

ANNEX 2-2

**Table of Frequencies in the Exclusive Bands for the
Aeronautical Mobile (OR) Service (3-18MHz Band)**

3MHz Band	4MHz Band	5MHz Band	6MHz Band	9MHz Band	11MHz Band	13MHz Band	15MHz Band	18MHz Band
3023	4700	5680	6685	8965	11175	13200	15010	17970
3026	4703	5684	6688	8968	11178	13203	15013	17973
3029	4706	5687	6691	8971	11181	13206	15016	17976
3032	4709	5690	6694	8974	11184	13209	15019	17979
3035	4712	5693	6697	8977	11187	13212	15022	17982
3038	4715	5696	6700	8980	11190	13215	15025	17985
3041	4718	5699	6703	8983	11193	13218	15028	17988
3044	4721	5702	6706	8986	11196	13221	15031	17991
3047	4724	5705	6709	8989	11199	13224	15034	17994
3050	4727	5708	6712	8992	11202	13227	15037	17997
3053	4730	5711	6715	8995	11205	13230	15040	18000
3056	4733	5714	6718	8998	11208	13233	15043	18003
3059	4736	5717	6721	9001	11211	13236	15046	18006
3062	4739	5720	6724	9004	11214	13239	15049	18009
3065	4742	5723	6727	9007	11217	13242	15052	18012
3068	4745	5726	6730	9010	11220	13245	15055	18015
3071			6733	9013	11223	13248	15058	18018
3074			6736	9016	11226	13251	15061	18021
3077			6739	9019	11229	13254	15064	18024
3080			6742	9022	11232	13257	15067	18027
3083			6745	9025	11235		15070	
3086			6748	9028	11238		15073	
3089			6751	9031	11241		15076	
3092			6754	9034	11244		15079	
3095			6757	9037	11247		15082	
3098			6760		11250		15085	
3101					11253		15088	
3104					11256		15091	
3107					11259		15094	
3110					11262		15097	
3113					11265			
3116					11268			
3119					11271			
3122								
3125								
3128								
3131								
3134								
3137								
3140								
3143								
3146								
3149								
3152								

1) The frequencies indicated in above table are the carrier frequencies of SSB.

2) 3023kHz and 5680kHz are for worldwide use (refer to ANNEX 2-1).

ANNEX 2-3

**Table of Frequencies for Radio Stations Using ACAS,
Aeronautical DME, TACAN, VOR, ILS, MLS, ATCRBS and GBAS**

1. VOR, ILS localizer, ILS glide path, MLS angle, Airborne DME, Airborne TACAN, Ground-based DME and Ground-based TACAN

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
1X	-	-	-	1025	962
1Y	-	-	-	1025	1088
2X	-	-	-	1026	963
2Y	-	-	-	1026	1089
3X	-	-	-	1027	964
3Y	-	-	-	1027	1090
4X	-	-	-	1028	965
4Y	-	-	-	1028	1091
5X	-	-	-	1029	966
5Y	-	-	-	1029	1092
6X	-	-	-	1030	967
6Y	-	-	-	1030	1093
7X	-	-	-	1031	968
7Y	-	-	-	1031	1094
8X	-	-	-	1032	969
8Y	-	-	-	1032	1095
9X	-	-	-	1033	970
9Y	-	-	-	1033	1096
10X	-	-	-	1034	971
10Y	-	-	-	1034	1097
11X	-	-	-	1035	972
11Y	-	-	-	1035	1098
12X	-	-	-	1036	973
12Y	-	-	-	1036	1099
13X	-	-	-	1037	974
13Y	-	-	-	1037	1100
14X	-	-	-	1038	975
14Y	-	-	-	1038	1101
15X	-	-	-	1039	976
15Y	-	-	-	1039	1102
16X	-	-	-	1040	977
16Y	-	-	-	1040	1103
17X	108.00	-	-	1041	978
17Y	108.05	-	5043.0	1041	1104
17Z	-	-	5043.3	1041	1104
18X	*108.10	334.7	5031.0	1042	979

