.397277°)	
NAU		40800	Aguada, Puerto Rico Locator: FK68jj	N 18° 23' 55.54" (+18.398762°)	W 067° 10' 39.36" (-067.177599°)	
NSY		45900	Niscemi, Italy Locator: JM77fd	N 37° 07' 32.37" (+37.125660°)	E 014° 26' 11.10" (+014.436416°)	

Call sign	Notes	Frequency	Location	Latitude	Longitude	Aerial View
SXA		49000	Marathon, Greece Locator: KM28ad	N 38° 08' 42.61" (+38.145170°)	E 024° 01' 10.95" (+024.019709°)	
GYW1		51950	Crimond, UK Locator: IO97bo	N 57° 37' 2.87" (+57.617464°)	W 001° 53' 15.34" (-001.887595°)	
MSF	(9)	60000	Anthorn, UK Locator: IO84iv	N 54° 54' 40.30" (+54.911195°)	W 003° 16' 45.49" (-003.279302°)	
WWVB	(10)	60000	Fort Collins, Colorado Locator: DN70lq	N 40° 40' 39.80" (+40.677722°)	W 105° 02' 49.75" (-105.047153°)	
JJY-60	(11)	60000	Mount Hagane, Fukuoka prefecture, Japan Locator: PM53cl	N 33° 27' 55.56" (+33.465433°)	E 130° 10' 31.49" (+130.175415°)	
FUG		62600	La Régine, France Locator: JN13bj	N 43° 23' 12.47" (+43.386798°)	E 002° 05' 50.60" (+002.097388°)	
FUE		65800	Kerlouan, France Locator: IN78tp	N 48° 38' 15.62" (+48.637672°)	W 004° 21' 2.61" (-004.350725°)	
BPC	(12)	68500	Shangqiu, Henan Province, China Locator: OM74wk	N 34° 27' 23.47" (+34.456519°)	E 115° 50' 12.97" (+115.836937°)	
CFH		73600	Halifax, Canada Locator: FN84ax	N 44° 58' 2.19" (+44.967276°)	W 063° 58' 55.78" (-063.982160°)	
DCF77	(13)	77500	Mainflingen, Germany Locator: JO40ma	N 50° 00' 55.48" (+50.015411°)	E 009° 00' 29.90" (+009.008307°)	
GYN2		81000	Inskip, UK Locator: IO83nt	N 53° 49' 48.26" (+53.830071°)	W 002° 50' 3.36" (-002.834266°)	

- Notes:
- (1) : JXN is transmitting 6 times a day, each transmission 2 hours: 00:00-02:00, 04:00-06:00, 8:00-10:00, 12:00-14:00, 16:00-18:00, 20:00-22:00 UTC.
- (2) : Historic station only active twice-yearly on special occasions. SAQ website:  [www](#)
- (3) : Sporadic transmissions. Transmitter location varies and for most of them is unknown. Candidate sites are: Krasnodar; Nizhniy Novgorod; Arkhangelsk; Tashkent, Uzbekistan; Molodechno, Belarus; Kalinigrad.
- (4) : 16.8kHz is seldom used
- (5) : HWU alternates between 18.3kHz, 19.1kHz, 21.75kHz and 22.6kHz. 15.1kHz is seldom used
- (6) : Off-air daily from 7:00 to 8:00 UTC.
- (7) : Off-air on Tuesdays from 12:00 to 19:00 UTC.
- (8) : Time Signal. 50kW/12.5kW ERP. JJY-40 website:  [www](#)
- (9) : Time Signal. 17kW ERP. MSF website:  [www](#)
- (10) : Time Signal. 65kW ERP. WWVB website:  [www](#)
- (11) : Time Signal. 50kW/22.5kW ERP JJY-60 website:  [www](#)
- (12) : Time Signal. Active 0000-2100 UTC. BPC website:  [www](#)
- (13) : Time Signal. 30KW ERP. DCF77 website:  [www](#)

Here are some [KML](#) files of the above transmitters. These files can be viewed using  Google Earth. In order to get updates to those files, give Google Earth **the link** and not a local copy of the kml file.

 VLF transmitters



(application/vnd.google-earth.kml+xml, 31Kb, 23 Nov 2019)

 Time Signal transmitters



(application/vnd.google-earth.kml+xml, 14Kb, 23 May 2013)

Other VLF Stations

For information, here are lists of other transmitters operating in the VLF or LF frequency range.

They usually cannot be used for SID monitoring: several transmitters could share the same frequency or a given transmitter could use several frequencies. Moreover, some of those stations are off air.

- Alpha ([RSDN-20](#)) is a Russian system for long range radio navigation. It operates on the frequencies: 11904.76190, 12648.80952, 14880.95238, 14881.09127, 12090.77381 and 12044.27083 Hz.
A location is determined by the phase difference between the received signals.
- The OMEGA was a radio navigation system for aircraft. The system consisted in 8 stations, operating between 10 and 14 kHz. Omega was stopped on September 30, 1997.
A location is determined by the phase difference between the received signals.
- [LORAN](#) is also a radio navigation system. It operates from 90 to 110 kHz. A similar system, called Chayka (*seagull* in English) is interoperable with LORAN and is in use in Russia.
A location is determined by the time interval between the received signals.

In order to get updates to those files, give Google Earth **the link** and not a local copy of the kml file.

 ALPHA (RSDN-20) transmitters



(application/vnd.google-earth.kml+xml, 1Kb, 01 Apr 2012)

 Former OMEGA transmitters



(application/vnd.google-earth.kml+xml, 3Kb, 10 Dec 2010)

 LORAN-C transmitters



(application/vnd.google-earth.kml+xml, 56Kb, 10 Dec 2010)



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