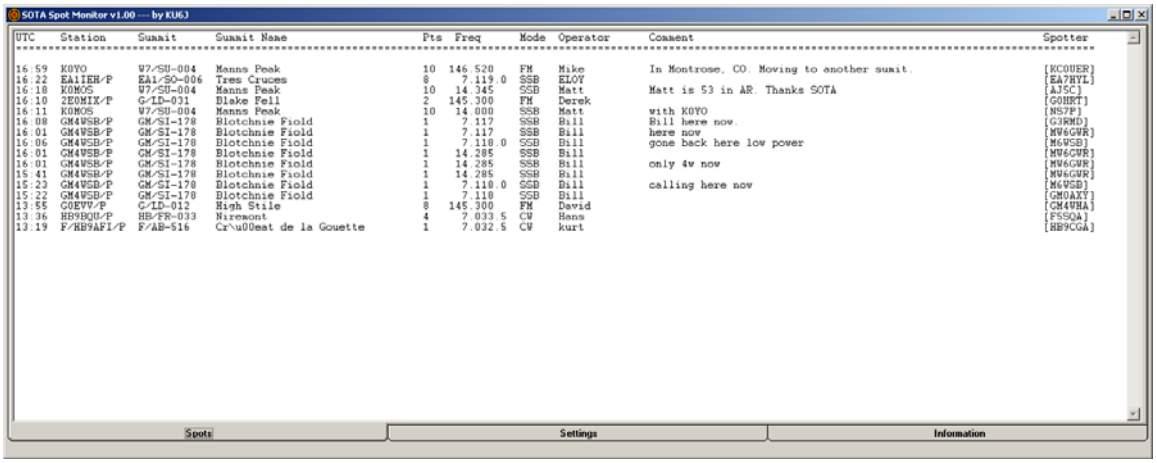
SOTA Spot Monitor

By Eric, KU6J

Installation and User Guide



Rev A – May 30, 2012

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Warranty, Support and Terms of Use

The Software is provided "as is" without warranty of any kind, either express or implied, including without limitation any implied warranties of condition, uninterrupted use, merchantability, fitness for a particular purpose, or non-infringement.

In his sole discretion, the author (KU6J) may or may not elect to provide support for the software in the future. If you wish to ask a question, make a bug report or request a new feature you may do so but KU6J may or may not choose to address it or even reply. **IF THIS WARRANTY AND THE TERMS OF USE ARE NOT ACCEPTABLE TO YOU THEN DO NOT USE THIS SOFTWARE.**

Introduction

SOTA Spot Monitor is a MS Windows application for monitoring and displaying spots of Summits On The Air (SOTA) participants. Fully configurable filters allow the spot display and audio alerts to be tailored to your preferences. The spots are retrieved from the SOTAWatch feed on Twitter.com, so the application can poll for new spots at a high rate without the SOTA system servers incurring any additional loading.

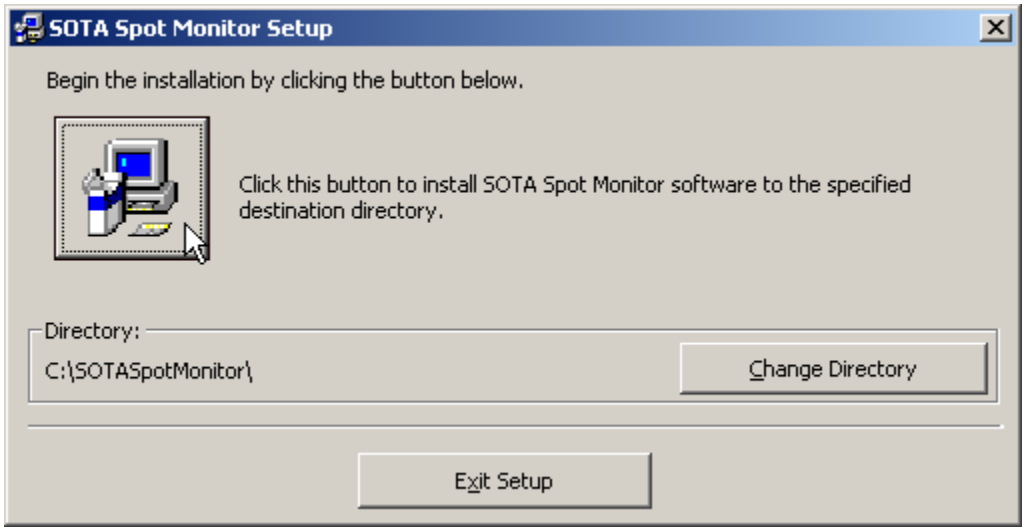
SOTA Spot Monitor is compatible with Windows 7, Windows Vista, Windows XP and Windows Server.

