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SCANNER SEARCHERS GUIDE

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30.000 - 46.610 MHz Business Band, Government

350020 McDonalds Drive-Up Orders (Common)
40.500 Emergency "Guard" (NAVY)

46.610 - 47.000 MHz Portable Phones

The following channels are listed as BASE/HANDSET.

46.610/49.670 Channel 1
46.630/49.845 Channel 2
46.670/49.860 Channel 3
46.710/49.770 Channel 4
46.730/49.875 Channel 5
46.770/49.830 Channel 6 (Also Baby Monitors on 49.83)
46.830/49.890 Channel 7 (Also Baby Monitors on 49.89)
46.870/49.930 Channel 8
46.930/49.990 Channel 9
46.970/49.970 Channel 10

47.000 - 49.670 MHz Business Band
49.670 - 50.000 MHz Portable Phones
50.000 - 54.000 MHz Amateur Radio
54.000 - 72.000 MHz VHF Television (Ch 2 - 4)

Television Channels are 6 MHz wide
Video is Fo + 1.25 MHz
Audio is Video + 4.5 MHz
Color Burst is Video + 3.5795 MHz

72.000 - 76.000 MHz Model Radio Control, Aviation and Industry

75.000 MHz is Aircraft Navigation Marker Beacon. This is near airports on the ILS (Instrument Landing System) course. Three lights are in the cockpit (Purple, Amber, White):

Purple - Outer Marker, Intercept Point, 4 to 7 Miles downrange
Two 400 Hz Dashes Per Second.
Amber - Middle Marker, Cat I Decision Height, 3500 Feet
downrange, 1300 Hz Dot and Dashes 95 times a minute.
White - Inner Marker, Cat II Decision Height, 3000 Feet
downrange, Six 3000 Hz Dots Per Seco nd.

76.000 - 88.000 MHz VHF Television (Ch 5 - 6)
88.000 - 108.000 MHz FM Commercial Advertising
108.000 - 112.000 MHz Aviation Navigation (Terminal VOR, ILS)

Currently 80 50 kHz Channels

112.000 - 117.950 MHz Aviation Navigation (VOR)

Currently 120 50 kHz Channels

118.000 - 136.000 MHz Aviation Communication

Currently 720 25 kHz Channels

121.500 Emergency, Emergency Locator Transmitters (ELT), "Guard"

122.700, 122.725, 122.800, 122.925,
122.975, 123.000, 123.050, 123.075 - UNICOM frequencies
122.900 - MULTICOM frequency
123.050, 123.075 - Heliports
122.750 - Air to Air Communications
122.975 - Air to Air Communications for high altitudes (airliners)
123.450 - Air to Air Communications (Trans-ocean get together, etc)
121.600 - CAP practice ELT search (under authorized missions only)
121.700, 121.800, 121.900 - Ground control frequencies.

136.000 - 138.000 MHz Weather Satellite, Government, Business
138.000 - 144.000 MHz Government (Military Bases)
144.000 - 148.000 MHz Amateur Radio
148.000 - 151.000 MHz Government, CAP, CD, MARS
151.000 - 156.250 MHz Business Band (Police, Fire)
156.250 - 157.425 MHz Marine Band

156.800 Marine Emergency "Guard"

157.450 - 160.200 MHz Business Band (Police, Fire)
160.200 - 161.600 MHz Railroad (161.600 is Marine Band)
161.605 - 161.795 MHz Business Band (Radio and V Remotes)
161.800 - 162.000 MHz Marine Band (Telephone)
162.000 - 174.000 MHz Government, Some Business (Radio and TV Remotes)

This is the common "Government Band", frequency spacing
is typically 12.5 kHz, other users are 5 kHz spacing

NOAA Weather is transmitted on:

162.400, 162.425, 162.450, 162.475, 162.500, 162.525, 162.550

174.000 - 216.000 MHz VHF Television (Ch 7 - 13)
216.000 - 220.000 MHz Maritime Mobile
220.000 - 222.000 MHz Land Mobile Radio
222.000 - 225.000 MHz Amateur Radio
225.000 - 329.000 MHz Government
329.000 - 335.000 MHz Government (Airport Glide Slope Navigation)
335.000 - 400.000 MHz Government

364.200 AICC (Airborne Intercept Control Common)

Many security low power control devices are located in the 225 - 400
band, both civilian and government.

