

Using CHIRP or Other Software

Programming Your Radio

By Larry – N7RGW

23 March 2019

chirp

chirp, chirp

Where to begin

- After receiving a new radio, there is a need to put your favorites frequencies into memory.
- You open up the manual and begin to read.
 - New acronyms that are unexplained
 - Cryptic method of how to store memories
 - Some manuals are written in “Chinglish”
 - You get one frequency in memory and then realize that you have 100 more to go.
- There has to be a better way!

What is needed

We can program the memory by using a computer

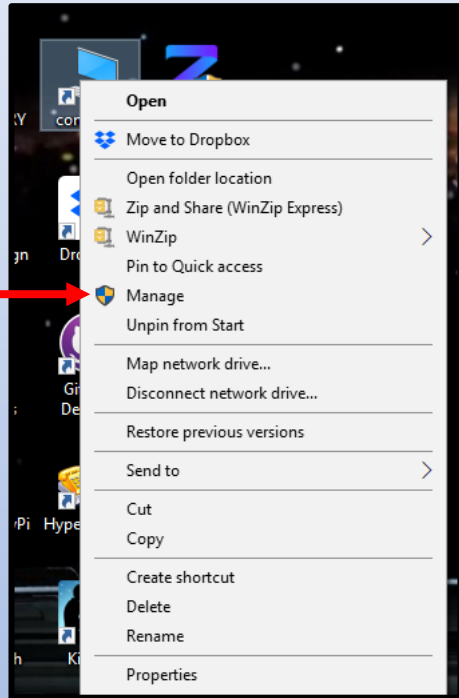
- You need the following:
 - A radio
 - A computer
 - A list of frequencies:
 1. <http://www.idahoerc.org/private/index.html?CFID=3199678&CFTOKEN=80242340>
 2. Login
 3. Select Resources
 4. Select Frequency Database
 - A cable – potential problem!
 - Software – compatible with your computer and radio

Problem discovered: (cable)

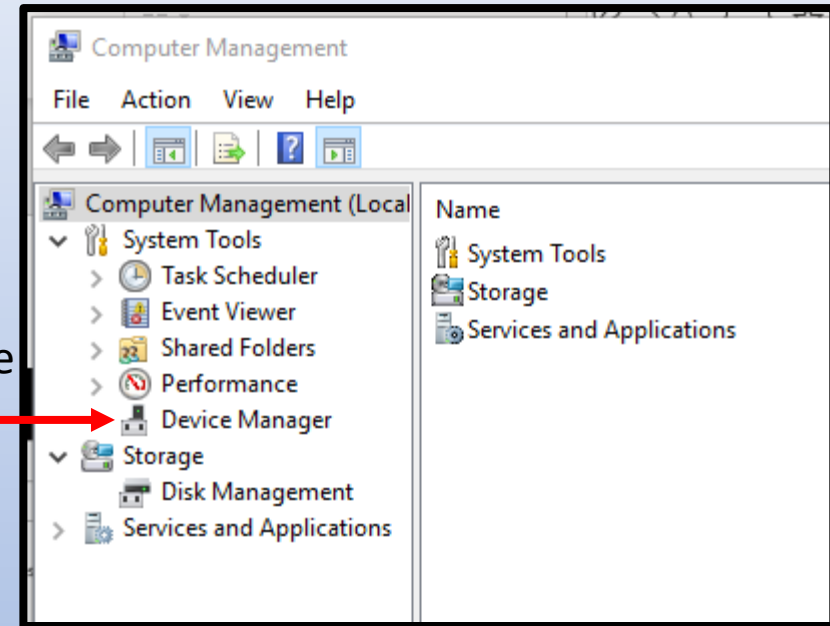
- Prolific IC chip
 - A company named “Prolific” created a wonderful chip interface that would work between the USB port and translate the signal to the appropriate use.
 - A driver needed to be added to the operating system.
- Then someone started to clone the IC chip.
 - As a result, many cables will not work with the Prolific Driver, which is needed for proper operation.
 - The cable is identified by the computer as a “Prolific” cable.
 - Even cables purchased from reputable dealers may have problems.
- Search the web and locate and try different drivers in order to find the appropriate one.

