

## List of HF DL / ACARS / VDL2 / Mode-S id's and frequencies

ID	Freq. kHz	Station	Mode	ID	Freq. kHz	Station	Mode
1	5508	San Francisco, CA, USA	HDFL/USB	6	5655	Hat Yai, THA	HDFL/USB
1	6559	San Francisco, CA, USA	HDFL/USB	6	6535	Hat Yai, THA	HDFL/USB
1	8927	San Francisco, CA, USA	HDFL/USB	6	8825	Hat Yai, THA	HDFL/USB
1	10081	San Francisco, CA, USA	HDFL/USB	6	10066	Hat Yai, THA	HDFL/USB
1	11327	San Francisco, CA, USA	HDFL/USB	6	13270	Hat Yai, THA	HDFL/USB
1	13276	San Francisco, CA, USA	HDFL/USB	6	17928	Hat Yai, THA	HDFL/USB
1	17919	San Francisco, CA, USA	HDFL/USB	6	21949	Hat Yai, THA	HDFL/USB
1	21934	San Francisco, CA, USA	HDFL/USB				
				7	2998	Shannon, IRL	HDFL/USB
2	5514	Molokai. HWA, USA	HDFL/USB	7	3455	Shannon, IRL	HDFL/USB
2	6565	Molokai. HWA, USA	HDFL/USB	7	5547	Shannon, IRL	HDFL/USB
2	8912	Molokai. HWA, USA	HDFL/USB	7	6532	Shannon, IRL	HDFL/USB
2	8936	Molokai. HWA, USA	HDFL/USB	7	8843	Shannon, IRL	HDFL/USB
2	10027	Molokai. HWA, USA	HDFL/USB	7	8942	Shannon, IRL	HDFL/USB
2	11312	Molokai. HWA, USA	HDFL/USB	7	10081	Shannon, IRL	HDFL/USB
2	11348	Molokai. HWA, USA	HDFL/USB	7	11384	Shannon, IRL	HDFL/USB
2	13276	Molokai. HWA, USA	HDFL/USB				
2	13312	Molokai. HWA, USA	HDFL/USB	8	3016	Johannesburg, AFS	HDFL/USB
2	13324	Molokai. HWA, USA	HDFL/USB	8	4681	Johannesburg, AFS	HDFL/USB
2	17919	Molokai. HWA, USA	HDFL/USB	8	5529	Johannesburg, AFS	HDFL/USB
2	21937	Molokai. HWA, USA	HDFL/USB	8	8834	Johannesburg, AFS	HDFL/USB
				8	11321	Johannesburg, AFS	HDFL/USB
3	3900	Reykjavik, ISL	HDFL/USB	8	13321	Johannesburg, AFS	HDFL/USB
3	5720	Reykjavik, ISL	HDFL/USB	8	17922	Johannesburg, AFS	HDFL/USB
3	6712	Reykjavik, ISL	HDFL/USB	8	21949	Johannesburg, AFS	HDFL/USB
3	8977	Reykjavik, ISL	HDFL/USB				
3	11184	Reykjavik, ISL	HDFL/USB	9	2944	Barrow, AK, USA	HDFL/USB
3	15025	Reykjavik, ISL	HDFL/USB	9	2992	Barrow, AK, USA	HDFL/USB
3	17985	Reykjavik, ISL	HDFL/USB	9	3007	Barrow, AK, USA	HDFL/USB
				9	3497	Barrow, AK, USA	HDFL/USB
4	5652	Riverhead, NY, USA	HDFL/USB	9	4654	Barrow, AK, USA	HDFL/USB
4	6661	Riverhead, NY, USA	HDFL/USB	9	4687	Barrow, AK, USA	HDFL/USB
4	8912	Riverhead, NY, USA	HDFL/USB	9	5529	Barrow, AK, USA	HDFL/USB
4	11387	Riverhead, NY, USA	HDFL/USB	9	5538	Barrow, AK, USA	HDFL/USB
4	13276	Riverhead, NY, USA	HDFL/USB	9	5544	Barrow, AK, USA	HDFL/USB
4	17919	Riverhead, NY, USA	HDFL/USB	9	6646	Barrow, AK, USA	HDFL/USB
4	21931	Riverhead, NY, USA	HDFL/USB	9	8927	Barrow, AK, USA	HDFL/USB
				9	8936	Barrow, AK, USA	HDFL/USB
5	5583	Auckland, NZL	HDFL/USB	9	10027	Barrow, AK, USA	HDFL/USB
5	6535	Auckland, NZL	HDFL/USB	9	10093	Barrow, AK, USA	HDFL/USB
5	8921	Auckland, NZL	HDFL/USB	9	11354	Barrow, AK, USA	HDFL/USB
5	10084	Auckland, NZL	HDFL/USB	9	17919	Barrow, AK, USA	HDFL/USB
5	13351	Auckland, NZL	HDFL/USB	9	17934	Barrow, AK, USA	HDFL/USB
5	17916	Auckland, NZL	HDFL/USB	9	21928	Barrow, AK, USA	HDFL/USB
				9	21937	Barrow, AK, USA	HDFL/USB

