Service Pro 2020

Single Family Instructions

User's Manual

Using Service Pro 2020 with Excel

Excel 1997-2003

This product was designed with Excel 1997 and runs fine with all versions of Excel through 2003.

Excel 1997-2003 creates files with a **.xls** file extension. This **.xls** file extension is the most common file extension for the Excel spreadsheets.

Excel 2007 and Later

Excel Version 2007 or later creates files with a new file extension **.xlsx.** This file extension in not reverse compatible with previous versions of Excel. Thus if you create files with Excel 2007 other users may not be able to use them.

Having said that we have created a version of Service Pro 2020 that uses the new Excel 2007 **.xlsx** file extension. We have tested this **.xlsx** version and found the following:

1. The new Excel 2007 takes longer to load files and the recalculation time is a little slow.
2. The menus in Excel 2007 are not the same and some commands no longer exist.
3. The new **.xlsx** files we created seem to run properly (and slow) with Excel 2007.

NOTE

We have both Excel 2003 and Excel 2007 installed on our machines. You may also wish to installed both version of Excel on your machines.

The **Service Pro 2020** software is a spreadsheet template software program for calculating main service panel size, feeder sizes and single family 1-Line drawings. The **Service Pro 2020** software is for reference purposes only, and Durand & Associates cannot assume any responsibility for the accuracy of the program contents. In using this program the user agrees to hold harmless and wave all claims against Durand & Associates.

SOFTWARE REQUIREMENTS

Service Pro 2020 was created with Microsoft Excel 97. To use these templates you must have Microsoft Excel, Version 97 or later, installed on your computer.

INTRODUCTION

The **Service Pro 2020** software is a spreadsheet template program. The program was designed for use in conjunction with Microsoft Excel on the Windows platform. The program should also work on other platforms that can read and write Microsoft Excel 97 file formats.

LOADING THE PROGRAM

Insert the CD in your drive and follow the setup instructions.

The installation of Service Pro will create the following folder on your C drive.

C:\Service Pro 2020

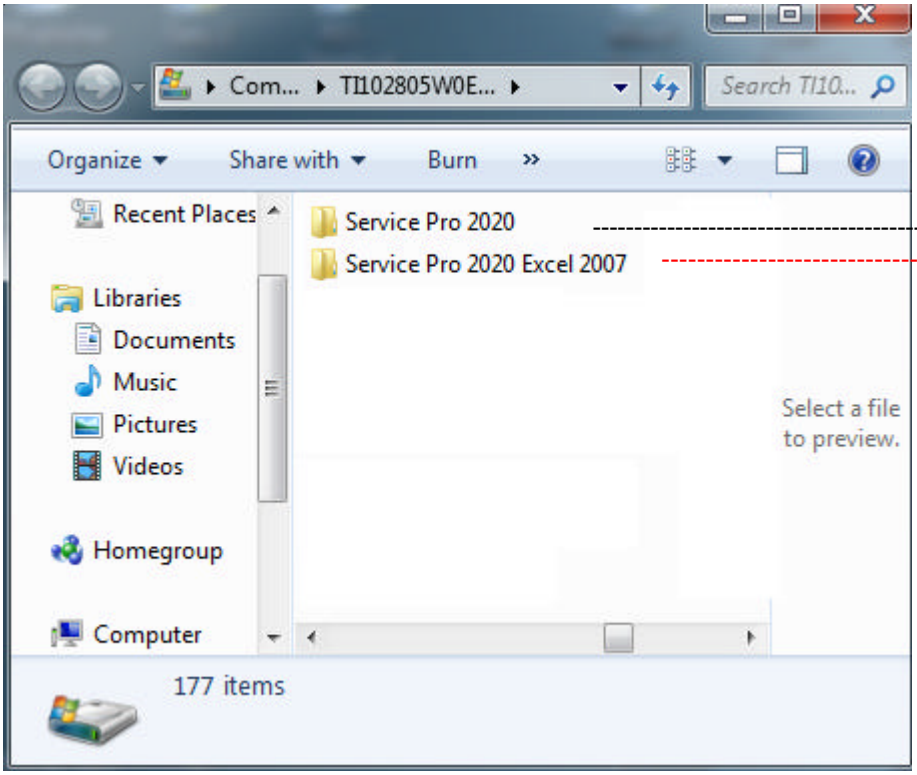
C:\Service Pro 2020 Excel 2007

EXPLORING THE PROGRAM

Service Pro software is a complex spreadsheet template program. The program uses 7 files which link to one another. DO NOT CHANGE THE FILE NAMES. If a file name is changed the template can become corrupt.