Check for USB Port to Locate Port

1) Right Click on computer icon

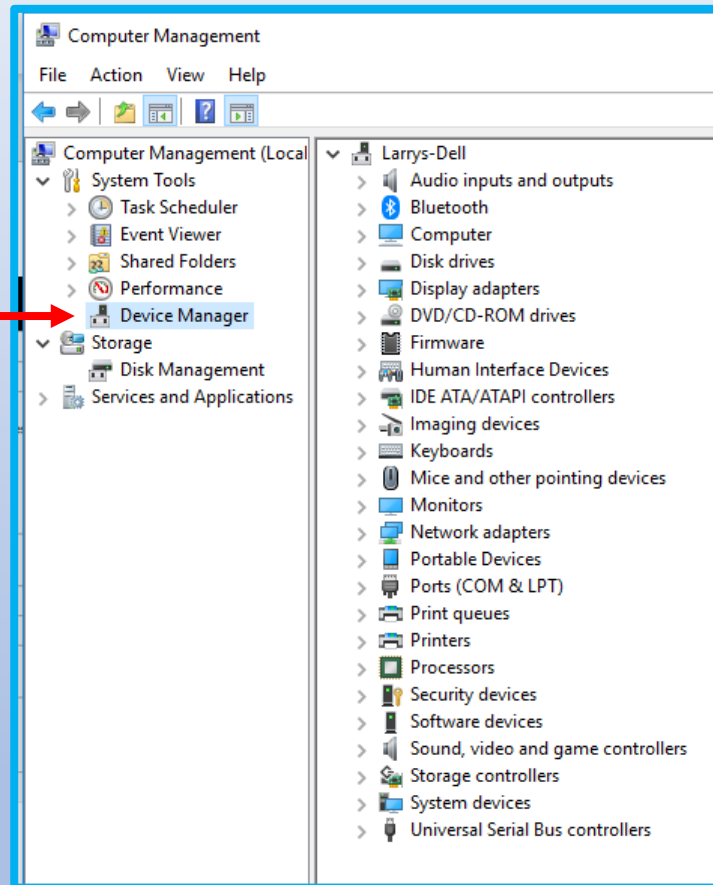


2) Select Device Manager

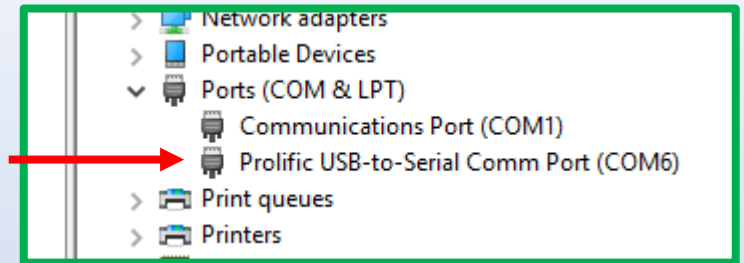


Checking USB port

3) Select Device Manager

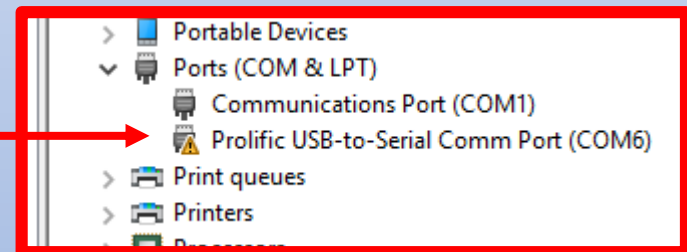


4) COM6 is location of the Prolific Cable



This com port location will be needed for the software. This port as shown is working and the driver is installed properly.

This port is not working properly



I have to plug in my USB cable and reboot my computer in order for the "Prolific" cable to work.

Obtaining Proper Equipment



Most expensive, usually: Visit the radio manufacture for software and cable.
(usually about \$50)



Search Internet for programming cable
such as www.EBAY.com.



Search Internet for programming
software.




Lots of choices – We will use CHIRP

Why Use Chirp Software?