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
18W	-	-	5031.3	1042	979
18Y	*108.15	334.55	5043.6	1042	1105
18Z	-	-	5043.9	1042	1105
19X	108.20	-	-	1043	980
19Y	108.25	-	5044.2	1043	1106
19Z	-	-	5044.5	1043	1106
20X	*108.30	334.1	5031.6	1044	981
20W	-	-	5031.9	1044	981
20Y	*108.35	333.95	5044.8	1044	1107
20Z	-	-	5045.1	1044	1107
21X	108.40	-	-	1045	982
21Y	108.45	-	5045.4	1045	1108
21Z	-	-	5045.7	1045	1108
22X	*108.50	329.9	5032.2	1046	983
22W	-	-	5032.5	1046	983
22Y	*108.55	329.75	5046.0	1046	1109
22Z	-	-	5046.3	1046	1109
23X	108.60	-	-	1047	984
23Y	108.65	-	5046.6	1047	1110
23Z	-	-	5046.9	1047	1110
24X	*108.70	330.5	5032.8	1048	985
24W	-	-	5033.1	1048	985
24Y	*108.75	330.35	5047.2	1048	1111
24Z	-	-	5047.5	1048	1111
25X	108.80	-	-	1049	986
25Y	108.85	-	5047.8	1049	1112
25Z	-	-	5048.1	1049	1112
26X	*108.90	329.3	5033.4	1050	987
26W	-	-	5033.7	1050	987
26Y	*108.95	329.15	5048.4	1050	1113
26Z	-	-	5048.7	1050	1113
27X	109.00	-	-	1051	988
27Y	109.05	-	5049.0	1051	1114
27Z	-	-	5049.3	1051	1114
28X	*109.10	311.4	5034.0	1052	989
28W	-	-	5034.3	1052	989
28Y	109.15	331.25	5049.3	1051	1115
28Z	-	-	5049.9	1052	1115
29X	109.20	-	-	1053	990

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
29Y	109.25	-	5050.2	1053	1116
29Z	-	-	5050.5	1053	1116
30X	*109.30	332.0	5034.6	1054	991
30W	-	-	5034.9	1054	991
30Y	*109.35	331.85	5050.8	1054	1117
30Z	-	-	5051.1	1054	1117
31X	109.40	-	-	1055	992
31Y	109.45	-	5051.4	1055	1118
31Z	-	-	5051.7	1055	1118
32X	*109.50	332.6	5035.2	1056	993
32W	-	-	5035.5	1056	993
32Y	*109.55	332.45	5052.0	1056	1119
32Z	-	-	5052.3	1056	1119
33X	109.60	-	-	1057	994
33Y	109.65	-	5052.6	1057	1120
33Z	-	-	5052.9	1057	1120
34X	*109.70	333.2	5035.8	1058	995
34W	-	-	5036.1	1058	995
34Y	*109.75	333.05	5053.2	1058	1121
34Z	-	-	5053.5	1058	1121
35X	109.80	-	-	1059	996
35Y	109.85	-	5053.8	1059	1122
35Z	-	-	5054.1	1059	1122
36X	*109.90	333.8	5036.4	1060	997
36W	-	-	5036.7	1060	997
36Y	*109.95	333.65	5054.4	1060	1123
36Z	-	-	5054.7	1060	1123
37X	110.00	-	-	1061	998
37Y	110.05	-	5055.0	1061	1124
37Z	-	-	5055.3	1061	1124
38X	*110.10	334.4	5037.0	1062	999
38W	-	-	5037.3	1062	999
38Y	*110.15	334.25	5055.6	1062	1125
38Z	-	-	5055.9	1062	1125
39X	110.20	-	-	1063	1000
39Y	110.25	-	5056.2	1063	1126

(continued)