LOCATING THE PROGRAM FILES

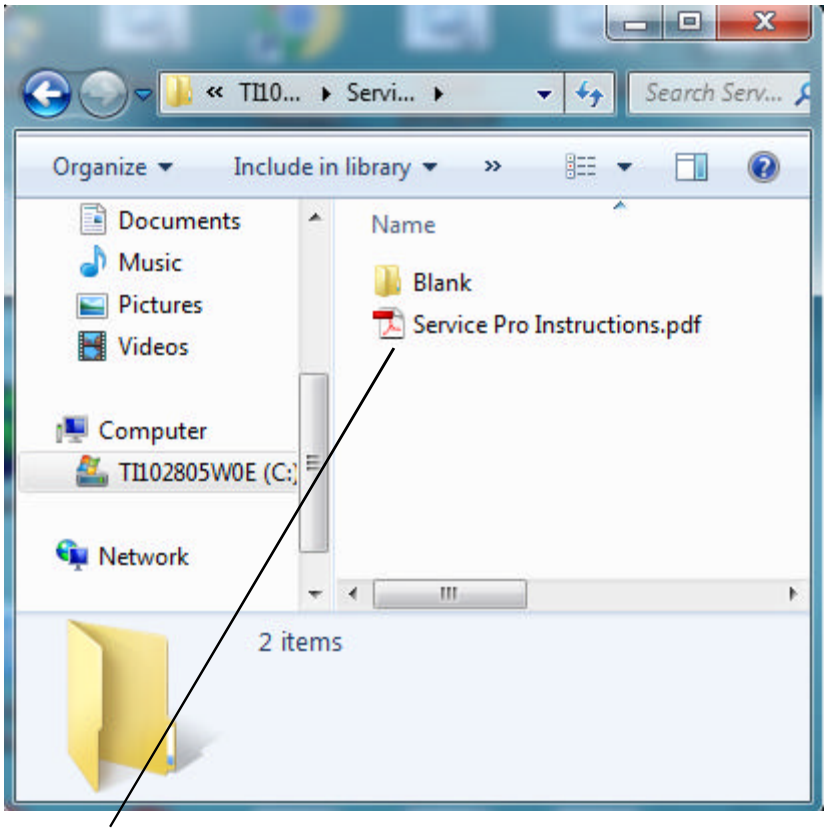
The Service Pro templates are located on your C: drive.



Excel 1997-2003 Version

Excel 2007 Version

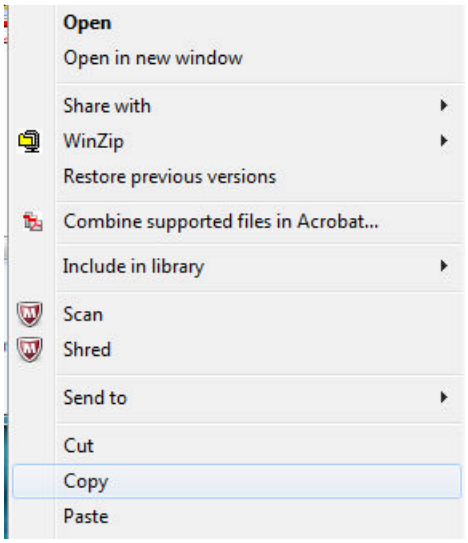
If you double click on the Service Pro folder, you will find 1-file & 1-folder.