243.000 Emergency Primary "Guard"
282.800 Emergency Secondary "Twenty-Eight Twenty-Eight"

400.000 - 420.000 MHz Government (Base Walkie/Talkies, Pagers, etc)
420.000 - 450.000 MHz Amateur Radio
450.000 - 470.000 MHz Business Band (Police, Fire, Radio and TV Remotes)
470.000 - 890.000 MHz UHF Television (Ch 14 - 83)

(All channels not used anymore, 70 - 83 Obsolete)

806.000 - 810.000 MHz Business Band (Conventional Systems, Mobile Input)
810.000 - 816.000 MHz Public Safety (Slow Growth Systems, Mobile Input)
816.000 - 821.000 MHz Business Band (Trunked Systems, Mobile Input)
821.000 - 825.000 MHz Land Mobile Satellite Service (Mobile Input)
825.000 - 835.000 MHz Cellular Telephone Non-Wireline (Mobile Input)
835.000 - 845.000 MHz Cellular Telephone Wireline (Mobile Input)
845.000 - 850.000 MHz Cellular Telephone (Expansion, Mobile Input)
850.000 - 851.000 MHz Unallocated
851.000 - 855.000 MHz Business Band (Conventional systems, Base Output)
855.000 - 861.000 MHz Public Safety (Slow Growth Systems, Base Output)
861.000 - 866.000 MHz Business Band (Trunked Systems, Base Output)
866.000 - 870.000 MHz Land Mobile Satellite Service (Satellite Output)
870.000 - 880.000 MHz Cellular Telephone Non-Wireline (Base Output)
880.000 - 890.000 MHz Cellular Telephone Wireline (Base Output)
890.000 - 895.000 MHz Cellular Telephone (Expansion, Base Output)
895.000 - 902.000 MHz Land Mobile Radio (Mobile Input)
902.000 - 928.000 MHz Free-For-All, No use near White Sands, and Denver
928.000 - 930.000 MHz Multi-Address Paging
930.000 - 931.000 MHz Advanced Technology Paging
931.000 - 932.000 MHz Common Carrier Paging
932.000 - 935.000 MHz Government/Private Shared
935.000 - 941.000 MHz Land Mobile Radio (Base Output)

941.000 - 944.000 MHz Government/Private Shared
944.000 - 947.000 MHz Broadcast Studio To Transmitter Link
947.000 - 952.000 MHz Broadcast Radio Services
952.000 - 960.000 MHz Microwave Relay and Paging
960.000 -1240.000 MHz TACAN/DME, RADAR/IFF, Government

TACAN has 126 X and 126 Y channels. Normally only X channels are used, unless crowded. TACAN frequencies are tied to VOR frequencies. (Note: there are more TACAN frequencies than VOR frequencies, some are blanked around the ATCRBS Beacon frequencies, and others are for expansion and military use). Pulse widths are 3.5 microseconds. Aircraft sounds like a Top Fuel Dragster or Funny Car when searching for lock-on.

Channel	VOR	Air	Ground
17X	108.00	1041	978
17Y	108.05	1041	1104
18X	108.10	1042	979
18Y	108.15	1042	1105
19X	108.20	1043	980
19Y	108.25	1043	1106
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58X	112.10	1082	1019
58Y	112.15	1082	1145
59X	112.20	1083	1020
59Y	112.25	1083	1146
. . .		(Unused to protect Beacon)	
70X	112.30	1094	1157

70Y 112.35 1094 1031 (Unused to protect Beacon)

126X 117.90 1150 1213
126Y 117.95 1150 1087 (Last VOR pairing)

29Y and 92Y Favorites for Military Air Refueling (Air-Air)
Check the heavens if active. All Air-Air pairs are 63 Y apart.

29Y N/A 1053 1116
92Y N/A 1116 1053

Air Traffic Control Radar Beacon System (ATCRBS - "At Crabs",
Secondary Radar - to the British)

1030 MHz Ground Interrogations to Transponder
1090 MHz Transponder Replies to Ground

There are currently five interrogation modes in use:

Mode 1, 2 pulses spaced 3 microseconds [Military]
Mode 2, 2 pulses spaced 5 microseconds [Military]
Mode 3/A, 2 pulses spaced 8 microseconds [Military/Civilian]
Mode 4, encrypted, IFF [Military]
Mode C, 2 pulses spaced 21 microseconds [Military/Civilian]

A third pulse is also included in all modes (except 4) at
2 microseconds from the first. This is the sidelobe pulse.
if it's within @6 dB of the first pulse (or greater) the
transponder doesn't reply (as it has detected an antenna

sidelobe). Pulse widths are .8 microseconds.

The reply is two framing pulses spaced 20.3 microseconds apart, with 13 code pulses (0000 - 7777 Octal) and an X pulse at the center which is not used anymore). A fourth pulse (called SPI pulse (Special Position Identifier) is used to identify your position when asked by a controller to "Squawk Ident", it is 4.35 microseconds after the last framing pulse and lasts for 20 seconds (about 2 scans of a long range radar). Pulse widths are .45 microseconds.

1575.42 MHz is the Navstar Global Positioning System (GPS) frequency L1, and 1227.6 MHz is L2.

1240.000 - 1300.000 MHz Amateur Radio, Government

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