



SQUARE DANCE  
ROSTER GENERATOR

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# Square Dance Roster Generator

## Licensing

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## Introduction

This is a simple program that takes a spreadsheet of club members' contact information and produces a PDF document suitable for printing. Two versions of PDF are generated at the same time: a booklet version and a full-page version.

The booklet version is the “fold in half and staple in the middle” style where the pages are interlaced to read like a book. The pages are half-size, but the text is still very readable. This style must be printed double-sided (flipped on the short side) to work right. The pages are printed already collated so you only have to fold and staple - easy-peasy.

The full-page version is like any standard PDF document. The pages are 8.5" x 11" in portrait and can be printed one-sided or two sided. Oh, by the way, meet Rosco, the pup. He'll be joining us along the way. What a good boy!

## The Software

The Windows program was written as a single source code file in C, and the Mac program was written in Swift. The Windows version is dependent on 3 other free and open-source libraries: libpng, libz, and libharu, while the Mac version uses system libraries. Roster is free and open source as well, and is licensed under Gnu GPLv3. I include the source code and documentation files, and you are free to redistribute them to others, as long as you maintain the same licenses.

I created a Windows installer program that puts the program in **C:\Program Files\SquareDanceRoster** and adds this folder to the PATH environment variable, ready to use. It also includes a set of example demo input files so you can run it immediately to test it out and see what the PDF documents look like.

The MacOS version does not require an installer. It's a single executable file, so I decided to create a compressed zip file that also includes the demo files and this documentation file. All you have to do is double-click the zip file in a working folder where you intend to manage your roster data. It will create a folder with the same name as the zip file.

For both versions, the program is configurable through a small text file called **roster.sdd**. You can change it to apply your own custom club logo, cover title, fonts and colours, executive table image file, dance schedule table image file, and of course the membership list as a CSV file. I will cover this later in more detail. If you open the portrait PDF to the side, you can follow along.

## PDF Format

The PDF document is organized in six parts:

### Cover Page

A club graphic or other image is placed in the top half, and the title and sub-title in the lower half. The font size and colour can be customized.

### Executive Listing

A table of executive and committee members is printed next. In Booklet format, it is placed on Page 2 (inside cover). Since it is often a large table, I decided the easiest way to do this is to take a previously generated table in Word or some other software, save it as a PDF or display it on the screen and take a screenshot. That's one way to do it, you may have your own method. All images **must** be in the PNG format.

### Caller and Cuer Listing

This is Page 3. There is often only one of each, but your club may have more, and some may be guest callers and cuers you wish to list. That's fine, there is no upper limit on numbers.

### Club Members Listing

This is often Page 4 unless you have an abundance of leaders. The Booklet version formats the contact info as labels in two columns and there is room for 7 rows, for a total of 14 names per page. The full-page portrait format has room for 8 rows and 3 columns, for a total of 24 names per page. The total number of members, including callers, cuers, and new dancers is capped at 512. You can take that as a challenge and let me know if this isn't big enough!

### New Dancers Listing

Some clubs like to have a separate list for the new dancers that are taking lessons. This can be quite useful for the executive and committee members, and the rest of the membership to learn the names of the new dancers.