- It is Free – (You can make donations)
- Large number of Radios available
- Updated usually 2 to 3 times or more a month as needed
- https://trac.chirp.danplanet.com/chirp_daily/


Download Latest Software For Your Computer

[<<< Back to the main CHIRP website...](#)



UV-5X3

144/220/430 MHz Tribander
updated scanning • remote commands • synchronized display
CHIRP SUPPORTED < BTECH < UV-5X3



Click for more information

[BaoFengTech](#) supports the CHIRP project. If you are in the market for radios or accessories, please consider giving them your business!

| Name | Last modified | Size | Description |
|----------------------------------|-------------------|------|-------------|
| Parent Directory | | - | |
| LATEST/ | 22-Feb-2019 00:08 | - | |
| MacOS/ | 17-Feb-2012 14:07 | - | |
| daily-20170108/ | 08-Jan-2017 00:15 | - | |
| daily-20170111/ | 11-Jan-2017 00:15 | - | |
| daily-20170115/ | 15-Jan-2017 00:15 | - | |



UV-5X3

144/220/430 MHz Tribander
updated scanning • remote commands • synchronized display
CHIRP SUPPORTED < BTECH < UV-5X3



Click for more information

[BaoFengTech](#) supports the CHIRP project. If you are in the market for radios or accessories, please consider giving them your business!

| Name | Last modified | Size | Description |
|--|-------------------|------|-------------------|
| Parent Directory | | - | |
| Model_Support.html | 22-Feb-2019 00:08 | 833K | |
| SHA1SUM | 22-Feb-2019 00:08 | 411 | |
| Test_Report.html | 22-Feb-2019 00:08 | 154K | |
| chirp-daily-20190222-installer.exe | 22-Feb-2019 00:08 | 11M | Windows Installer |
| chirp-daily-20190222-win32.zip | 22-Feb-2019 00:08 | 14M | |
| chirp-daily-20190222.app.zip | 22-Feb-2019 00:08 | 1.0M | MacOS Application |
| chirp-daily-20190222.tar.gz | 22-Feb-2019 00:08 | 832K | Source Tarball |

Choose Operating System

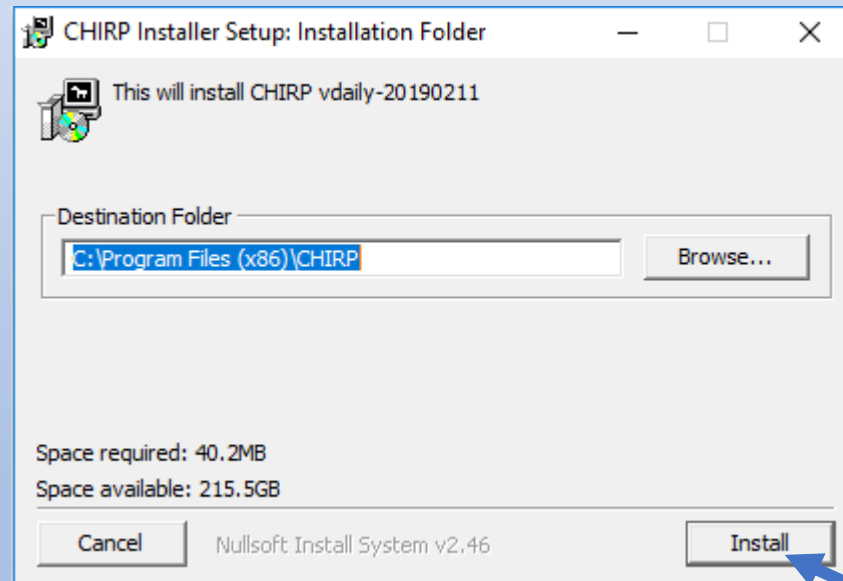
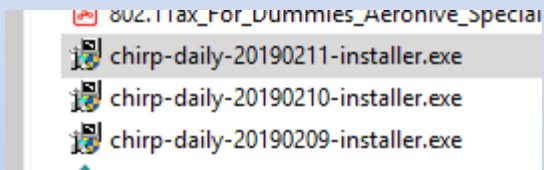
Confused about what to download?

For more information, see the [Download](#) page! Quick summary:

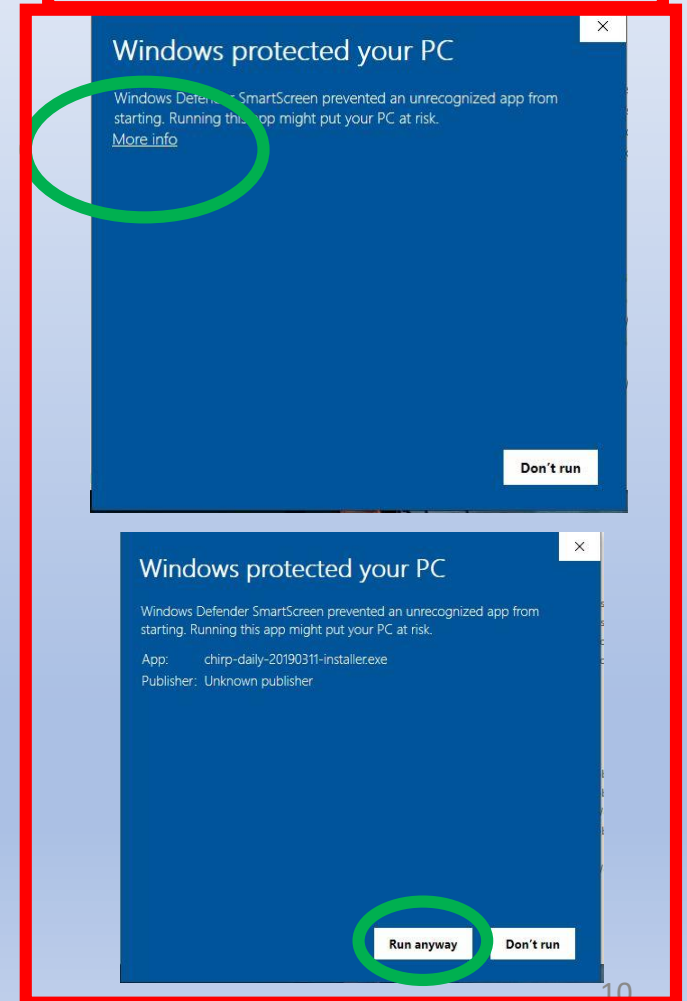
- Windows users will want the **installer.exe** file
- MacOS users will want the **app.zip** file (and also need the [runtime](#))
- Linux users may want the **tar.gz** file (but Ubuntu users should use the [PPA](#))

Installing Chirp

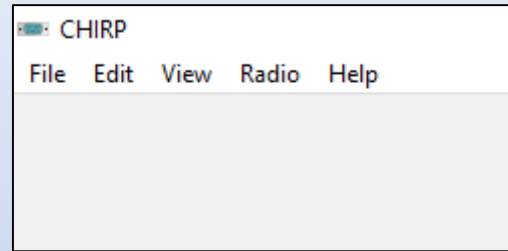
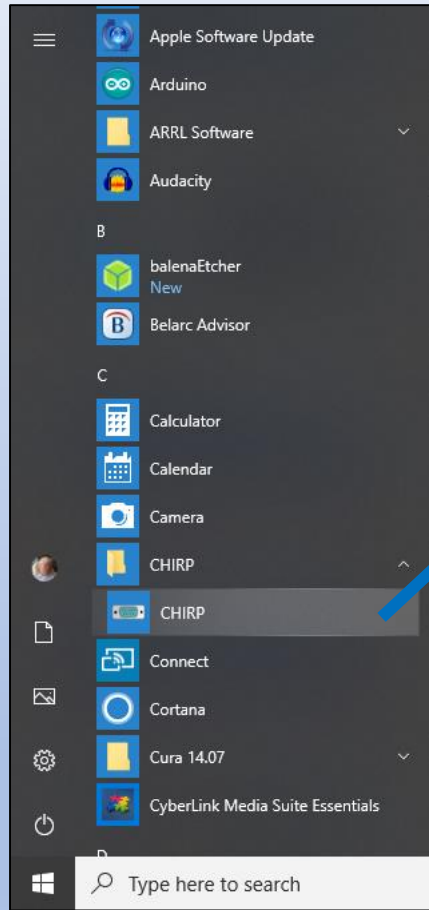
Downloads:



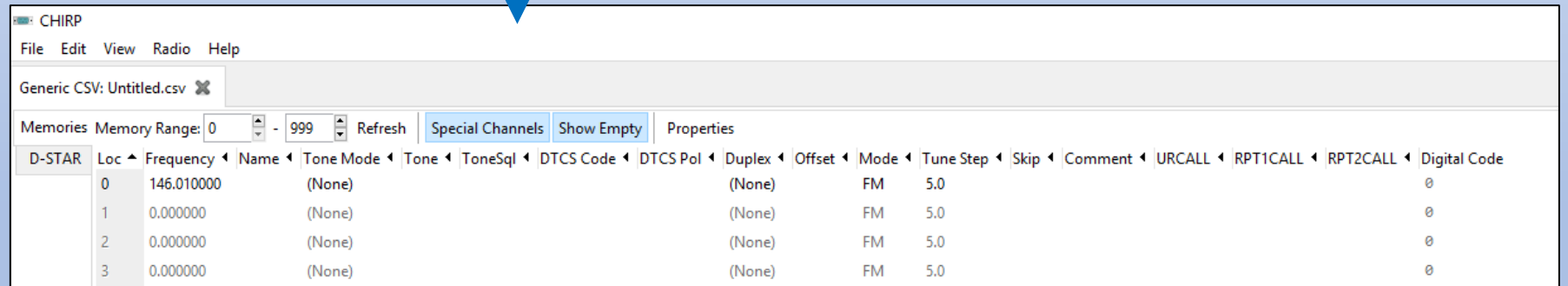
Sometimes you might get an alert indicating a problem. Just continue to install. The software is safe.