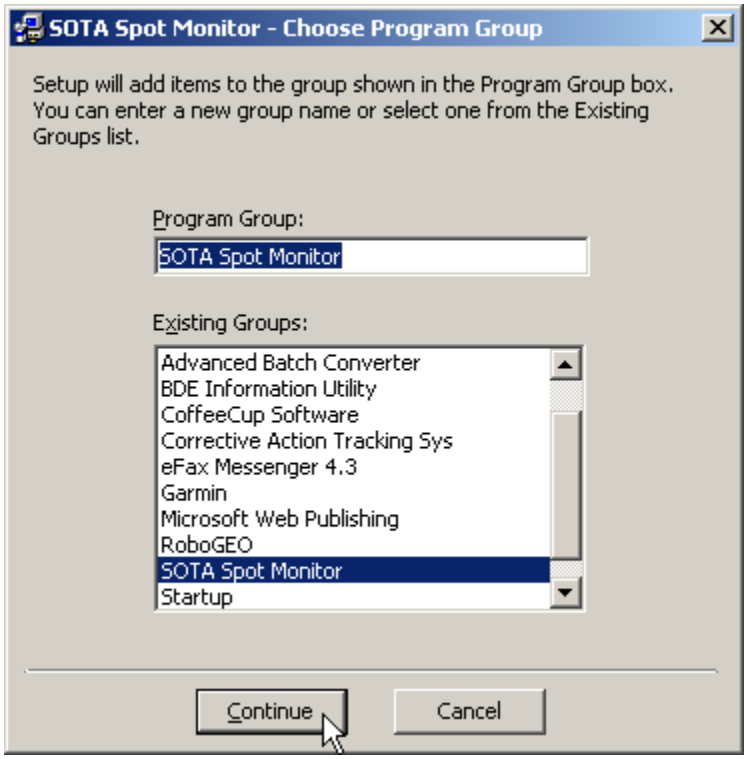
Installation

IMPORTANT: When installing the software, either accept the default destination directory of C:\SOTASpotMonitor or specify a different destination directory *OUTSIDE OF* the Windows\Program Files tree (or similar variant for your operating system). The software may not function properly if you install it inside the Windows\Program Files tree.

Unzip the setup files and copy them to any folder on your computer. Run the Setup.exe program and follow the prompts as shown below:

SOTA Spot Monitor Setup
Welcome to the SOTA Spot Monitor installation program.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any applications you may be running.
OK
Exit Setup


SOTA Spot Monitor Setup
Begin the installation by clicking the button below.
Click this button to install SOTA Spot Monitor software to the specified destination directory.
Directory:
C:\SOTASpotMonitor\
Change Directory
Exit Setup


SOTA Spot Monitor - Choose Program Group
Setup will add items to the group shown in the Program Group box.
You can enter a new group name or select one from the Existing Groups list.
Program Group:
SOTA Spot Monitor
Existing Groups:
Advanced Batch Converter
BDE Information Utility
CoffeeCup Software
Corrective Action Tracking Sys
eFax Messenger 4.3
Garmin
Microsoft Web Publishing
RoboGEO
SOTA Spot Monitor
Startup
Continue
Cancel

SOTA Spot Monitor Setup
SOTA Spot Monitor Setup was completed successfully.
OK

Operation

Run SOTA Spot Monitor (SOTASpotMonitor.exe). It will immediately retrieve approximately 15 of the most recent spots and display them on the Spots tab. The spots are listed with the most recent spot at the top. The program automatically checks for new spots every few seconds and any spots found are retrieved and placed at the top of the list.

Double-clicking on any summit reference (e.g., W6/SN-001) within the spot display will cause your default web browser to show the summit's information page from sotawatch.org. Double-clicking on any call sign will show the corresponding record in QRZ.com.

Settings Tab

The settings tab enables you to define filters and alerts, make adjustments to general settings such as how often the application polls for new spots, and to enable optional spot logging.