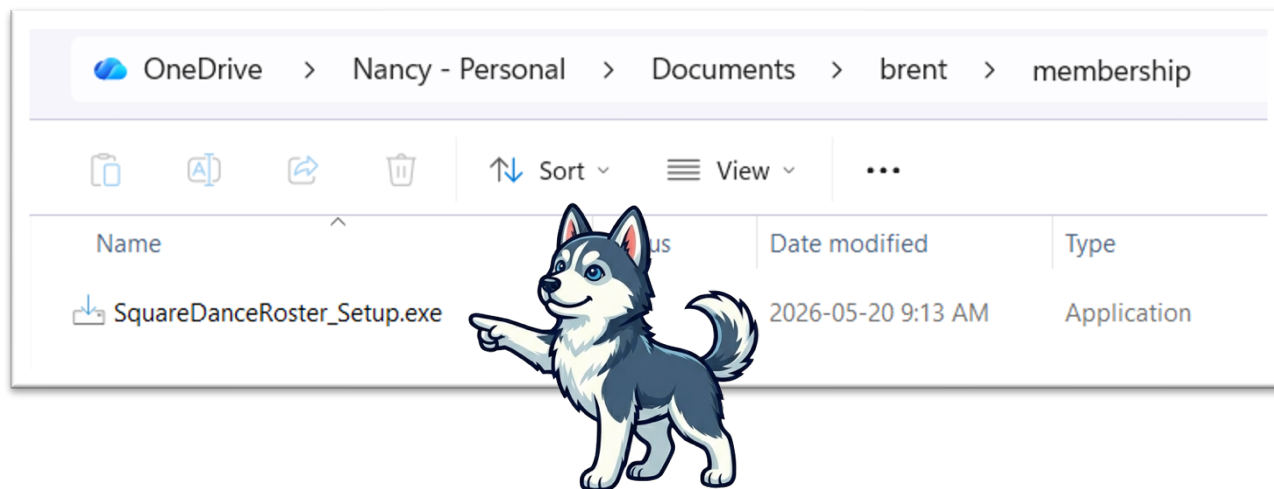
## Club Dances Schedule

Club dances (regular and special) and lesson nights are usually decided upon at the beginning of the season or even earlier. A table of dance nights are often drawn up. This can be saved as a PNG graphics file. The program will place the dance schedule graphic on the back page of the booklet, or last page of the full-page portrait PDF document. This makes it handy to consult without turning pages.

## Installation

### Installing on Windows 10 or 11

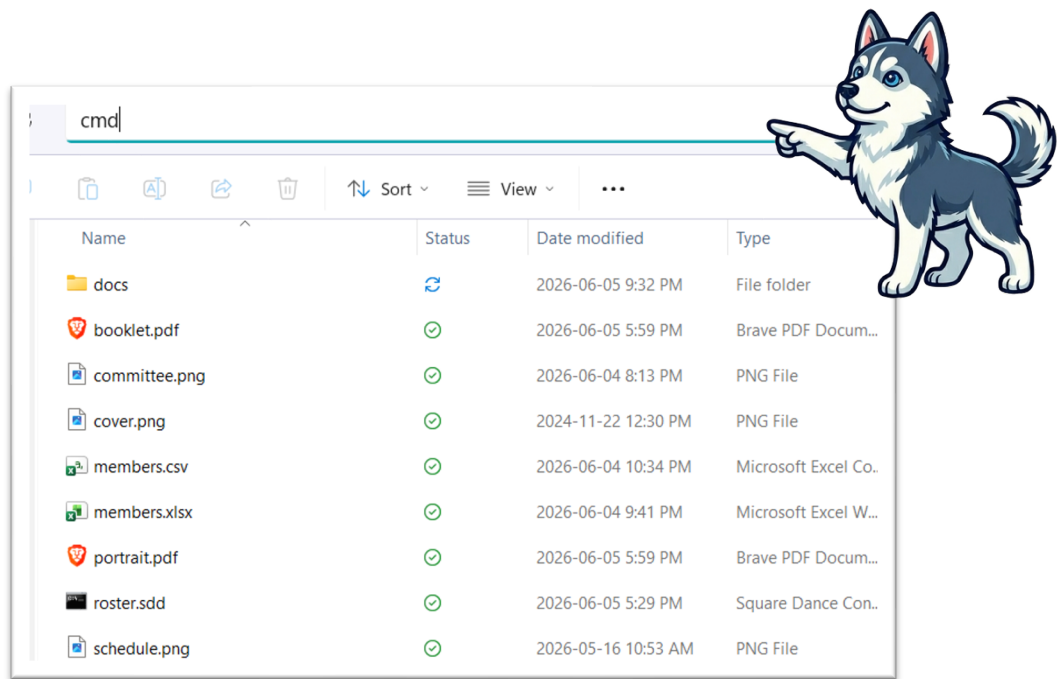
Copy the installer program to a working folder where you will generate the PDF documents. I created a membership folder in my home folder and copied the installer program there. Thank you Rosco. Double-click on it in File Manager. The installer will start and you will see a window. Keep the defaults by clicking Next each time. When done, the program will be installed in c:\Program Files\SquareDanceRoster, and the PATH will be updated to include this folder. The program will now run from anywhere.



You should see a demo\_files folder newly created. To test the program, double-click on the demo\_files folder to open it up. Now double-click on the **roster.sdd** file. You should see a flash as a Command window briefly opens and closes again. The Roster program ran and generated new PDF files. If the program encounters a problem with any of the input, it will pause and let you read any messages.