Operation of CHIRP - OPEN



File: New



HOLD This till we get the Data

Uploading Data from ERC Website

Emergency Response Communications (ERC)
Home ▶ Resources

Resources

There is a lot of information in this section of the website. Spend some time following the links and you will find many resources to help you magnify your calling.

- Digital Modes
- 2M Simplex Frequencies
- Technical Resources
- Personal Preparedness
- Emergency Preparedness
- Disaster Resources
- Formal Message Traffic
- ERC Newsletters
- Files
- Frequency Database**
- Outside Information Links
- Equipment Listings

Select Groups You Want

Select Desired Frequencies

| Storehouse | Type | Mode | Band | Nets |
|---|---|--|--|---|
| <input type="checkbox"/> Blackfoot | <input checked="" type="checkbox"/> Amateur | <input checked="" type="checkbox"/> Repeater | <input checked="" type="checkbox"/> VHF (2M) | <input checked="" type="checkbox"/> Include Net Frequencies |
| <input type="checkbox"/> Boise | <input checked="" type="checkbox"/> GMRS | <input checked="" type="checkbox"/> Simplex | <input checked="" type="checkbox"/> UHF (70cm) | <input type="checkbox"/> Only Net Frequencies |
| <input type="checkbox"/> Burley | <input checked="" type="checkbox"/> MURS | <input checked="" type="checkbox"/> Include standard frequencies | <input type="checkbox"/> HF | |
| <input checked="" type="checkbox"/> Idaho Falls | <input checked="" type="checkbox"/> FRS | | <input type="checkbox"/> Microwave | |
| <input type="checkbox"/> Missoula | | | | |
| <input type="checkbox"/> Pocatello | | | | |

Frequency List

| Location | Label | Type | Mode | Band | Output | Offset | Input | Mode | Tone | Call | IRLP | Echolink |
|-----------------------------------|--------|---------|----------|------|---------|--------|---------|--------|-------|------|------|----------|
| Idaho Falls Storehouse Net | IFSH | Amateur | Repeater | VHF | 146.880 | - | 146.280 | Analog | 100.0 | KM7G | | |
| Idaho Falls Storehouse Net Backup | Backup | Amateur | Simplex | VHF | 146.280 | | 146.280 | Analog | | | | |
| Rexburg Region Net | Rexbrg | Amateur | Simplex | VHF | 147.500 | | 147.500 | | | | | |

Press Update List


Go To The Bottom Of The Page


Select CHIRP

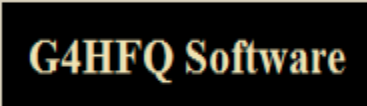
| | | | | | | | | | | | | |
|---------------|--------|---------|---------|-----|---------|---------|--|--|--|--|--|--|
| 2M Simplex 36 | 147.60 | Amateur | Simplex | VHF | 147.600 | 147.600 | | | | | | |
|---------------|--------|---------|---------|-----|---------|---------|--|--|--|--|--|--|

Records Returned: 59

Generate Programming Files

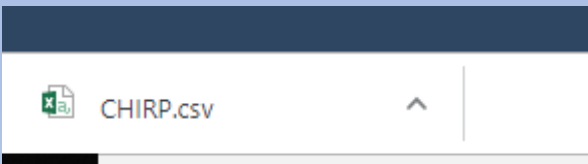






Generate Programming Reports

[Radio Reference Report](#)