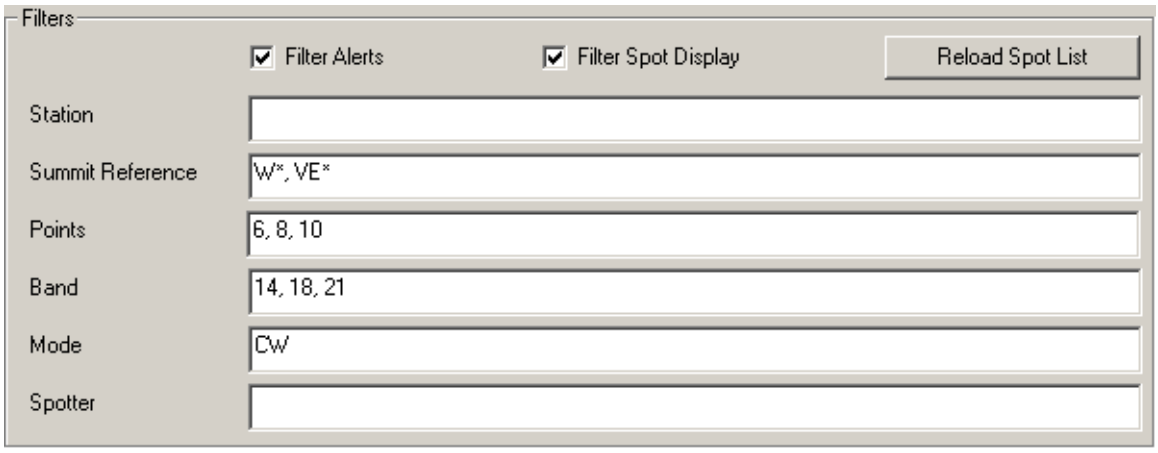
Filters

Multiple text boxes are provided for entering filters to process a variety of spot attributes. For a spot to pass through the filter, it must match criteria in *all* of the text boxes where criteria have been specified (logical AND).

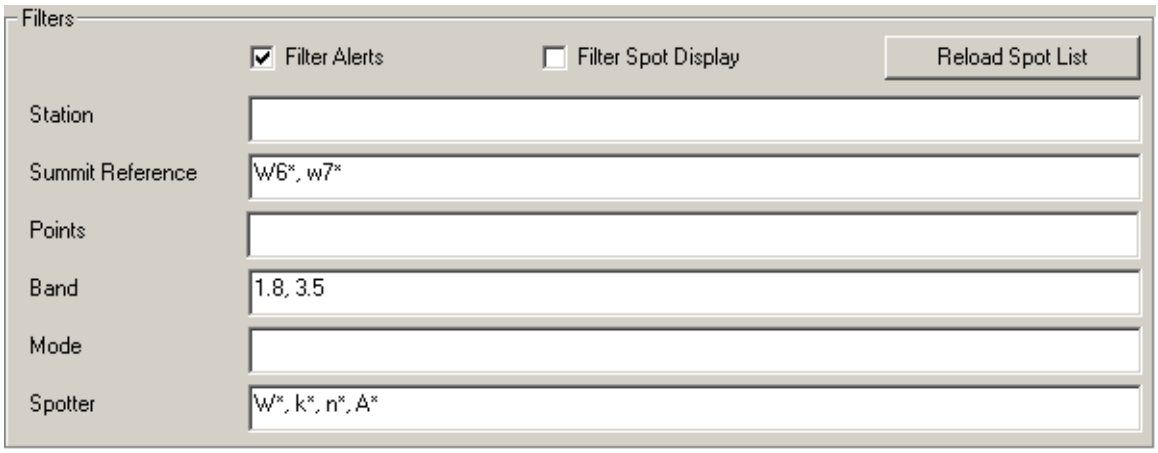
Within each text box, a single value may be entered or multiple criteria may be specified in a comma-separated list. If the spot meets *any* of the criteria within a text box, it passes that aspect of the filter (logical OR).

The asterisk character serves as a wildcard that allows filtering on just the first few characters of an attribute (e.g., "W*" to filter Summit References to those in the USA). The wildcard may be used anywhere that a parameter may be entered. For example, this entry for Summit References would filter spots to only those for summits in the USA, Switzerland, France or Canada: "W*, HB*, F*, VE*".