A manual method is available for users who are familiar with the command prompt. You should know this procedure, just to give you a backup method of running the program.

Click on the navigation bar near the top: the one that looks like a path to the current folder with ">" symbols in-between each level. When you click on it, it will change to something like C:\Users\nancy\OneDrive\Documents\brent\test\demo\_files. Overwrite this with "cmd" and hit enter.



You will see a black terminal window open with a cursor blinking at you from the end of a long string of characters. This is the current working directory and the command prompt.

```
C:\Windows\System32\cmd.e  X + v
Microsoft Windows [Version 10.0.26200.8457]
(c) Microsoft Corporation. All rights reserved.

C:\Users\nancy\OneDrive\Documents\brent\install\demo_files>
```

Type "dir" and enter (without the quotes) and you will see the files in this folder. Type "roster" to run the program. If it installed correctly, the system will find the program and run it. It will write some output to the screen like this:

```
C:\Windows\System32\cmd.e  X + v
Microsoft Windows [Version 10.0.26200.8457]
(c) Microsoft Corporation. All rights reserved.

C:\Users\nancy\OneDrive\Documents\brent\install\demo_files>roster
Config : title=3 line(s), subtitle=1 line(s), Column Order
Members : 1 Caller(s), 1 Cuer(s), 58 Member(s), 14 New Dancer(s)
Booklet : 10 content pages => padded to 12 (3 sheets)
Portrait: 8 pages
Booklet : booklet.pdf (landscape, SHORT-edge duplex, collate-fold-staple)
Standard: portrait.pdf (portrait, LONG-edge duplex)

C:\Users\nancy\OneDrive\Documents\brent\install\demo_files>
```

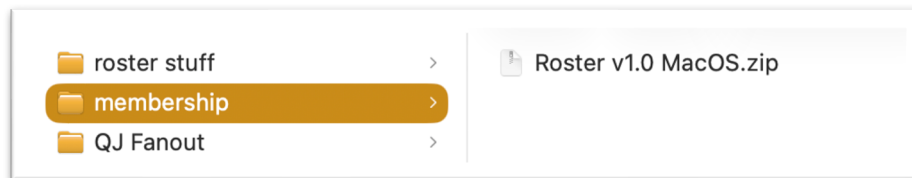
You have successfully run the program with no errors. Now you can view the two PDF documents in your browser or other program. Use File Manager in Windows or Finder in MacOS, navigate to the demo\_files

folder and double-click one of the PDF files. This will load the default program that reads PDFs on your computer – either a browser or Preview (MacOS).

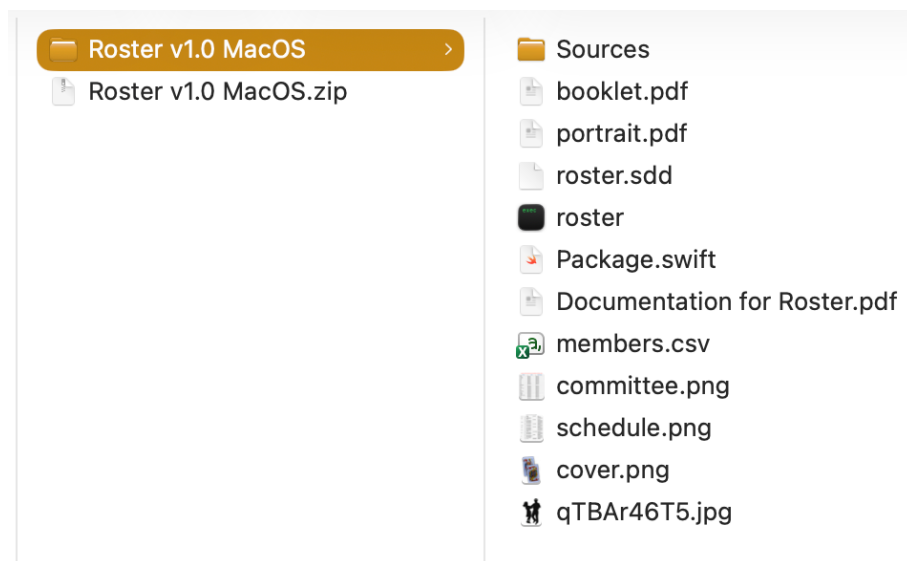
In Windows, Edge will likely be your default browser, but other browsers like Brave and Firefox can also display PDFs. You can even print from the browser. Just look for a print icon near the top, right-click somewhere on the page, or look for print in the File menu at the top if the browser has one of these. The booklet pdf requires a printer that prints double-sided. Make sure you select the “flip on the short side” option in double-sided printing. This is generally not the default. The portrait pdf requires no special setup assuming you use Letter size paper. A monochrome print works fine, but the colour prints are going to reproduce what you see on the screen.

