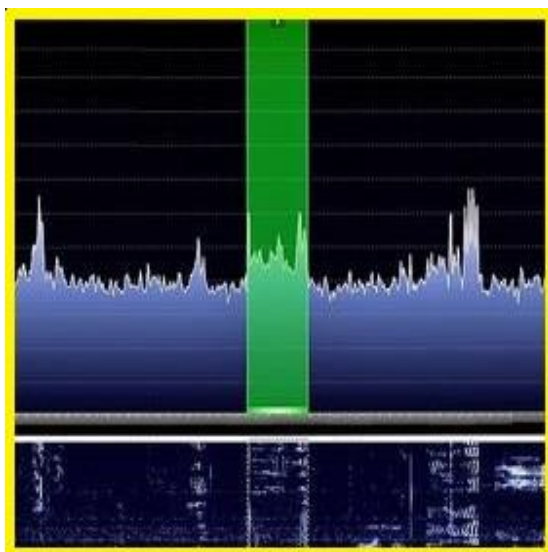


# SDRAutoCenter

(Version 2.2.1 -- Revised: May 3, 2019)



# Users Guide

*Ray Andrews, K9DUR*

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## INTRODUCTION

**SDRAutoCenter** is a small utility for use with FLEX-6000 series radios running **SmartSDR™**. Its purpose is to automatically adjust the center frequency of the panadapter as you tune across the band.

**SDRAutoCenter** communicates directly with the radio over the local network using the **FlexLib™** API.

## SYSTEM REQUIREMENTS

**SDRAutoCenter** requires Windows Vista or later. It is a 32-bit application, and therefore will run on a computer with either a 32-bit or a 64-bit processor.

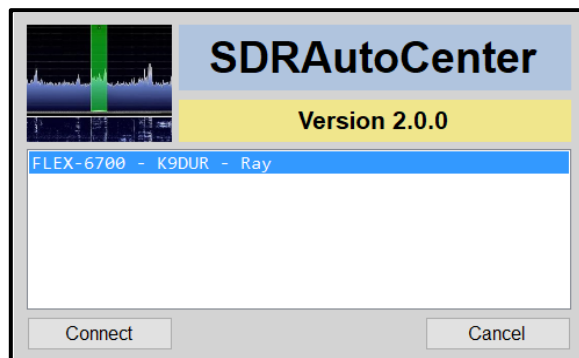
**Adobe Acrobat Reader®** or a similar program capable of displaying .pdf files is required to view the program documentation.

## INSTALLATION

Run the installation package file, **SDRAutoCenterSetup.exe**. This will install **SDRAutoCenter.exe** and all required supporting files on your computer. The installer will suggest a default location for the program file. You may change the location or leave it at the default, it does not matter.

## PROGRAM OPERATION

When the program starts, the window shown in Figure 1 will be displayed. This window will contain a list of available FLEX-6000 series radios for you to choose from. Connect to the desired radio by double-clicking on it in the list or by clicking on it and then clicking on the "Connect" button. If you click on the "Cancel" button, the program will close.



**Figure 1 -- Radio Connection Window**

If you have *Autoconnect* selected, the Radio Connection Window will not be displayed and the program will automatically connect to the first radio it discovers. If no radio is found after 15 seconds, the program will close with an error message.

## MAIN DISPLAY

After you have connected to the radio, the main window, shown in Figure 2, will be displayed.



Clicking on the window will turn the centering action on or off. If centering is on, the text will be white. If off, the text will be gray.

Right-clicking on the window will display a pop-up menu which will allow you to change the program settings or exit the program.

## OPERATING MODES

**SDRAutoCenter** has two operating modes: *Centered* & *Panadapter Edge*.

- In the *Centered* mode, the panadapter center frequency will be continuously adjusted as you tune across the band to keep the active slice centered in the panadapter.
  - *NOTE: the centering action is not smooth. As you change frequency, the panadapter center frequency will “jump” every few tenths of a second to catch up with the slice frequency. Unfortunately, this is caused by the inherent delays involved in controlling the radio via the API and cannot be avoided with an external program.*
- In the *Panadapter Edge* mode, the panadapter center frequency is not adjusted until the active slice nears the edge of the panadapter, at which time the panadapter center frequency will be adjusted to move the active slice to near the opposite edge of the panadapter.