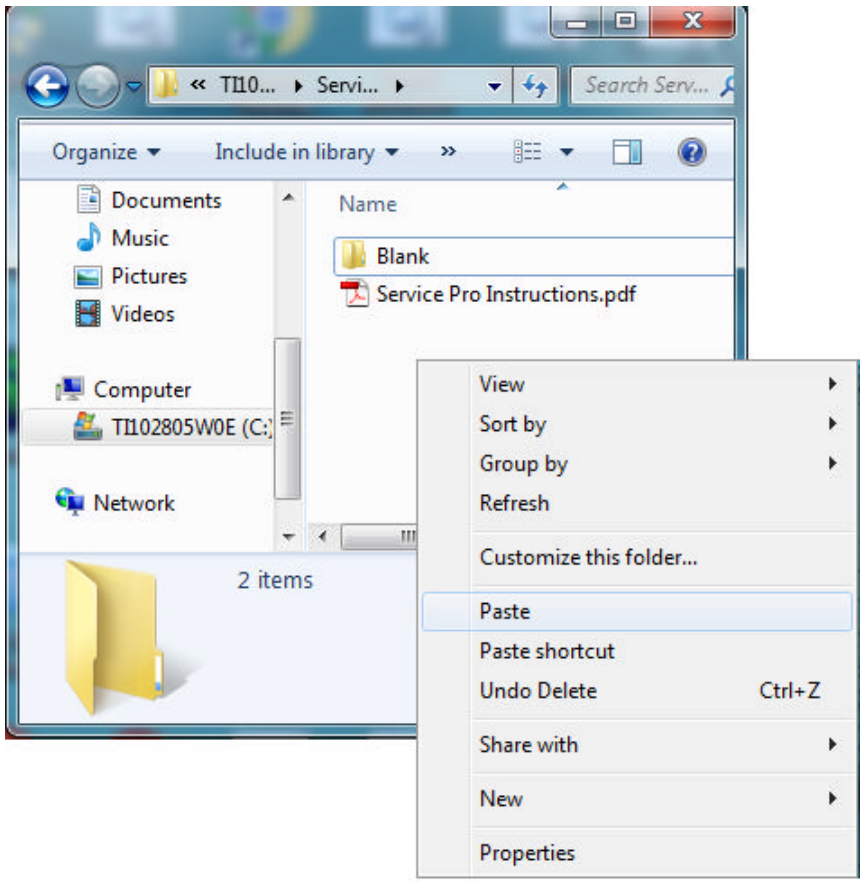
NOTE: Please double click on the "Service Pro Instructions" file and print the instructions.

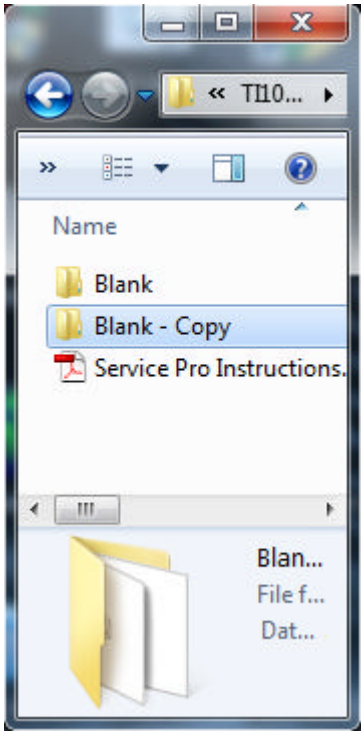
STARTING A NEW PROJECT

If you want to start a new project, RIGHT CLICK on the blank folder and select COPY.



Then RIGHT CLICK on the white area of the window and select PASTE.