## Installing on MacOS (iMac, MacBook Air, MacBook Pro)

Download the Zip file for MacOS. Using the Finder, move the zip file to your working directory where you will generate the PDF documents. I’m putting mine in “membership”.

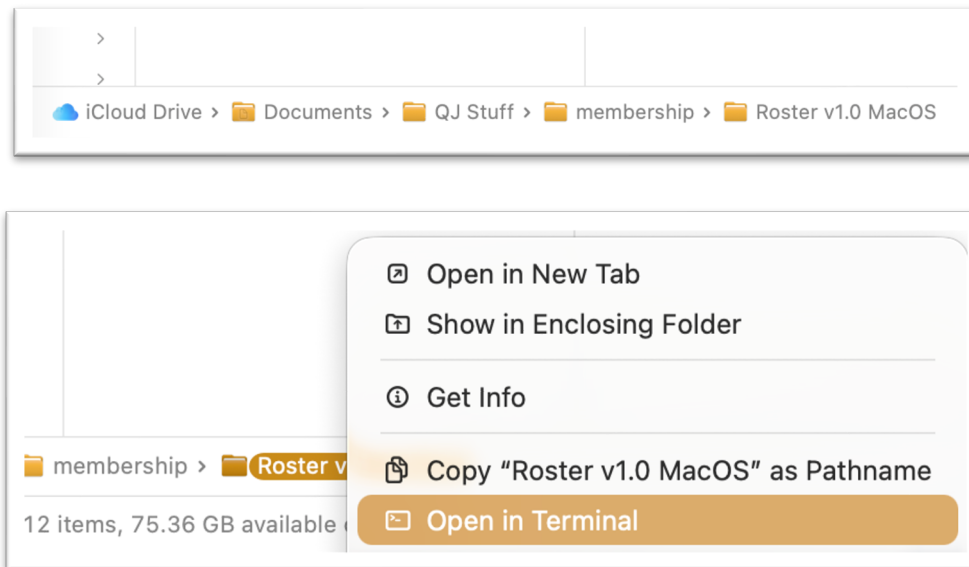


Double-click the file to uncompress it. The files will be in a sub-directory with the same name as the zip file. That’s it – it’s fully installed. The program is just one executable file called ‘roster’.



At the bottom of the Finder window, you can see the full path of the subdirectory that is highlighted. Right-click on right-most name and choose the Open in Terminal option.

**Note:** If you don’t see this Path Bar, then in Finder, go to View in the top Finder menu and select Show Path Bar, and then it will appear.



You will see a terminal window open with the current directory at this same location. Type 'ls' to list the files. You are now ready to test the program. Run the program by typing **./roster** at the prompt. Don't leave out the **./** part or it won't execute.

**Note:** You may get a Security Warning that you are attempting to run a program that you have downloaded. This program is currently not code-signed which is triggering this message. Choose Ignore. Then go to System Settings (the grey gear icon), select Privacy and Security on the left, then scroll down on the right until you see the line about roster being run. Select that one and click on Run Anyway.

If you see similar output to the next screenshot, then you successfully ran the program and generated two new PDF documents. Don't be alarmed if you didn't get the colourful text. I have a custom system configuration.



```

Roster v1.0 MacOS — -zsh — 80x28

brent@Brents-iMac:
~/Documents/QJ Stuff/membership/Roster v1.0 MacOS
[% ls
.
..
.DS_Store
booklet.pdf
committee.png
cover.png
Documentation for Roster.docx
LICENSE_DEPENDENCIES.txt
members.csv
members.xlsx
portrait.pdf
roster
roster.c
roster.sdd
schedule.png

brent@Brents-iMac:
~/Documents/QJ Stuff/membership/Roster v1.0 MacOS
[% ./roster

=====
ROSTER GENERATOR v1.0 Copyright (C) 2026 Brent Daignault
bjdaignault@gmail.com GPLv3 License
This program comes with ABSOLUTELY NO WARRANTY.
=====
Config : title=3 line(s), subtitle=1 line(s), Column Order
Members : 1 Caller(s), 1 Cuer(s), 58 Member(s), 14 New Dancer(s)
Booklet : 10 content pages → padded to 12 (3 sheets)
Portrait: 8 pages
Booklet : booklet.pdf (landscape, SHORT-edge duplex, collate-fold-staple)
Standard: portrait.pdf (portrait, LONG-edge duplex)
brent@Brents-iMac:
~/Documents/QJ Stuff/membership/Roster v1.0 MacOS
%