Download location on your computer

Open .csv File

AutoSave Off CHIRP.csv - Excel

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

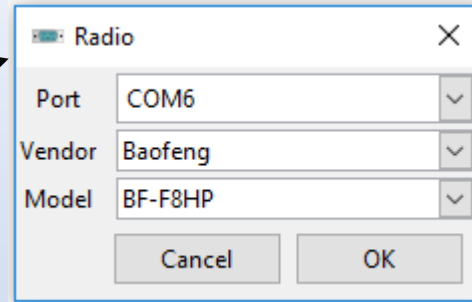
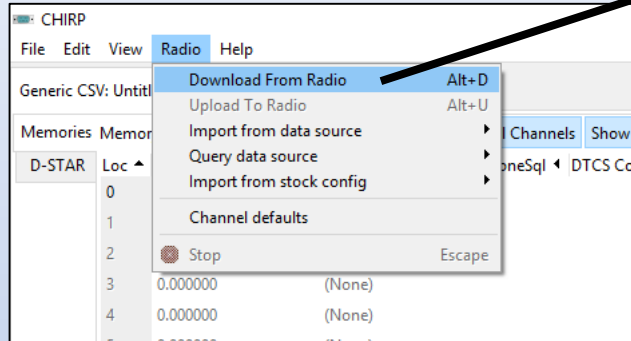
Clipboard: Paste, Cut, Copy, Format Painter
Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color
Alignment: Wrap Text, Merge & Center
Number: General, Currency, Percentage, Thousand Separator, Comma Separator, Negative Numbers, Fractional Display
Styles: Normal, Bad, Good, Check Cell, Explanatory..., Input

POSSIBLE DATA LOSS Some features might be lost if you save this workbook in the comma-delimited (.csv) format. To preserve these features, save it in an Excel file format. Don't show again Save As...

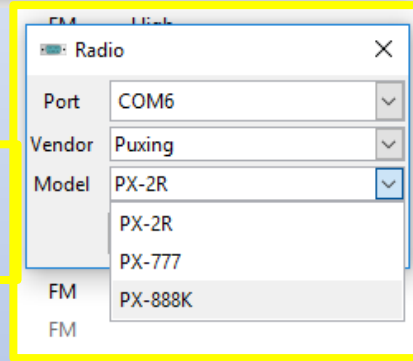
A1 Location

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|----|----------|--------|-----------|--------|--------|------|-----------|-----------|----------|--------------|------|-------|------|--------|----------|----------|---|
| 1 | Location | Name | Frequency | Duplex | Offset | Tone | rToneFreq | cToneFreq | DtcsCode | DtcsPolarity | Mode | TStep | Skip | URCALL | RPT1CALL | RPT2CALL | |
| 2 | 1 | IFSH | 146.88 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 3 | 2 | Backup | 146.28 | | | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 4 | 3 | Rexbrg | 147.5 | | | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 5 | 4 | North | 147.52 | | | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 6 | 5 | South | 147.54 | | | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 7 | 6 | Rigby | 147.56 | | | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 8 | 7 | Sawtel | 145.23 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 9 | 8 | Harson | 145.33 | - | 0.6 | Tone | 123 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 10 | 9 | BYUI1 | 145.41 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 11 | 10 | Iona | 146.64 | - | 0.6 | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 12 | 11 | RexHil | 146.7 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 13 | 12 | Ptrson | 146.74 | - | 0.6 | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 14 | 13 | Sedgwk | 146.8 | - | 0.6 | Tone | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 15 | 14 | Pocky | 146.82 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 16 | 15 | Jump | 146.85 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 17 | 16 | Menan | 146.88 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 18 | 17 | Garns | 146.94 | - | 0.6 | Tone | 123 | 88.5 | 23 | NN | FM | 5 | | | | | |
| 19 | 18 | Salmon | 146.98 | - | 0.6 | Tone | 100 | 88.5 | 23 | NN | FM | 5 | | | | | |

Getting Data From Radio – Matches Radio to Chirp



Different Radio View



- 1) Connect radio to cable
- 2) Select Radio Set-up
 - 1) Select Com Port
 - 2) Select Brand (Vendor)
 - 3) Select Model
- 3) First Download: read from the radio to understand what it needs (even if radio is unprogrammed)
- 4) Add information needed

