

MORE Project Introduction to CHIRP
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CHIRP is a downloadable, FREE, Open-Source tool for Programming your Amateur Radio. It supports a large number of manufacturers and models, and also provides a way to interface with multiple data sources and formats. Channel info doesn't have to be entered manually into the radio, and can be down/up-loaded for backup and sharing. <<https://chirp.danplanet.com/projects/chirp/wiki/Download>>

Some Amateur Radio manufacturers provide programming software, but these products are not free and may not be able to easily transfer data between radios from other companies. CHIRP provides a universal tool (compatible with hundreds of radios) for this purpose.

The **Generic Code Plug Methodology** involves the use of a Comma-Separated Value (CSV) file that can be produced manually in a spreadsheet, or downloaded from a radio where the programmed channels have already been stored. The CSV file stores tabular data in plain text, where each line of the file represents one data record. Each record consists of the same number of fields, and these are separated by commas in the CSV file. The CSV file can then be modified and uploaded into the same radio or uploaded into a different radio. All necessary information for the channels (including program number, send and receive frequency split, and tone, etc.) are stored in separate lines of the spreadsheet.

Popular databases where channel information can be found include:

RadioReference <<https://radioreference.com>> The largest database with over 224,000 identified frequencies, 7,100+ trunked radio systems, national, state, municipal and local utilities. Most are not enabled to transmit, but you can listen. Requires login, subscription enables access to additional data.

RepeaterBook <<https://repeaterbook.com>> Amateur Radio's most comprehensive, worldwide, FREE repeater directory. Now supporting GMRS. Donations are encouraged.

RFinder <<https://www.rfinder.net/websearch.html>> This Worldwide Repeater Directory is continually updated and includes many different modes of communications, such as IRLP, EcholnK, AllStar, DStar, MotoTRBO, and WinLink. 175 countries and growing! Requires subscription fee.

Building a Generic Codeplug: If you want to start with an empty CHIRP-compatible CSV file, the easiest way is to let CHIRP create one for you.

Here are the steps for creating an empty file, editing it in an external editor (such as Excel or OpenOffice Calc) and then opening it up in CHIRP:

- 1) Start CHIRP.
- 2) Go to *File > New* to create an empty CSV file.
- 3) Add a memory channel to the first row, by entering a common frequency (such as 146.520).
- 4) Go to *File > Export* to save the template file to something ending with a .csv extension.
- 5) Open the file in a spreadsheet or software application of your choice, make edits and additions and then save.
- 6) Re-open the file in the CHIRP software to validate that the format is still correct, by going to *File > Open* and choosing your file.
- 7 optional) Copy memories from that CHIRP tab into the tab for another radio and then upload.

Tips to Avoid Breaking the Formatting

CHIRP relies on the CSV file's formatting to be intact in order for it to read and understand the data inside of the file. Observe the following rules to ensure that CHIRP can continue to read the file:

- Maintain the header row in its original format, so that CHIRP knows which column corresponds to which value.
- You may reorder the columns as long as the header row matches.
- You may delete columns for which there are some defaults, and CHIRP will assume those defaults upon opening the file.
- You may place double quote marks (i.e. " not ' or '') around column values that contain spaces or commas.
- Field values must be in the original format, using one of the accepted values for the column type. For example, the duplex field may be either blank, a plus sign (+), a minus sign (-) or the word "split". The ToneMode field may be either blank, or "Tone", "TSQL", "DTCS", or "CROSS". If you're not sure, use CHIRP to create a file with a given value and observe what it puts into the CSV file as a result.

Getting the Data Back Into a Radio

CSV files are generic, radio-independent text files. This means that you cannot upload them directly into a radio. In order to get the information into your device, you must copy memories into an image for that device:

- 1) Open your CSV file using *File > Open* and choose your file.
- 2) Open a *.img* file of your radio, or download one from it using *Radio > Download From Radio*.
- 3) Make sure that the resulting tab at the top says something like "Yaesu FT-7800" or "Icom IC-880" to indicate that you're operating on a radio-specific driver.
- 4) Select the tab containing your CSV file at the top, and select memories from the CSV file you want to copy over. You can select multiple rows by holding the Shift or Control keys while making your selections.
- 5) After selecting one or more memories, copy them to the clipboard by going to *Edit > Copy*.
- 6) Next, select the tab corresponding to your actual radio, at the top.
- 7) For clone-mode radios, upload the changes back to your device using: *Radio > Upload To Radio*. If you are using a live-mode radio, wait until all of the changes finish synchronizing back to the device by watching the status bar in the lower right corner of the main window.

We Are All In This Together!

Save your spreadsheets and let other Hams know what you have found.

FIND, STORE & SHARE DATA!

Look for other information, such as different radios, modes, and operations.

Find an Elmer to help you!

Contact the MORE Project and Radio Clubs for local CHIRP files.

HAVE FUN!