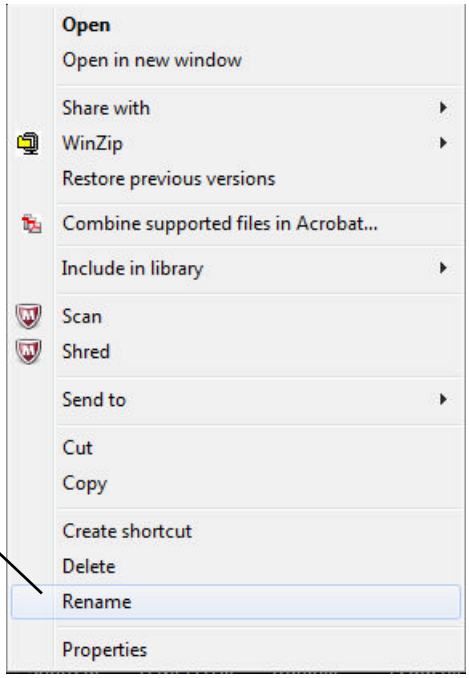




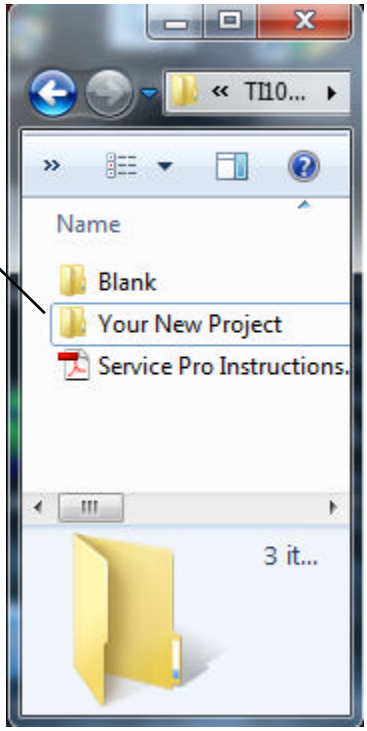
This will created a new folder titled “Blank - Copy”.

RENAME THE FOLDER

You can RIGHT CLICK on the new folder and select the RENAME command.



Type in your new project name.

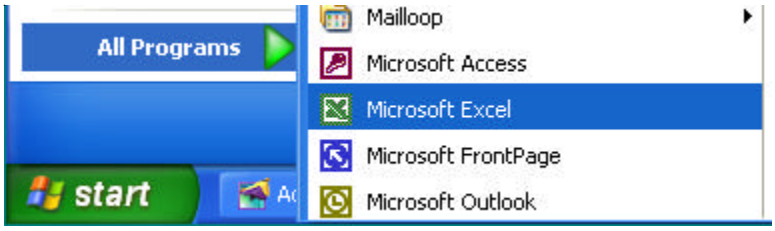


Use this method to create a new project each time you start a new Service Pro.

Now that you have created a new folder close all windows.