```



## Working in Windows 10 or 11

It's all fine and good to run the program on the demo data and everything works perfectly, but now you want to use your own data. We need to set up a working folder with your own files: spreadsheet, image files, and a configuration file.

Whether you are working in Windows or MacOS, we will follow the same process, just using different tools along the way. We are going to create new input files, one at a time, and then run the program on them.

### Configuration File

The configuration file is called "roster.sdd". It's a text file and it is automatically read by the program when it starts up. The program takes direction from the information you put in this file, so let's go through it. For Windows users, I suggest you use Notepad to edit this file, since Word or some other word processor will do weird things to it. If you don't have it on the task bar, you can start notepad by hitting the Windows key (⊞) and typing in the search bar "notepad". It will probably be listed under best match. Click on the entry to start Notepad. If you want to pin it to the task bar, right-click on the listing and choose "Pin to Taskbar", then Esc or click somewhere else. Now you can start Notepad like any other program and open the file. From the menu – File, Open, and navigate to your working folder and select roster.sdd.

Lines beginning with # are comments and are skipped by the program

```
# roster.sdd
# Square Dance Roster generator
```

This is just a reminder that the program is run from the same folder as your data and this .sdd file.

```
# — Cover text —
# Title and Subtitle are multi-line inputs,
# terminated by a blank line. They are centred horizontally and as a
# group vertically in the lower half of the cover page.
```

```
Title:
Queens & Jacks
Square Dance Club
2025 / 2026
                                <title up to 8 lines, keep blank line at end of title>
```

```
Subtitle:
Member Directory
                                <subtitle up to 4 lines, keep blank line at end of subtitle>
```

```
# Font size in points. Colour as a CSS-style hex triplet.
# Use any graphics or paint program to find the hex codes or look it up online.
Title Font Size:    20
Title Color:        #D34C00
Subtitle Font Size: 16
Subtitle Color:     #0075F3
```

```
# Note: image files must be in PNG format, sorry, limitation of the code
# Note: you can use your own file names, except for roster.sdd
```

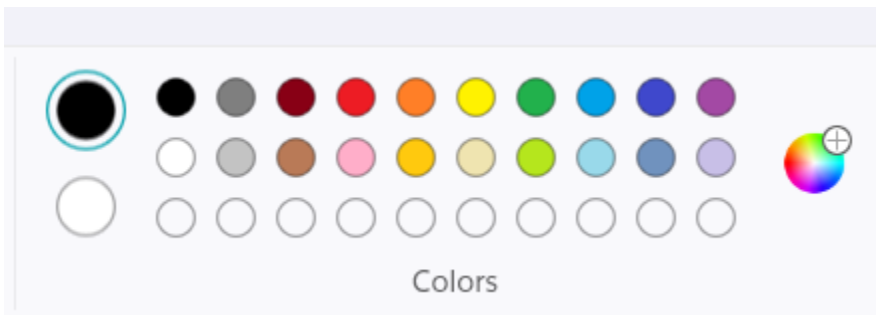
```
# — Input files —
Member CSV:      members.csv
Cover Image:     cover.png ← this can be your club logo or anything really
Committee Image: committee.png
Schedule Image:  schedule.png

# — Output files —
Booklet PDF:     booklet.pdf
Standard PDF:    portrait.pdf

# — Label layout —
# Change the selection to one of the following:
#   Row Order    — names read left-to-right across each row (AB/CD/EF)
#   Column Order — left column fills top-to-bottom, then right (AD/BE/CF)
Label Sequence:  Column Order
# End of File
```