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
39Z	-	-	5056.2	1063	1126
40X	*110.30	335.0	5037.6	1064	1001
40W	-	-	5037.9	1064	1001
40Y	*110.35	334.85	5056.8	1064	1127
40Z	-	-	5057.1	1064	1127
41X	110.40	-	-	1065	1002
41Y	110.45	-	5057.4	1065	1128
41Z	-	-	5057.7	1065	1128
42X	*110.50	329.6	5038.2	1066	1003
42W	-	-	5038.5	1066	1003
42Y	*110.55	329.45	5058.0	1066	1129
42Z	-	-	5058.3	1066	1129
43X	110.60	-	-	1067	1004
43Y	110.65	-	5058.6	1067	1130
43Z	-	-	5058.9	1067	1130
44X	*110.70	330.2	5038.8	1068	1005
44W	-	-	5039.1	1068	1005
44Y	*110.75	330.05	5059.2	1068	1131
44Z	-	-	5059.5	1068	1131
45X	110.80	-	-	1069	1006
45Y	110.85	-	5059.8	1069	1132
45Z	-	-	5060.1	1069	1132
46X	*110.90	330.8	5039.4	1070	1007
46W	-	-	5039.7	1070	1007
46Y	*110.95	330.65	5060.4	1070	1133
46Z	-	-	5060.7	1070	1133
47X	111.00	-	-	1071	1008
47Y	111.05	-	5061.0	1071	1134
47Z	-	-	5061.3	1071	1134
48X	*111.10	331.7	5040.0	1072	1009
48W	-	-	5040.3	1072	1009
48Y	*111.15	331.55	5061.6	1072	1135
48Z	-	-	5061.9	1072	1135
49X	111.20	-	-	1073	1010
49Y	111.25	-	5062.2	1073	1136
49Z	-	-	5062.5	1073	1136
50X	*111.30	332.3	5040.6	1074	1011
50W	-	-	5040.9	1074	1011
50Y	*111.35	332.15	5062.8	1074	1137

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
50Z	-	-	5063.1	1074	1137
51X	111.40	-	-	1075	1012
51Y	111.45	-	5063.4	1075	1138
51Z	-	-	5063.7	1075	1138
52X	*111.50	332.9	5041.2	1076	1013
52W	-	-	5041.5	1076	1013
52Y	*111.55	332.75	5064.0	1076	1139
52Z	-	-	5064.3	1076	1139
53X	111.60	-	-	1077	1014
53Y	111.65	-	5064.6	1077	1140
53Z	-	-	5064.9	1077	1140
54X	*111.70	333.5	5041.8	1078	1015
54W	-	-	5042.1	1078	1015
54Y	*111.75	333.35	5065.2	1078	1141
54Z	-	-	5065.5	1078	1141
55X	111.80	-	-	1079	1016
55Y	111.85	-	5065.8	1079	1142
55Z	-	-	5066.1	1079	1142
56X	*111.90	331.1	5042.4	1080	1017
56W	-	-	5042.7	1080	1017
56Y	*111.95	330.95	5066.4	1080	1143
56Z	-	-	5066.7	1080	1143
57X	112.00	-	-	1081	1018
57Y	112.05	-	-	1081	1144
58X	112.10	-	-	1082	1019
58Y	112.15	-	-	1082	1145
59X	112.20	-	-	1083	1020
59Y	112.25	-	-	1083	1146
60X	-	-	-	1084	1021
60Y	-	-	-	1084	1147
61X	-	-	-	1085	1022
61Y	-	-	-	1085	1148
62X	-	-	-	1086	1023
62Y	-	-	-	1086	1149
63X	-	-	-	1087	1024
63Y	-	-	-	1087	1150
64X	-	-	-	1088	1151
64Y	-	-	-	1088	1025
65X	-	-	-	1089	1152

(continued)