| Settings | Loc | Frequency | Name | Tone Mode | Tone | ToneSql | DTCS Code | DTCS Rx Code | DTCS Pol | Cross Mode | Duplex | Offset | Mode | Power | Skip |
|----------|-----|------------|--------|-----------|-------|---------|-----------|--------------|----------|------------|--------|----------|------|-------|------|
| | 0 | 0.000000 | | (None) | | | | | | | (None) | | FM | | |
| | 1 | 145.230000 | SAWTEL | Tone | 100.0 | | | | | | - | 0.600000 | FM | High | |
| | 2 | 145.230000 | | Tone | 123.0 | | | | | | - | 0.600000 | FM | High | |
| | 3 | 145.410000 | BYUI | Tone | 100.0 | | | | | | - | 0.600000 | FM | High | |
| | 4 | 146.640000 | ERARC | (None) | | | | | | | - | 0.600000 | FM | High | |
| | 5 | 146.700000 | REX | Tone | 100.0 | | | | | | - | 0.600000 | FM | High | |
| | 6 | 146.740000 | IF | (None) | | | | | | | - | 0.600000 | FM | High | |

NEW Radio will have some default data

Import File (.csv)

The screenshot shows the CHIRP software interface. The 'File' menu is open, and the 'Import' option is highlighted. The main window displays a table of radio memories with the following columns: Loc, Frequency, Name, Tone Mode, Tone, ToneSql, DTCS Code, DTCS Pol, Duplex, Offset, Mode, Tune Step, Skip, Comment, URCALL, RPT1CALL, RPT2CALL, and Digital Code.

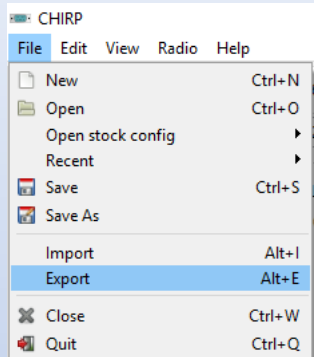
| Loc | Frequency | Name | Tone Mode | Tone | ToneSql | DTCS Code | DTCS Pol | Duplex | Offset | Mode | Tune Step | Skip | Comment | URCALL | RPT1CALL | RPT2CALL | Digital Code |
|-----|------------|--------|-----------|-------|---------|-----------|----------|--------|----------|------|-----------|------|---------|--------|----------|----------|--------------|
| 0 | 146.010000 | | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 1 | 146.880000 | IFSH | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 2 | 146.280000 | Backup | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 3 | 147.500000 | Rexbrg | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 4 | 147.520000 | North | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 5 | 147.540000 | South | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 6 | 147.560000 | Rigby | (None) | | | | | (None) | | FM | 5.0 | | | | | | 0 |
| 7 | 145.230000 | Sawtel | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 8 | 145.330000 | Harson | Tone | 123.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 9 | 145.410000 | BYUI1 | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 10 | 146.640000 | Iona | (None) | | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 11 | 146.700000 | RexHil | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 12 | 146.740000 | Ptrson | (None) | | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 13 | 146.800000 | Sedgwk | Tone | 88.5 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 14 | 146.820000 | Pocky | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 15 | 146.850000 | Jump | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |
| 16 | 146.880000 | Menan | Tone | 100.0 | | | | - | 0.600000 | FM | 5.0 | | | | | | 0 |

Program Radio (Upload to Radio)

The image illustrates the process of uploading a program to a radio using CHIRP software, showing several dialog boxes and a progress window:

- CHIRP Main Window:** The 'Radio' menu is open, and 'Upload To Radio' is selected.
- Radio Dialog:** Shows the selected port (COM6), vendor (Baofeng), and model (BF-F8HP).
- Baofeng BF-F8HP Instructions:** A dialog box providing instructions for the specific radio model, including turning the radio off, connecting the cable, and turning it on.
- Proceed with experimental driver?:** A warning dialog box asking for confirmation to proceed with an experimental driver.
- Clone Progress:** A dialog box showing the progress of the cloning process, with a green bar indicating the current status.