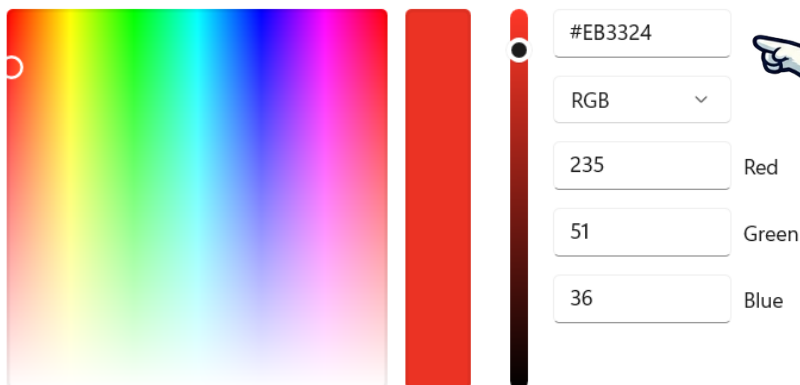
## Help with Font Colours using MS Paint

The easiest way to find these hex codes for colours in Windows is to use MS Paint. Open Paint with Windows key (⊞) and type “paint” and hit enter. You will see a colour pallet in the top menu bar. Click the circle with the + sign.



Another window opens where you can pick a custom colour. When you do, it will fill in the numbers on the side and the hex code at the top. Copy that hex code #EB3324 to get the same shade of red for your text. Easy-peasy. Show the reader, Rosco. Good dog.

### Edit colors



## Help with Snipping Tool

As it turns out, the Windows Snipping Tool is great for creating screenshots in the correct file type for this program – who would have guessed? We need 3 image files to complete our task: a cover image, a committee table, and a dance schedule. I have provided examples of each of these. I can't help with the creation of these tables, you can do them in MS Word or MS Excel but they should each fit on one page.

Use your program, let's say MS Word, to display the table. Reduce the size until it fits on your screen and is legible. Then use the Snipping Tool to take a screenshot. The files are automatically saved to \Pictures\screenshots in your personal files. Change the name to something simple like the names in the demo\_files folder and move them to your working directory. Keep reading to learn more about Snipping Tool.

Get prepared by displaying the table or image on the screen. When you are ready to take a screenshot, type the Windows key, then search for "snip" and hit enter. A quicker way is to use the keyboard shortcut Windows Key-Shift-S together – this launches the program too. It's hard to take a screenshot of the screenshot program in action, so you'll just have to fly solo for a bit. The toolbar is displayed at the top of the screen, and your cursor is a + sign. You click and drag from the top-left corner to the bottom-right corner, and the rectangle portion of the screen will be saved. You don't need to do anything else. You'll find the file in your personal Pictures\Screenshots folder, and with a timestamped name. You can change the name to cover.png or schedule.png or whatever you like. The great thing about Snipping Tool is that it creates PNG files, which is what we need here. Don't worry about the image size early on. The program will scale the image to fit. If you don't like it, you can adjust the length to width ratio by taking another screenshot, but it's usually not that hard. The committee table and dance schedule should be in approximate portrait proportions, so they look good.

## It's all about the Spreadsheet Data

It's a simple spreadsheet, a field for each type of data that is printed in each label. You probably have a your own more advanced membership spreadsheet to track other things. To make this one, I stripped out several columns that I didn't need and deleted a few other sheets too. Then I saved it as a .csv file. It's a good idea to remove any blank rows or columns to avoid any spurious blanks from showing up in the CSV file. A CSV file is almost unreadable, but it's just text and it can be viewed in Notepad as well. A spreadsheet can be created in Excel or Open Office or Libre Office, Windows or Mac, as long as you can save it as a CSV.

Once the CSV file is saved and the image files are in place – and the roster.sdd file is prepared, you are ready to go. The roster program requires the file to match the columns shown below, in this order. A second phone number and both email addresses are optional. Blank fields are ok, too. The program will leave the line blank when it prints the label on the page.

