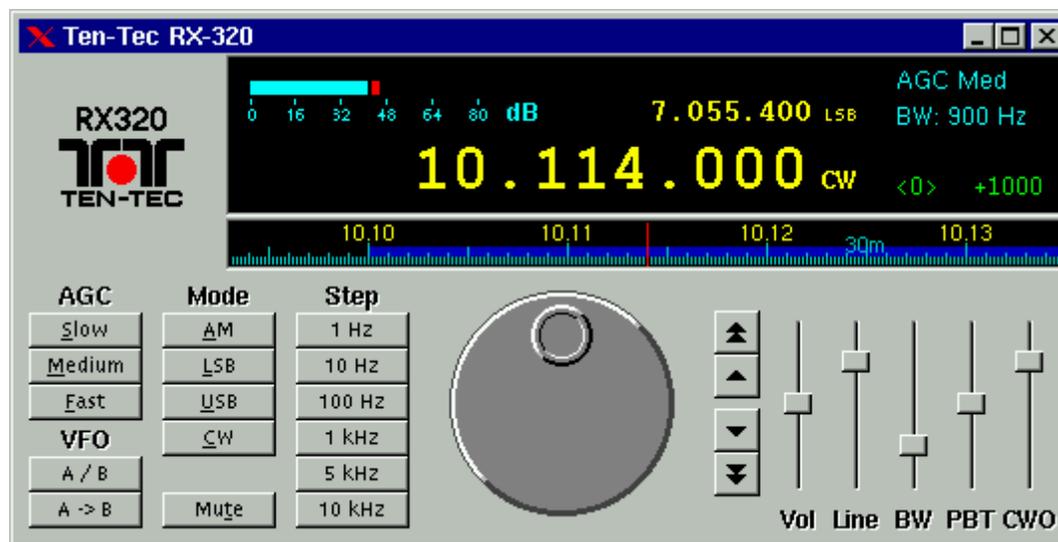


Unix Control Software for the Ten-Tec RX320 Receiver

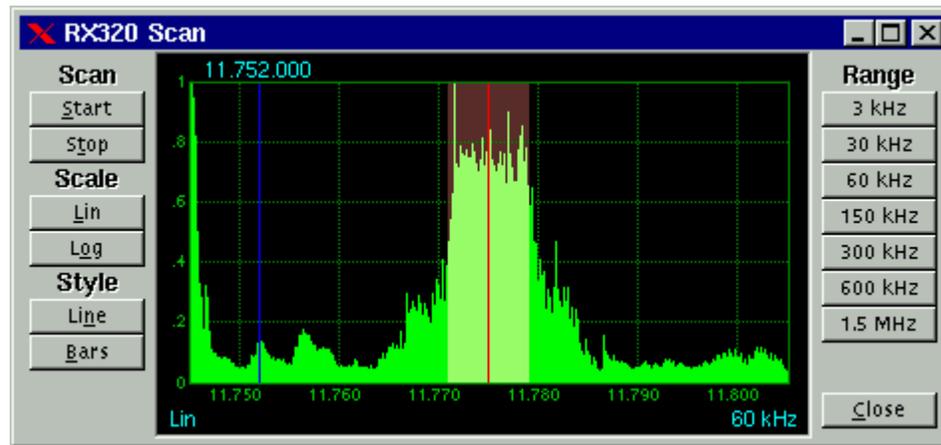
This is the beta version 0.6.1 of rx320, a Unix/Linux control program for the Ten-Tec RX320 receiver with a graphical user interface.



Features

Currently the program is capable of communicating with the receiver using one of the available serial ports. There is also support for managing frequency database files: the program can read and save files in Clifton Turner's *.320 format, and the receiver can be tuned to selected stations. New stations can be entered and existing ones can be edited.

The program can also scan a frequency band and display a graphical view of station activity.



The program saves the whole receiver state on exit, including the two VFO frequencies, and restores it on startup. The receiver is also reinitialized every time a power-on is detected.

Downloading and installing the software

The latest version (0.6.1) of the control program can be downloaded from [here](#). You will need xclass version 0.8.3 or higher in order to compile and run the program. Xclass is available from [sourceforge](#), and the current version is [0.8.3](#).

Once downloaded, unpack the sources:

```
tar zxf rx320-0.6.1.tgz
```

then go to the just created directory with the sources and build the executable:

```
cd rx320-0.6.1
make
```

The executable is named rx320, if you are the superuser you can install it in an standard location with the command

```
make install
```

If you do not have root access, you can install instead the application locally in your home directory, by typing

```
make install_user
```

That will cause the executable to be copied to `$HOME/.xclass/bin` and the help files to `$HOME/.xclass/docs/rx320`. You should then to either add `$HOME/.xclass/bin` to your `$PATH` environment variable, or to copy the rx320 executable to a suitable directory.

Operation

To run the program, just type rx320 and the main window should appear. You'll probably have to select a serial port, below we explain how to do it and how to use the program.

Configuration:

The serial port device initially defaults to /dev/ttyS1, and if you're using another port you'll have to use the configuration dialog to enter the correct device name. Right click on the main window and a popup menu will appear, select "Configuration..." and in the dialog that appears enter the new device name. Make sure you have the correct permissions to access the serial port.