The example shown in the screen shot below makes use of multiple filters, and filters both the audio alerts and the spot display. The filter only passes spots of summits in the U.S. or Canada, on 20, 17 or 15 meter CW, that are worth 6 points or more:



This next example filters only the audio alerts (the alert will only be heard for matching spots), but the spot display is not filtered so it will show all spots from around the world. The filter only triggers audio alerts for summits in the U.S. W6 and W7 associations, on 160 or 80 meters, that were spotted by U.S. operators:



Note the following regarding filters:

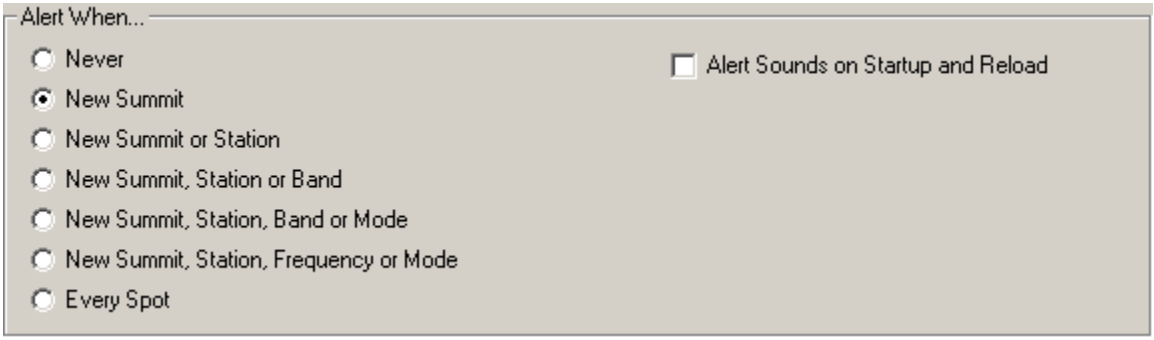
- The filter criteria you enter is case-insensitive (e.g., “W7” and “w7” are equivalent).
- White space between comma-separated values is ignored, and the order of the values does not matter. For example, these two filters are equivalent: “W*,k*,n*” or “k*, W*,n*”.

- Filters for Station and Spotter operate on call signs with portable designators ignored. For example, the call signs W1AW, F/W1AW/P, HB/W1AW and W1AW/3 and will all be filtered as if they were W1AW.
- Refer to Appendix A for a complete listing of available bands.
- Filters go into effect beginning with the *next* spot received, and are not applied to the list of spots already received. If you want to apply the filters immediately to a freshly loaded set of spots, click the Reload Spot List button or close the application and run it again.

Audio Alerts

Audio alerts use .WAV audio files. Several .WAV files were installed with the application, but you may use any .WAV file regardless of where it is located on your computer. Click the button to the right of the Alert Sound box to select your preferred audio file. Files specified without paths are assumed to exist in the same folder as the SOTA Spot Monitor application. The Play button may be used to test the audio file.

In addition to the optional filters described above, the Alert When settings are used to limit when audio alerts are played:



The meaning of the Never and Every Spot options are obvious. The other options are best understood with the help of a sequence of example spots shown in the following table:

UTC	Station	Summit	Summit Name	Pts	Freq	Mode
20:09	KT5X	W5N/SE-015	Peralta Ridge	8	14.061	CW
20:00	KT5X	W5N/SE-015	Peralta Ridge	8	14.061	CW
19:41	WS0TA	W5N/SE-015	Peralta Ridge	8	14.061	CW
19:37	WS0TA	W5N/SE-015	Peralta Ridge	8	14.061	CW
19:35	WS0TA	W5N/SE-015	Peralta Ridge	8	14.061	CW
19:34	WS0TA	W5N/SE-015	Peralta Ridge	8	14.061	CW
19:09	HB9TNF/P	HB/SG-030	Gonzen	6	14.285	SSB
19:07	W4/SM0HPL	W4V/SH-002	Stony Man	10	14.061	CW
19:07	W4/SM0HPL	W4V/SH-002	Stony Man	10	14.061.9	CW

19:07	W4/SM0HPL	W4V/SH-002	Stony Man	10	14.060.8	CW
17:55	WS0TA	W5N/SE-012	Los Griegos	10	10.108	CW
17:51	WS0TA	W5N/SE-012	Los Griegos	10	10.108	CW
17:51	WS0TA	W5N/SE-012	Los Griegos	10	14.061	CW
17:47	WS0TA	W5N/SE-012	Los Griegos	10	14.061	CW
17:46	WS0TA	W5N/SE-012	Los Griegos	10	14.061	CW

New Summit – If a new summit is spotted, the alert is sounded. “New” means since the application began running for the current session, not since the first time it was ever executed. For the spots listed above the alert will sound three times, once for the first spot of each of these three summits: W5N/SE-002, HB/SG-030 and W5N/SE-015. All subsequent spots for those summits are ignored.