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
65Y	-	-	-	1089	1026
66X	-	-	-	1090	1153
66Y	-	-	-	1090	1027
67X	-	-	-	1091	1154
67Y	-	-	-	1091	1028
68X	-	-	-	1092	1155
68Y	-	-	-	1092	1029
69X	-	-	-	1093	1156
69Y	-	-	-	1093	1030
70X	112.30	-	-	1094	1157
70Y	112.35	-	-	1094	1031
71X	112.40	-	-	1095	1158
71Y	112.45	-	-	1095	1032
72X	112.50	-	-	1096	1159
72Y	112.55	-	-	1096	1033
73X	112.60	-	-	1097	1160
73Y	112.65	-	-	1097	1034
74X	112.70	-	-	1098	1161
74Y	112.75	-	-	1098	1035
75X	112.80	-	-	1099	1162
75Y	112.85	-	-	1099	1036
76X	112.90	-	-	1100	1163
76Y	112.95	-	-	1100	1037
77X	113.00	-	-	1101	1164
77Y	113.05	-	-	1101	1038
78X	113.10	-	-	1102	1165
78Y	113.15	-	-	1102	1039
79X	113.20	-	-	1103	1166
79Y	113.25	-	-	1103	1040
80X	113.30	-	-	1104	1167
80Y	113.35	-	5067.0	1104	1041
80Z	-	-	5067.3	1104	1041
81X	113.40	-	-	1105	1168
81Y	113.45	-	5067.6	1105	1042
81Z	-	-	5067.9	1105	1042
82X	113.50	-	-	1106	1169
82Y	113.55	-	5068.2	1106	1043
82Z	-	-	5068.5	1106	1043
83X	113.60	-	-	1107	1170

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
83Y	113.65	-	5068.8	1107	1044
83Z	-	-	5069.1	1107	1044
84X	113.70	-	-	1108	1171
84Y	113.75	-	5069.4	1108	1045
84Z	-	-	5069.7	1108	1045
85X	113.80	-	-	1109	1172
85Y	113.85	-	5070.0	1109	1046
85Z	-	-	5070.3	1109	1046
86X	113.90	-	-	1110	1173
86Y	113.95	-	5070.6	1110	1047
86Z	-	-	5070.9	1110	1047
87X	114.00	-	-	1111	1174
87Y	114.05	-	5071.2	1111	1048
87Z	-	-	5071.5	1111	1048
88X	114.10	-	-	1112	1175
88Y	114.15	-	5071.8	1112	1049
88Z	-	-	5072.1	1112	1049
89X	114.20	-	-	1113	1176
89Y	114.25	-	5072.4	1113	1050
89Z	-	-	5072.7	1113	1050
90X	114.30	-	-	1114	1177
90Y	114.35	-	5073.0	1114	1051
90Z	-	-	5073.3	1114	1051
91X	114.40	-	-	1115	1178
91Y	114.45	-	5073.6	1115	1052
91Z	-	-	5073.9	1115	1052
92X	114.50	-	-	1116	1179
92Y	114.55	-	5074.2	1116	1053
92Z	-	-	5074.5	1116	1053
93X	114.60	-	-	1117	1180
93Y	114.65	-	5074.8	1117	1054
93Z	-	-	5075.1	1117	1054
94X	114.70	-	-	1118	1181
94Y	114.75	-	5075.4	1118	1055
94Z	-	-	5075.7	1118	1055
95X	114.80	-	-	1119	1182
95Y	114.85	-	5076.0	1119	1056
95Z	-	-	5076.3	1119	1056
96X	114.90	-	-	1120	1183

(continued)

