

# SDR Sharp Frequency Manager + Scanner Data Conversion Tools

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## *User's Guide*

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This is a quick-and dirty guide to using the Data Conversion Tools for the Frequency Manager + Scanner (hereafter called FM).

The Tools provide 3 utility functions:

1. Export existing FM frequency data to a CSV file
2. Import a CSV file into the FM frequency database
3. Convert an XML file created by K5DEV's frequency manager into a CSV file that can be imported into FM

These functions are simple and direct; each is meant to do only one thing and in only one way. As a result the application is no-frills and has a bare minimum of input validation and error handling.

### **EXPORT**

To export existing FM frequency data, perform the following steps.

1. Start the Tools application.
2. Click the Export button.
3. In the dialog that is displayed
  - a. Enter the full file path and filename of the source database
  - b. Enter the full file path and filename of the CSV file to be created
  - c. Click the Start Export button
4. If any errors are detected, message boxes will be displayed.
5. Upon successful completion the number of records output will be displayed.

The CSV file is created with double quotes ("" ) around each text field and with commas separating the fields.

### **IMPORT**

To import new FM frequency data you must first have a suitable CSV file. Be aware that SDR Sharp has minimum and maximum values for the following fields, and you must provide values in these ranges even if you do not intend to import data for them.

Field	Minimum	Maximum
Filter Bandwidth	10	250000
Filter Order	10	9999
Squelch	0	100
CW Shift	200	1200

These are the columns that are expected in the CSV, with their sequence and their content rules. **All columns are required to be present but can be empty of data.** Empty text columns must contain double quotes (""). Empty numeric columns must contain a zero.

Column	Meaning	Data Type	Notes
1	Frequency	Numeric	Large number without a decimal fraction.
2	Center	Numeric	Large number without a decimal fraction.
3	Description	Text	Describe the station, for example "Bellagio Hotel & Casino".
4	Mode	Text	Abbreviation of the transmission mode, NFM, AM, LSB, etc. Must exactly match the settings on the SDR Sharp Radio collapsible panel.
5	Protocol	Text	Text describing the transmission protocol, for example Voice, Unidentified, POCSAG, etc. See the FM User's Guide for the built-in list of protocols.
6	Callsign	Text	Callsign for the transmitting station as assigned by the FCC or other government body.
7	Service	Text	Text describing the service, for example Business, EMS Dispatch, Law Tactical, etc. See the FM User's Guide for the built-in list of services.
8	Shift Enabled	Numeric	Supply a zero to indicate shift is <i>not</i> enabled; supply a 1 if shift <i>is</i> enabled.
9	Shift	Numeric	Large number without a decimal fraction.
10	Filter Type	Text	Must be one of the Filter Types from the SDR# Radio collapsible panel. Spelling and hyphens must exactly match those in SDR#.
11	Filter Bandwidth	Numeric	Must be a number in the range described previously.
12	Filter Order	Numeric	Must be a number in the range described previously.
13	Squelch Enabled	Numeric	Supply a zero to indicate squelch is <i>not</i> enabled; supply a 1 if shift <i>is</i> enabled.
14	Squelch	Numeric	Must be a number in the range described previously.
15	CW Shift	Numeric	Must be a number in the range described previously.
16	Notes	Text	Text describing the frequency.
17	Date	Text	Text in the format YYYY-MM-DDThh:mm:ss. See the Appendix for more information.
18	Locked	Numeric	Supply a zero to indicate the frequency is <i>not</i> locked; supply a 1 if it <i>is</i> locked.
19	Flagged	Numeric	Supply a zero to indicate the frequency is <i>not</i> flagged; supply a 1 if it <i>is</i> flagged.

I recommend against using Excel or a similar spreadsheet to edit any CSV; spreadsheet programs often add default formatting that cause confusion and obscure the real contents of a column. Instead use one of the many CSV editors available on the Internet or just use Notepad.

To import, the target database must be at database version 2. This is the revision of database created by FM version 1.0.4759.20512 and newer.

To import a CSV file into the FM database:

1. Start the Tools application.
2. Click the Import button.
3. In the dialog that is displayed
  - a. Enter the full file path and filename of the source CSV file.
  - b. Enter the full file path and filename of the target FM database.
  - c. Click the Start Import button. Note that **existing frequencies in the database will be deleted** before the import executes.
4. If any errors are detected, message boxes will be displayed.

Upon successful completion the number of records imported will be displayed.

It is possible to have a successful import only to find that SDR Sharp chokes on an invalid data field; be prepared to fix your CSV file and re-import it if that happens.

## CONVERT

This function will convert an XML file created by K5DEV's frequency manager into a CSV file that can be imported into the FM database. Because of the differences in the data collected, certain default values will be created in the CSV where the K5DEV data does not contain the necessary fields.

To convert an XML file into a CSV file:

1. Start the Tools application.
2. Click the Convert button.
3. In the dialog that is displayed
  - a. Enter the full file path and filename of the source XML file
  - b. Enter the full file path and filename of the target CSV file
  - c. Click the Start Conversion button.
4. If any errors are detected, message boxes will be displayed.

Upon successful completion the number of records converted will be displayed.

The map of K5DEV fields to FM database fields is as follows:

K5DEV XML field	FM field
Favourite	Not used
Name	Description
Group Name	Service
Frequency	Frequency
Detector Type	Mode
Shift	Shift
Center Frequency	Center
Filter Bandwidth	Filter Bandwidth

## Appendix

The Date field requires a common storage format for dates that is language-neutral. FM will reformat the dates to your global locale at runtime. The segments of the format are:

- YYYY = 4-digit year, e.g. 2013

- MM = 2-digit month, e.g. 02 for February or 11 for November.
- DD = 2-digit day of the month 01 through 31.
- T = a required character that tells Microsoft that what follow is a time of day.
- hh = hour of the day in 24-hour format, e.g. 03 for 3:00am or 17 for 5pm.
- mm = 2-digit minute of the hour, 00 through 59.
- ss = 2-digit second of the minute, 00 through 59.

So a date and time of 2:16:27pm on August 14, 2013 would be represented as 2013-08-14T14:16:27.

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