New Summit or Station – The alert would sound for the same spots as the New Summit setting, and also sound for the first spot of KT5X (new station) on the same W5N/SE-015 summit.

New Summit, Station or Band – The alert would sound for the same four spots as the New Summit or Station setting, and also sound for the first spot of WS0TA on 10.108 MHz (30m is a new band for WS0TA on W5N/SE-012).

New Summit, Station, Band or Mode – For the spots above, the alert would sound for the same spots as the New Summit, Station or Band setting. Had any of the stations changed modes, then additional alerts would be sounded the first time the station used each combination of band and mode.

New Summit, Station, Frequency or Mode – This setting is similar to the prior setting but uses frequency changes instead of band changes. For the spots above, the alert would sound for the same spots as the prior setting and also for each of the two subsequent spots of W4/SM0HPL since each one was at a new frequency within the 20m band.

Alert Sounds on Startup and Reload – If this box is unchecked, alert sounds won’t be played when the program first starts up or when the Reload Spot Button is clicked.

General Settings

Seconds Between Checks for New Spots – This determines how often the application polls (checks) Twitter.com for new spots. The value must be between 3 and 60 seconds (inclusive). Note that if a short interval of just a few seconds is specified, Twitter may “throttle back” it’s response to these frequent polls and return no data for some Twitter-determined amount of time. Setting a reasonable value of 5-10 seconds or more will likely avoid this.

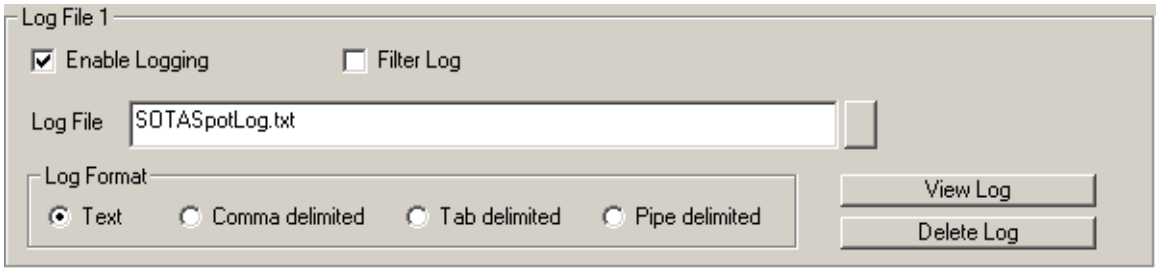
Maximum Spots Displayed – This determines the maximum number of spots that are displayed. The Alert When settings are also evaluated only against this

maximum number of spots, but spot logging is not affected. Enter 0 for no maximum. Note that entering 0 (no maximum) may cause the computer to slow down or even cause the application to crash if it runs continuously for weeks or months and accumulates many spots.

If Minimized, Show Main Window on Alert – Checking this box will cause the SOTA Spot Monitor window to restore itself from a minimized state if a new spot passes through the filters and meets the alert criteria. This capability can be used as a visual alert.

Spot Logging

Spots may optionally be logged to disk files and used for a variety of purposes. For example, if you are going on vacation and plan to activate summits during that time, you may wish to let SOTA Spot Monitor run while you are away and log any spots of you for viewing later. Two different log files may be enabled, disabled or configured independently.



The following settings apply:

Enable Logging – Enables or disable logging to this file.

Filter Log – If unchecked, then all spots will be written to the log. If checked, any filters specified will be used to limit the spots that are written to the log. For example, if Filter Log is checked and you have entered your call sign into the Station filter, only spots of you will be logged, regardless of whether Filter Alerts and Filter Spot Display are checked or unchecked.

Log File – The file that the spots will be logged to. If the Log File is specified without a path, it will be created in the same folder as the SOTA Spot Monitor application. The button to the right of the text box may be used to select or specify a different file.