ID	Freq. kHz	Station	Mode
11	5589	Albrook, PNR	HDFL/USB
11	6589	Albrook, PNR	HDFL/USB
11	8894	Albrook, PNR	HDFL/USB
11	10063	Albrook, PNR	HDFL/USB
11	13264	Albrook, PNR	HDFL/USB
11	17901	Albrook, PNR	HDFL/USB
13	4660	Santa Cruz, BOL	HDFL/USB
13	6628	Santa Cruz, BOL	HDFL/USB
13	8957	Santa Cruz, BOL	HDFL/USB
13	11318	Santa Cruz, BOL	HDFL/USB
13	13315	Santa Cruz, BOL	HDFL/USB
13	17916	Santa Cruz, BOL	HDFL/USB
13	21997	Santa Cruz, BOL	HDFL/USB
14	5622	Krasnoyarsk, RUS	HDFL/USB
14	6596	Krasnoyarsk, RUS	HDFL/USB
14	8886	Krasnoyarsk, RUS	HDFL/USB
14	10087	Krasnoyarsk, RUS	HDFL/USB
14	13321	Krasnoyarsk, RUS	HDFL/USB
14	17912	Krasnoyarsk, RUS	HDFL/USB
14	21990	Krasnoyarsk, RUS	HDFL/USB

ID	Freq. kHz	Station	Mode
15	5544	Muharraq, BHR	HDFL/USB
15	8885	Muharraq, BHR	HDFL/USB
15	10075	Muharraq, BHR	HDFL/USB
15	13354	Muharraq, BHR	HDFL/USB
15	17967	Muharraq, BHR	HDFL/USB
15	21982	Muharraq, BHR	HDFL/USB
16	5451	Agana, GUM	HDFL/USB
16	6652	Agana, GUM	HDFL/USB
16	8927	Agana, GUM	HDFL/USB
16	11306	Agana, GUM	HDFL/USB
16	13312	Agana, GUM	HDFL/USB
16	17919	Agana, GUM	HDFL/USB
16	21928	Agana, GUM	HDFL/USB
17	6529	Telde - Canarias, CNR	HDFL/USB
17	8948	Telde - Canarias, CNR	HDFL/USB
17	11348	Telde - Canarias, CNR	HDFL/USB
17	13303	Telde - Canarias, CNR	HDFL/USB
17	17928	Telde - Canarias, CNR	HDFL/USB
17	21955	Telde - Canarias, CNR	HDFL/USB

Freq. MHz	Mode	Area
129.125	ACARS	USA & Canada
130.025	ACARS	USA & Canada
130.425	ACARS	USA
130.450	ACARS	USA & Canada
131.125	ACARS	USA
131.450	ACARS	Primary channel Japan
131.475	ACARS	Air Canada company channel
131.525	ACARS	Secondary Europe
131.550	ACARS	Primary Channel worldwide
131.725	ACARS	Primary channel in Europe
131.825	ACARS	Additional channel Europe

Freq. MHz	Mode	Area
131.850	ACARS	Additional channel Europe
136.700	ACARS	Additional channel USA
136.750	ACARS	Additional channel USA & Europe
136.800	ACARS	Additional channel USA
136.850	ACARS	SITA North American Frequency
136.875	VDL2	Europe
136.900	ACARS	SITA Secondary channel Europe
136.925	ACARS	ARINC channel Europe
136.975	VDL2	Europe
1030.000	Mode-S	Interrogation frequency
1090.000	Mode-S	Reply frequency

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## Selcal decoding

A description taken from the ICAO: AERONAUTICAL TELECOMMUNICATIONS, Annex 10 to the Convention on International Civil Aviation, Volume I, 4th edition of 1985 (amended 1987)

### 4.8 SELCAL system

4.8.1 Recommendation.- Where a SELCAL system is installed, the following system characteristics should be applied

- a) Transmitted code. Each transmitted code should be made up of two consecutive tone pulses, with each pulse containing two simultaneously transmitted tones. The pulses should be of 1.0 plus or minus 0.25 seconds duration, separated by an interval of 0.2 plus or minus 0.1 seconds.
- b) Stability. The frequency of transmitted tones should be held to plus or minus 0.15 per cent tolerance to ensure proper operation of the airborne decoder.
- c) Distortion. The over-all audio distortion present on the transmitted RF signal should not exceed 15 per cent.
- d) Per cent modulation. The RF signal transmitted by the ground radio station should contain, within 3 dB equal amounts of the two modulating tones. The combination of tones should result in a modulation envelope having a nominal modulation percentage as high as possible and in no case less than 60 per cent.
- e) Transmitted tones. Tone codes should be made up of various combinations of the tones listed in the following table and designated by colour and letter as indicated:

#### Designation Frequency (Hz)

Red A	312.6	Red J	716.1
Red B	346.7	Red K	794.3
Red C	384.6	Red L	881.0
Red D	426.6	Red M	977.2
Red E	473.2	Red P	1083.9
Red F	524.8	Red Q	1202.3
Red G	582.1	Red R	1333.5
Red H	645.7	Red S	1479.1

- N1. It should be noted that the tones are spaced by Log-1 0.045 to avoid the possibility of harmonic combinations.
- N2. In accordance with the application principles developed by the Sixth Session of the Communications Division, the only codes at present used internationally are selected from the red group.
- N3. Guidance material on the use of SELCAL systems is contained in the Attachment to Part II.
- N4. The tones Red P, Red Q, Red R, and Red S are applicable after 1 September 1985, in accordance with 3.2.

### Abbreviations

SITA	Société Internationale de Télécommunications Aéronautiques
ARINC	Aeronautical Radio, Incorporated
VDL	VHF Digital Link
ACARS	Aircraft Communications and Reporting System (VDL Mode 1)
HFDL	High Frequency Data Link
VDL2	VDL Mode 2
Mode-S	Mode-Select



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