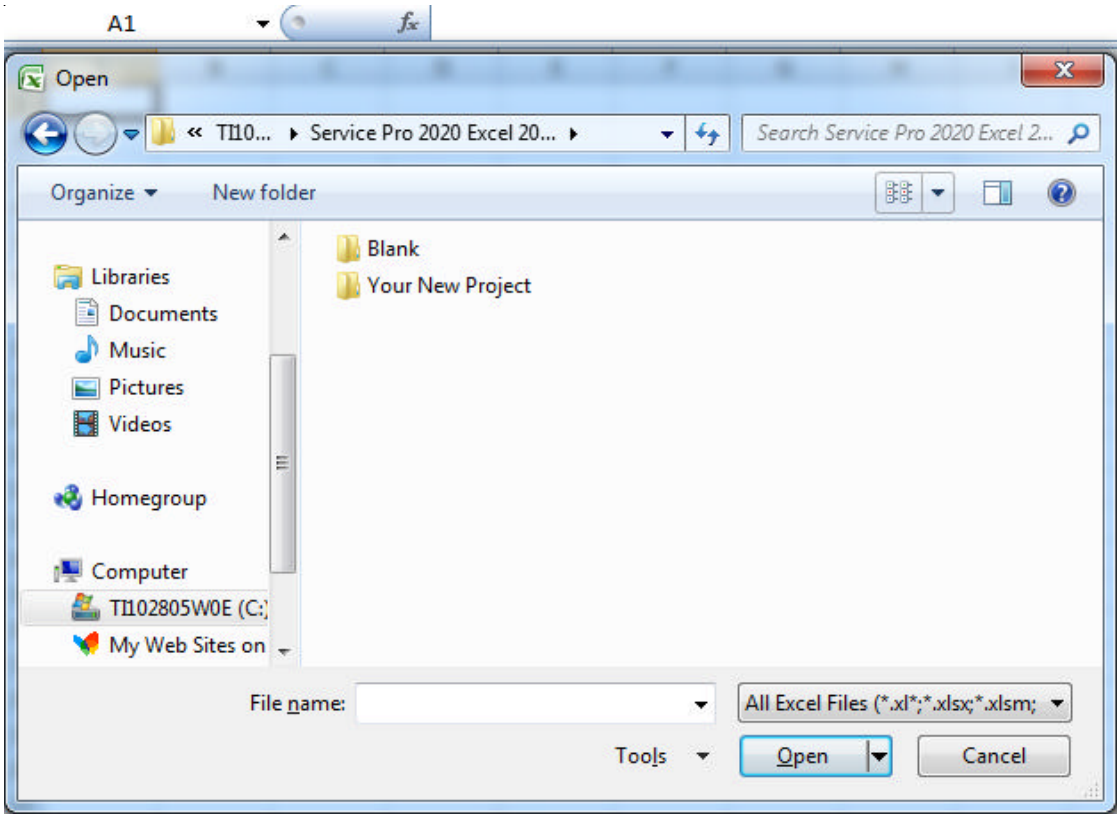
USING THE PROGRAM

Go to your START MENU, select ALL PROGRAMS, and select EXCEL.



This will start your Excel spreadsheet program.

Select the FILE OPEN command and locate the Service Pro 2020 folder on your C: drive. Double click the Service Pro 2020 folder to display the contents.

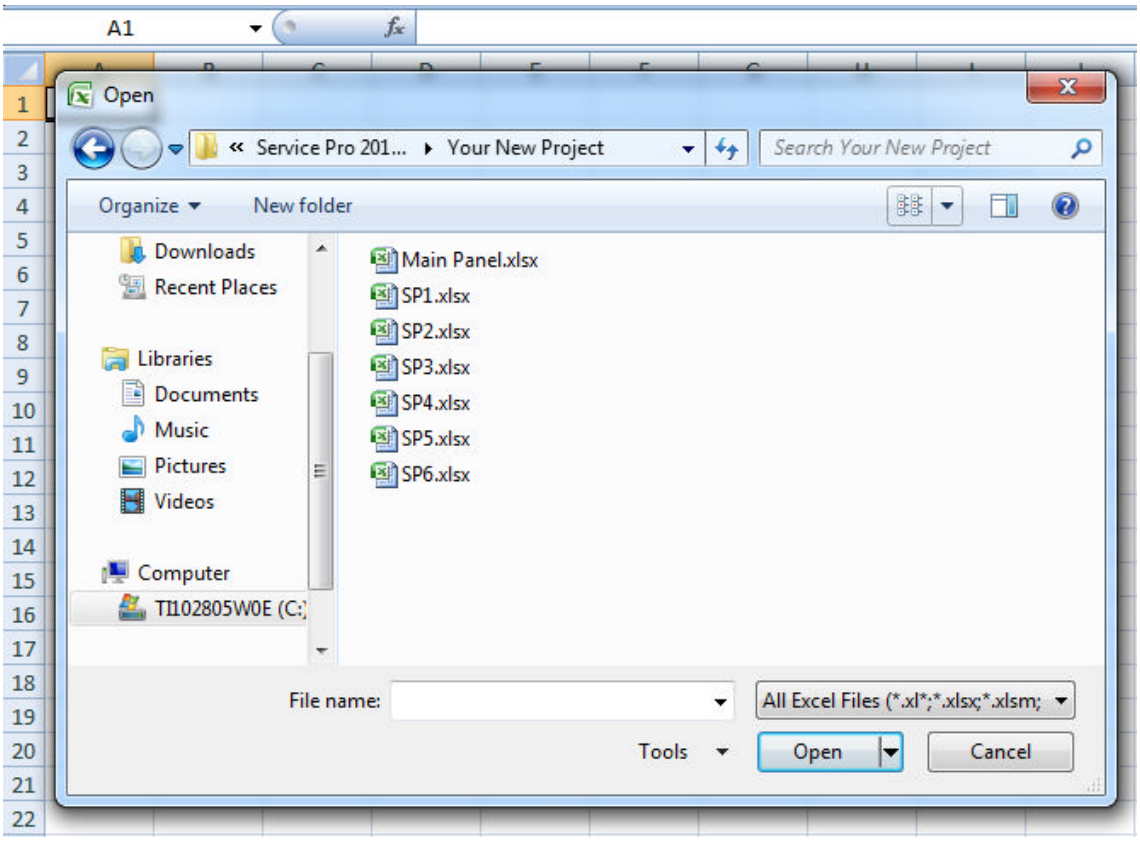


Now displayed are two (2) folders.

1. Blank
2. Your New Project (This is the folder you just created.)

Double click on “Your New Project”.