## SETTING THE DISPLAY POSITION

To position the display on the screen, place the cursor over the display, hold the *Ctrl* key down and then press the left mouse button down. Drag the display to the desired position and release the mouse button followed by the *Ctrl* key.

If you drag the display to a position within the **SmartSDR** window, then the **SDRAutoCenter** display will be anchored to the **SmartSDR** display position. That is, if you move or re-size the **SmartSDR** window, the **SDRAutoCenter** display will move accordingly, always keeping the same position relative to the **SmartSDR** window.

If you drag the display to any position that is not totally inside the borders of the **SmartSDR** window, then the **SDRAutoCenter** display will be fixed at that position on the screen.

The colors of the **SDRAutoCenter** main window are selected so that it can be positioned over top of the **SmartSDR** window and it will look like a part of **SmartSDR**. For an example, see Figure 3 below.



Figure 3 - SDRAutoCenter Positioned on SmartSDR

## CLOSING THE PROGRAM

To close the program, you can either:

- Right-click on the main display and click on "Close SDRAutoCenter" on the pop-up menu, or
- Right-click on the system tray icon & click on "Close SDRAutoCenter".

## POP-UP MENU

Right-clicking on the **SDRAutoCenter** window will display a menu with the following items:

- **Always On Top** -- Toggles whether the main window will always be displayed on top of all other applications. If off, the main window will be displayed on top of the **SmartSDR** window.
- **Autoconnect** -- Toggles whether the program will automatically connect to the first radio found. Also, the program will continue running when the connection to the radio is lost & will automatically re-connect to the radio when the radio is found again.
- **Center RX Filter** -- Toggles the option to either center the panadapter on the slice VFO frequency or on the slice RX filter. If centered on the RX filter, there are more calls to the API required, which might increase the jerkiness of the panadapter movement as you tune.
- **Panadapter Edge** – Toggles the operating mode.
  - If not checked, the program will be in *Centered* mode.
  - If checked, the program will be in *Panadapter Edge* mode.
- **Display Documentation** -- Displays the program documentation (this document).
- **About SDRAutoCenter** -- Displays basic information about the program.
- **Close SDRAutoCenter** -- Closes the program.

## SOFTWARE LICENSE AGREEMENT

The installation and use of **SDRAutoCenter** indicates your agreement to adhere to the terms listed below:

Software written by Ray Andrews, K9DUR, for amateur radio use may be freely copied by any licensed amateur radio operator for their own personal use.

Other than the cost of the distribution media, no fee may be charged for the distribution of the software to any other party or parties.

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No warranty, expressed or implied, is conveyed for the use of the software or for the installation of the software on any computer.

## ABOUT THE AUTHOR

**SDRAutoCenter** was written by Ray Andrews, K9DUR.

Ray holds an Amateur Extra class license and was first licensed in April 1960. He currently resides in West Terre Haute, IN, and is a retired electronic design engineer and software developer. He operates a small custom software consulting business just to keep him out of mischief between camping trips.

For more information, visit Ray's web page:

<http://k9dur.info>

## REVISION HISTORY

v2.2.1 – May 3, 2019 – Changes to About/Donate screens.

v2.2.0 – Dec 2, 2018 – Changed algorithm used in *Panadapter Edge* mode to smooth out scrolling. Changed to use new *AboutDonate* dll.

v2.1.0 – Aug 18, 2018 – Added ability to check for updates. Fixed bugs in *Panadapter Edge* mode.

v2.0.0 – Jun 3, 2018 – Added *Panadapter Edge* mode. Changed program logo & icon.

v1.1.0 – May 2, 2018 – Added option to center RX filter in panadapter. Added pop-up menu to main window.

v1.0.0 – May 1, 2018 -- Initial Release.