	A	B	C	D	E	F	G	H	I	J
	Type	First	LastName	Address	City	PCode	Ph1	Ph2	email1	email2
1	Caller	Caller	Bob	123 Woodridge Drive	Cochrane	T4C 1V7	403-850-7400		Caller@telus.net	
2	Cuer	Cuer	Jane	124 Woodridge Drive	Calgary	T3A 2P7	403-850-7401		Cuer@telus.net	
3	Member	Bill1	Agnew1	125 Woodridge Drive	Calgary	T2Y 5B5	403-850-7402	403 816-6601	Bill1@telus.net	
4	Member	Bill2	Agnew2	126 Woodridge Drive	Calgary	T2J 1J4	403-850-7403	403 816-6602	Bill2@telus.net	
5	Member	Bill3 & Jill1	Agnew3	127 Woodridge Drive	Calgary	T2J 3C8	403-850-7404	403 816-6603	Bill3@telus.net	Jill1@telus.net
6	Member	Bill4 & Jill2	Agnew4	128 Woodridge Drive	Calgary	T2Y 4C4	403-850-7405	403 816-6604	Bill4@telus.net	Jill2@telus.net
7	Member	Bill5	Agnew5	129 Woodridge Drive	Calgary	T2W 0W1	403-850-7406	403 816-6605	Bill5@telus.net	Agnew5@telus.net
8	Member	Bill6 & Jill3	Agnew6	130 Woodridge Drive	Calgary	T3M 1M3	403-850-7407	403 816-6606	Bill6@telus.net	Jill3@telus.net
9	Member	Bill7	Agnew7	131 Woodridge Drive	Calgary	T2Y 4C3	403-850-7408		Bill7@telus.net	Agnew7@telus.net
10	Member	Bill8	Agnew8	132 Woodridge Drive	Calgary	T2J 3A5	403-850-7409		Bill8@telus.net	Agnew8@telus.net
11	Member	Bill9	Agnew9	133 Woodridge Drive	Calgary	T2X 1Y2	403-850-7410		Bill9@telus.net	Agnew9@telus.net
12	Member	Bill10	Agnew10	134 Woodridge Drive	Crossfield	T0M 1S0	403-850-7411		Bill10@telus.net	Agnew10@telus.net
13	Member	Bill11	Agnew11	135 Woodridge Drive	Calgary	T2Y 2X1	403-850-7412		Bill11@telus.net	Agnew11@telus.net
14	Member	Bill12	Agnew12	136 Woodridge Drive	Calgary	T2W 5V9	403-850-7413		Bill12@telus.net	Agnew12@telus.net
15	Member	Bill13	Agnew13	137 Woodridge Drive	Calgary	T2J 4P2	403-850-7414		Bill13@telus.net	Agnew13@telus.net
16	Member	Bill14	Agnew14	138 Woodridge Drive	Calgary	T3H 3T9	403-850-7415		Bill14@telus.net	Agnew14@telus.net
17	Member	Bill15	Agnew15	139 Woodridge Drive	Calgary	T2Y 2Z1	403-850-7416		Bill15@telus.net	Agnew15@telus.net
18	Member	Bill16	Agnew16	140 Woodridge Drive	Calgary	T3E 4W2	403-850-7417		Bill16@telus.net	Agnew16@telus.net
19	Member	Bill17	Agnew17	141 Woodridge Drive	Calgary	T2W 4E5	403-850-7418		Bill17@telus.net	Agnew17@telus.net

## A Note about the Type Column

The program uses the entries in the Type Column to group the members into one of four (for now) categories: Caller, Cuer, Member, and New Dancer. There should be one and only one in each row. These type names are not customizable (yet). The program will be looking for these specifically. If it sees something else or is left blank, it will not print that label. If you don't want one printed, erase the type or use a different type than these four, but you didn't hear it from me.

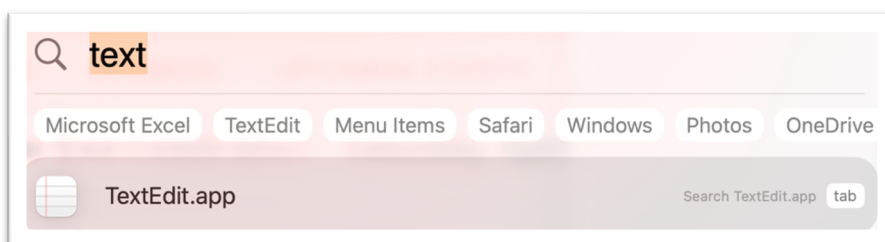
## To Review:

1. Using the File Manager, go to the working folder where you have all these files stored.
2. Click on the bar showing the full path.
3. Type 'cmd' enter. A black command window will pop up. The prompt should be the same path where your working files are.
4. Type 'roster' to run the program.
5. Review the PDF output generated – clicking on them from the File Manager should automatically load them into the browser, where you can also print them.