Log Format – The Text format causes the log to appear in the same format as the spot window, but with the local date and time prepended to each line for easier reference later. The other formats are delimited formats suitable for importing into a spreadsheet or database (the pipe is the “|” character). If a delimited format is specified, spots will first have any occurrences of the

delimiting character replaced by a hyphen (“-“) prior to being written to the log. An additional column containing Twitter’s tweet ID for the spot is also added to log files using a delimited format.

The View Log and Delete Log buttons are provided for convenience. If the log is deleted, a new one will be created automatically when the next spot is received.

Miscellaneous

The Miscellaneous area contains buttons for viewing this User Guide, and for viewing the configuration file (SOTAWebsites.INI) that stores website information for the On The Web list on the Information tab. See this section below for more information on the SOTAWebsites.INI file: Adding, Editing or Deleting Websites Listed on the Information Tab.

Information Tab

The Information tab contains a list of various SOTA-related web sites. Double-click on any of them (or select one and click the View Website button) to cause your default web browser to navigate to the site. The “My” links such as “My Chaser Log” will take you to the sotadata.org website where you will be prompted to login (if not already logged in) before viewing or entering your information.

The Information Tab also includes a button to access this User Guide, along with version information and a photo of the author working CW on top of Dixie Mountain W6/CN-006 at 8,327 feet.

Configuring Customized Behavior

Custom Audio Alerts

Custom audio alerts for particular activating stations may be configured by copying a .WAV file to the SOTA Spot Monitor application’s folder that has the same filename as the activating station’s call sign. For example, if a K1ABC.WAV file exists, it will be used as the audio alert for spots of K1ABC. If the station is spotted with portable designators, those designators will be ignored and the custom alert will still play.

Custom audio alerts may also be created for particular summits, regions or associations. To create a custom alert for a summit, copy a .WAV file to the application’s folder with summit reference as it’s name, but with the “/” character replaced by a hyphen (e.g., W6-SN-001.WAV for summit W6/SN-001, or EA1-SO-006.AV for summit EA1/SO-006).

To create a custom audio alert for any summit in a particular region, use a .WAV filename like these: W6-SN.WAV, EA1-SO.WAV, GM-SI.WAV, etc. To create a custom audio alert for any summit within an association, use filenames like these: W6.WAV, W.WAV (for the entire U.S.), EA1.WAV, G.WAV, etc.

Only one audio alert will be played for a set of incoming spots. The precedence (priority) is as follows:

- Spotted Station (call sign)
- Spotted Summit, Region or Association (in that order)
- For all other spots, the Sound File that you specified on the Settings tab

Adding, Editing or Deleting Websites Listed on the Information Tab

The list of websites is loaded from the SOTAWebsites.INI file. This file may be modified using any text editor, such as Windows Notepad. Clicking the View Websites File button on the Settings tab opens the file for viewing or editing.

To add a new website, add a pair of new lines similar to these in either the [General] or [MySites] section (depending on where you wish for the site to appear in the list):

Title18=Some Other Site Title
URL18=http://www.someplace.com

The numbers immediately after “Title” and “URL” (18 in this example) must match, be unique within the section, and be 100 or less. The list items within each section will be ordered based on these numbers and not based on the order that the lines appear in the file. Each title must also be unique within a section.

To delete a website, either remove both pairs of lines or add a semi-colon (the INI file comment character) to the beginning of each line like this:

;Title4=Submit Activator Log Entry
;URL4=http://www.sotadata.org.uk/AddActivation.aspx

To see the effect of your changes, close and restart the SOTA Spot Monitor application.

Appendix A – List of Bands for Band Filter

Frequency Range (MHz)	Band
0 – 0.999	.135
1-2 (160m)	1.8
3-4 (80m)	3.5
5-6 (60m)	5
7-8 (40m)	7
10-11 (30m)	10
14-15 (20m)	14
18-19 (17m)	18
21-22 (15m)	21
24-25 (12m)	24
28-30 (10m)	28
50-55 (6m)	50
70-71 (4m)	70
144-148 (2m)	144
219-225 (1.25m)	220
420-450 (70 cm)	420
902-928	902
1240-1300	1240
2300-2350	2300
3300-3500	3300
5650-5925	5700
10000-10500	10000
24000-24250	24000
47000-47200	47000
75500-81000	76000
119980-120020	120000
122000-123000	122000
134000-136000	134000
136000-141000	136000
142000-149000	142000
241000-250000	250000
Other	Integer part of the frequency in MHz