Mouse operation:

- **Tuning:** Use the mouse to turn the main tuning knob. Note that it does not work in the same way as in the Ten-Tec's Windows program, both rather more like a real knob: you click on the small hole and drag the mouse around in circles. If you have a wheel mouse and your X server is configured to support it, then you can use the wheel to tune up and down with the selected step, or ten times the step value if you hold Shift down. Keep in mind that for this to work the mouse pointer must be located somewhere over the main window.
- **Volume:** Use the slider labelled "Vol" to control the speaker output, or the "Line" to control the line output. Use the "Mute" button to mute both outputs, click it again to unmute.
- **Bandwidth:** Use the "BW" slider.
- **Passband Tuning:** Use the "PBT" slider. Each step of the slider shifts the passband up or down by 100 Hz, up to 1500 Hz in each direction.
- **CW offset:** Use the "CWO" slider.
- **Mode, AGC, Tuning Step:** use the corresponding push buttons in the front panel.
- **VFO control:** the program emulates a receiver with two VFOs. Each VFO holds not only the current tuning frequency, but also the current Mode, AGC, Tuning Step, Filter Bandwidth and Passband Tuning values. This is very handy to quickly switch between two stations back and forth. Use the "A/B" button to switch between the current and alternate VFO, the "A->B" saves the current settings into the alternate VFO.

Keyboard shortcuts:

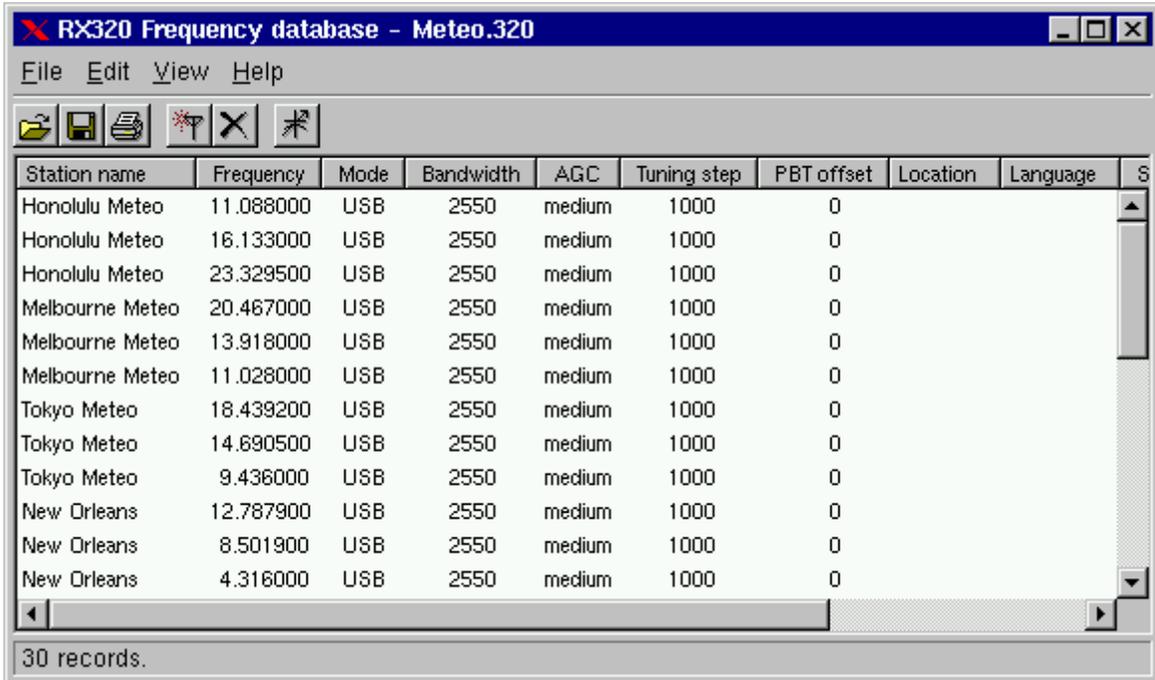
The program implements a large number of keyboard shortcuts to allow mouseless operation. The following keys are the most commonly used:

- Right and Left: tune up/down with the current tuning step
- PgUp and PgDn: tune up/down with ten times the current tuning step
- Up and Down: increase/decrease speaker volume
- Shift/Up and Shift/Down: increase/decrease line output volume
- F1: show the on-line help.

You will find a complete list in the help pages.

Frequency database access:

By Right-clicking on an empty space between buttons a popup menu will appear. Select the "Frequency database..." option to open a new frequency database window.



The screenshot shows a software window titled "RX320 Frequency database - Meteo.320". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu bar is a toolbar with icons for file operations and a search function. The main area contains a table with the following columns: Station name, Frequency, Mode, Bandwidth, AGC, Tuning step, PBT offset, Location, Language, and a small 'S' icon. The table lists 12 entries for various locations including Honolulu, Melbourne, Tokyo, and New Orleans. At the bottom of the window, a status bar indicates "30 records."

Station name	Frequency	Mode	Bandwidth	AGC	Tuning step	PBT offset	Location	Language	S
Honolulu Meteo	11.088000	USB	2550	medium	1000	0			
Honolulu Meteo	16.133000	USB	2550	medium	1000	0			
Honolulu Meteo	23.329500	USB	2550	medium	1000	0			
Melbourne Meteo	20.467000	USB	2550	medium	1000	0			
Melbourne Meteo	13.918000	USB	2550	medium	1000	0			
Melbourne Meteo	11.028000	USB	2550	medium	1000	0			
Tokyo Meteo	18.439200	USB	2550	medium	1000	0			
Tokyo Meteo	14.690500	USB	2550	medium	1000	0			
Tokyo Meteo	9.436000	USB	2550	medium	1000	0			
New Orleans	12.787900	USB	2550	medium	1000	0			
New Orleans	8.501900	USB	2550	medium	1000	0			
New Orleans	4.316000	USB	2550	medium	1000	0			

You can have any given number of database windows open simultaneously. To load a frequency file (*.320 or *.cdf) use the Open option from the File menu of the database window. Double-click on station names to tune the receiver into that station. Select "Edit/Add new station" to enter a new station into the database, "Edit/Change entry" lets you edit the currently selected database entry.