## Working in MacOS

### Editing roster.sdd

Ok, so we've seen how it works in Windows. It's very similar on the Mac. You want to edit the roster.sdd file in the same way, but you have different tools. You can use TextEdit and to launch TextEdit, you type the keyboard shortcut Command-Space to get Spotlight. Then start typing "TextEdit". Before you are done, this window will pop up. Click on TextEdit.app to run. It should even ask for a file to edit, so navigate to the folder where you are working and pick roster.sdd.



Make your changes to the file as in the previous section for Windows. Make sure you understand each of the sections and your options. Save the file.

## Making the PNG Images

The most appropriate image for the cover is likely to be the logo of your club, but it could be any image, as long as it's in the PNG format. Lots of software that loads and saves images can work with PNG files. If your logo happens to be a JPEG file, you will have to convert it.

The MacOS system is blessed with an amazing program called Preview. The icon is located on the Dock and looks like an upside-down shot glass. Hovering over any of the icons will display the name. This program will load and display all kinds of documents including image files and PDF's. From the Finder window or if your image is not on the desktop as an icon, double-click the image or PDF file and see what program automatically loads the file – it might be Preview.



From the File drop-down menu of Preview, you can see two relevant options – **Take Screenshot** and **Export...**. The export function will allow you to convert the file to several formats including PDF and PNG. If you have a JPEG file, this is an easy way to convert it to PNG. If you need just a portion of the displayed image, then Take Screenshot is helpful. I'll leave it to you to explore that method.

The MacOS way of taking screenshots is to use the family of keyboard short-cuts available for this purpose.

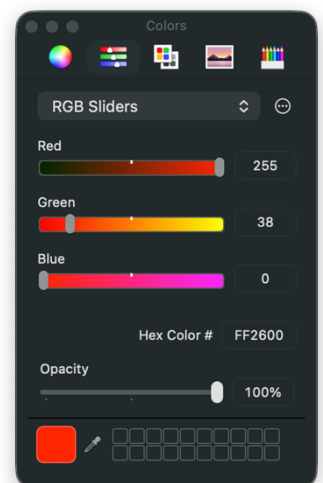
Here is a quick cheat sheet for the built-in macOS screenshot shortcuts. They all save directly to your desktop by default:

- **Cmd + Shift + 3**: Captures your **entire screen**.
- **Cmd + Shift + 4**: Turns your cursor into a crosshair so you can **click and drag a selection** over a specific area.
- **Cmd + Shift + 4, then press Spacebar**: Turns your cursor into a camera icon. Click on any specific window, menu, or the Dock to capture **just that window** with a clean drop-shadow.
- **Cmd + Shift + 5**: Opens the **Screenshot/Screen Recording toolbar** at the bottom of the screen. This lets you choose custom save destinations (like sending it straight to the clipboard or Mail), set a timer, or record video of your screen.

When a box in the lower-right corner of the screen pops up, right-click on it and you will get option to save. I generally use Save to Documents and then move it to my working folder.

## Colours on MacOS

Preview comes to the rescue again. Double-click on any image and Preview is likely going to open and display it. In the edit toolbar at the top, there is a colour button with the letter 'v' beside it. Click the 'v' and then click **Show Colors**. This little colour picker window pops up. Click on the slider icon second from the





left, then choose RGB Sliders from the choices. Notice the Hex Color #. By changing the colour bars, you get the corresponding Hex Color code for roster.sdd.

## Conclusions

I hope you made it this far along, with Rosco as your guide. It might seem like a lot, but after doing it a few times, all the tools will become easier. You will find them useful for all sorts of projects. If you are a seasoned computer user, this will all be quite familiar, and you are free to go your own route.

There is no need to read or print the following Gnu Documentation License. It just says that everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.



Cheers,

Brent Daignault and Rosco

Queens & Jacks Square Dance Club, Calgary, Alberta, Canada

<https://queensandjacks.com>

Calgary & District Square and Round Dance Association

<https://squaredancecalgary.com>

email: [bjd@biggianthead.ca](mailto:bjd@biggianthead.ca)

website: <https://biggianthead.ca>

published projects: <https://codeberg.org/biggianthead>

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