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
96Y	114.95	-	5076.6	1120	1057
96Z	-	-	5076.9	1120	1057
97X	115.00	-	-	1121	1184
97Y	115.05	-	5077.2	1121	1058
97Z	-	-	5077.5	1121	1058
98X	115.10	-	-	1122	1185
98Y	115.15	-	5077.8	1122	1059
98Z	-	-	5078.1	1122	1059
99X	115.20	-	-	1123	1186
99Y	115.25	-	5078.4	1123	1060
99Z	-	-	5078.7	1123	1060
100X	115.30	-	-	1124	1187
100Y	115.35	-	5079.0	1124	1061
100Z	-	-	5079.3	1124	1061
101X	115.40	-	-	1125	1188
101Y	115.45	-	5079.6	1125	1062
101Z	-	-	5079.9	1125	1062
102X	115.50	-	-	1126	1189
102Y	115.55	-	5080.2	1126	1063
102Z	-	-	5080.5	1126	1063
103X	115.60	-	-	1127	1190
103Y	115.65	-	5080.8	1127	1064
103Z	-	-	5081.1	1127	1064
104X	115.70	-	-	1128	1191
104Y	115.75	-	5081.4	1128	1065
104Z	-	-	5081.7	1128	1065
105X	115.80	-	-	1129	1192
105Y	115.85	-	5082.0	1129	1066
105Z	-	-	5082.3	1129	1066
106X	115.90	-	-	1130	1193
106Y	115.95	-	5082.6	1130	1067
106Z	-	-	5082.9	1130	1067
107X	116.00	-	-	1131	1194
107Y	116.05	-	5083.2	1131	1068
107Z	-	-	5083.5	1131	1068
108X	116.10	-	-	1132	1195
108Y	116.15	-	5083.8	1132	1069
108Z	-	-	5084.1	1132	1069
109X	116.20	-	-	1133	1196

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
109Y	116.25	-	5084.4	1133	1070
109Z	-	-	5084.7	1133	1070
110X	116.30	-	-	1134	1197
110Y	116.35	-	5085.0	1134	1071
110Z	-	-	5085.3	1134	1071
111X	116.40	-	-	1135	1198
111Y	116.45	-	5085.6	1135	1072
111Z	-	-	5085.9	1135	1072
112X	116.50	-	-	1136	1199
112Y	116.55	-	5086.2	1136	1073
112Z	-	-	5086.5	1136	1073
113X	116.60	-	-	1137	1200
113Y	116.65	-	5086.8	1137	1074
113Z	-	-	5087.1	1137	1074
114X	116.70	-	-	1138	1201
114Y	116.75	-	5087.4	1138	1075
114Z	-	-	5087.7	1138	1075
115X	116.80	-	-	1139	1202
115Y	116.85	-	5088.0	1139	1076
115Z	-	-	5088.3	1139	1076
116X	116.90	-	-	1140	1203
116Y	116.95	-	5088.6	1140	1077
116Z	-	-	5088.9	1140	1077
117X	117.00	-	-	1141	1204
117Y	117.05	-	5089.2	1141	1078
117Z	-	-	5089.5	1141	1078
118X	117.10	-	-	1142	1205
118Y	117.15	-	5089.8	1142	1079
118Z	-	-	5090.1	1142	1079
119X	117.20	-	-	1143	1206
119Y	117.25	-	5090.4	1143	1080
119Z	-	-	5090.7	1143	1080
120X	117.30	-	-	1144	1207
120Y	117.35	-	-	1144	1081
121X	117.40	-	-	1145	1208
121Y	117.45	-	-	1145	1082
122X	117.50	-	-	1146	1209
122Y	117.55	-	-	1146	1083
123X	117.60	-	-	1147	1210

(continued)

Channel	Frequencies (MHz)				
	VOR or ILS localizer	ILS glide path	MLS angle	Airborne DME and TACAN	Ground-based DME and TACAN
123Y	117.65	-	-	1147	1084
124X	117.70	-	-	1148	1211
124Y	117.75	-	-	1148	1085
125X	117.80	-	-	1149	1212
125Y	117.85	-	-	1149	1086
126X	117.90	-	-	1150	1213
126Y	117.95	-	-	1150	1087

* The frequencies are limited to the radio stations use ILS Localizer.

2. The frequency for the radio station uses ILS marker beacon 75 MHz
3. The frequency for the radio stations of ATCRBS
 - (1)The radio stations on the surface of the earth 1030 MHz, 1090MHz
 - (2)The radio stations other than those on the surface of the earth 1090 MHz
4. The frequency for the radio station uses ACAS 1030 MHz
5. The frequency for the radio station uses GBAS 108.025MHz and higher frequencies in increments of 25kHz in the range 108.025MHz to 117.95MHz inclusive