Export to a .csv file



The image shows a Microsoft Excel window titled 'Puxing_PX-888K_20190206.csv - Excel'. The ribbon is set to 'Home', and the 'Export' option from the CHIRP application is visible in the background. A yellow warning banner at the top of the spreadsheet reads: 'POSSIBLE DATA LOSS Some features might be lost if you save this workbook in the comma-delimited (.csv) format. To preserve these features, save it in an Excel file format.' Below the warning is a table with 18 columns and 12 rows of data.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|----|----------|----------|-----------|--------|--------|-------|-----------|-----------|----------|--------------|------|-------|------|---------|--------|----------|----------|--------|---|
| 1 | Location | Name | Frequency | Duplex | Offset | Tone | rToneFreq | cToneFreq | DtcsCode | DtcsPolarity | Mode | TStep | Skip | Comment | URCALL | RPT1CALL | RPT2CALL | DVCODE | |
| 2 | | 1 SAWTEL | 145.23 | - | 0.6 | Cross | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |
| 3 | | 2 SAWLOC | 145.23 | - | 0.6 | Cross | 88.5 | 123 | 23 | NN | FM | 5 | | | | | | | |
| 4 | | 3 BYUI | 145.41 | - | 0.6 | TSQL | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |
| 5 | | 4 ERARC | 146.64 | - | 0.6 | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | | | |
| 6 | | 5 N7UNY | 146.7 | - | 0.6 | Cross | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |
| 7 | | 6 K7EFZ | 146.74 | - | 0.6 | | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | | | |
| 8 | | 7 DIL MT | 146.76 | - | 0.6 | Cross | 88.5 | 107.2 | 23 | NN | FM | 5 | | | | | | | |
| 9 | | 8 BANCR | 146.8 | - | 0.6 | Cross | 88.5 | 88.5 | 23 | NN | FM | 5 | | | | | | | |
| 10 | | 9 ERCPO | 146.82 | - | 0.6 | Cross | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |
| 11 | | 10 JUMP | 146.85 | - | 0.6 | Cross | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |
| 12 | | 11 MENAN | 146.88 | - | 0.6 | Cross | 88.5 | 100 | 23 | NN | FM | 5 | | | | | | | |

Manual and other Information

- [https://chirp.danplanet.com/projects/chirp/wiki/Beginners Guide](https://chirp.danplanet.com/projects/chirp/wiki/Beginners_Guide)
- List of supported Models:
<https://chirp.danplanet.com/projects/chirp/wiki/Home>

New Cable Just Found on EBAY



Cable located at EBAY for
\$9.32

Fitment:

for MOTOROLA AXU4100, AXV5100, for Commander 245, CP040, CP125, CP140, CP150, CP160, CP180, CP185, CP200, CP340, CP360, CP380, CT150, CT250, CT450, CT450-LS, EP450, GP2000, GP2000s, GP2003, GP2100, GP308, GP3188, GP3688, GP3689, GP88s, P020, P030, P040, P080, Pacer Plus, PR400, PRO2150, PRO3150, SKS 245, SP66, and VL130 etc.

for KENWOOD TH-F6, TH-F7, TH-G71, TH-K2, TH-K4, TK-2100, TK-2101, TK-2102, TK-2107, TK-2118, TK-2160, TK-2201, TK-2202, TK-2206, TK-2207, TK-240, TK-249, TK-250, TK-253, TK-255, TK-260, TK-260G, TK-270, TK-270G, TK-272, TK-272G, TK-273, TK-278, TK-278G, TK-3100, TK-3101, TK-3102, TK-3107, TK-3118, TK-3160, TK-3201, TK-3202, TK-3206, TK-3207, TK-3301, TK-340, TK-349, TK-350, TK-353, TK-355, TK-360, TK-360G, TK-370, TK-370G, TK-372, TK-373, TK-373G, TK-378, TK-378G, TK-430, TK-431.

for HYT: TC-268, TC-268S, TC-270, TC-270S, TC-368, TC-368S, TC-370, TC-370S.

Relm: RPU416A, RPU499A Plus, RPV516A, RPV599A Plus and some types for TYT, for QUANSHENG, for PUXING, for LINTON, for WOUXUN and for BAOFENG, And most Chinese Brand Radios: for KST Radios: V6, UV-F89, UV501, K568, K8900, K6900, N8, N6 .etc

for Linton handheld Radio: LT-2288, LT-3288, LT-6288, LT-5288, LT-3188, LT-2188, LT-3260, LT-2268, LT-3268/6188.

for PUXING: PX-777, PX-666, PX-328, PX-888, PX-888K, PX-333, PX-325, PX-358, PX-359, PX-728, PX-555, PX-628

for WEIERWEI: VEV-3288S, VEV-3288D, VEV-V1000, VEV-V16, VEV-3188

for WOUXUN/SURECOM Handheld Radio: KG-669, KG-669 PLUS, KG-UVD1P

for QUANSHENG: TG-UV2

for BAOFENG: UV-5R Series, BF-666S, BF-777S, BF-888S

for TYT: TH-UVF1, TH-F5, TH-F8

Questions?