EXPLORING THE SAMPLE PROJECT



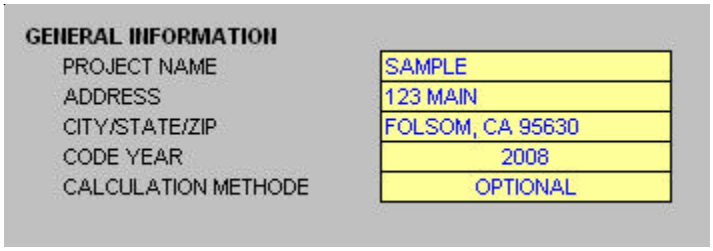
The files in this folder are MAIN PANEL and SP1-SP6.

DO NOT RENAME THESE FILES (This will corrupt the files).

WORKING WITH THE MAIN PANEL

Double click on the MAIN PANEL file to display the Main Panel Template

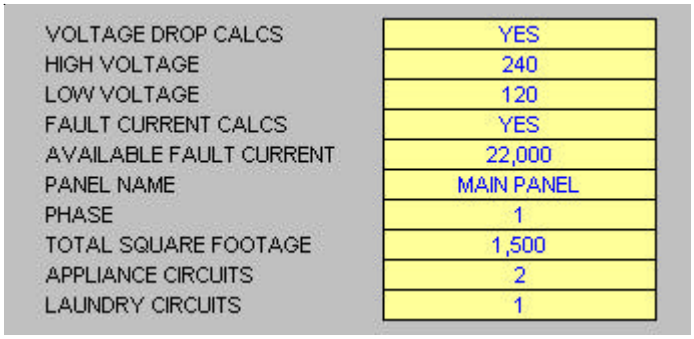
This may take a few seconds to open as Excel updates the links to the other files.



GENERAL INFORMATION	
PROJECT NAME	SAMPLE
ADDRESS	123 MAIN
CITY/STATE/ZIP	FOLSOM, CA 95630
CODE YEAR	2008
CALCULATION METHODE	OPTIONAL

GENERAL INFORMATION

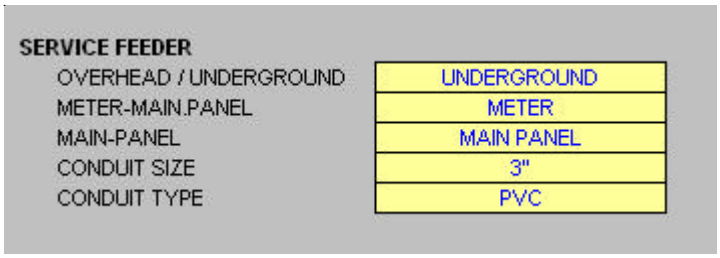
- **Project Name** (Enter the project name)
- **Address** (Enter the address)
- **City/State/Zip** (Enter the city, state, and zip code)
- **Code Year** (Select the Code Year from the pulldown menu)
- **Calculation Method** (Select Standard or Optional)



VOLTAGE DROP CALCS	YES
HIGH VOLTAGE	240
LOW VOLTAGE	120
FAULT CURRENT CALCS	YES
AVAILABLE FAULT CURRENT	22,000
PANEL NAME	MAIN PANEL
PHASE	1
TOTAL SQUARE FOOTAGE	1,500
APPLIANCE CIRCUITS	2
LAUNDRY CIRCUITS	1

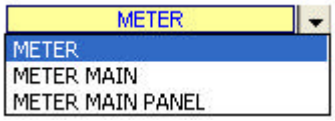
LOAD INFORMATION

- **Voltage Drop Calcs** (Select YES or NO)
- **High Voltage** (Enter the line to line voltage)
- **Low Voltage** (Enter the line to neutral voltage)
- **Fault Current Calcs** (Select YES or NO)
- **Available Fault Current** (Enter fault current)
- **Panel Name** (Enter Panel Name)
- **Phase** (Select 1 or 3Y)
- **Total Square Footage** (Enter square footage)
- **Appliance Circuits** (Enter number of appliance circuits)
- **Laundry Circuits** (Enter number of laundry circuits)

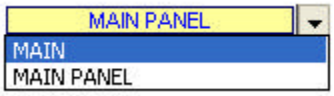


SERVICE FEEDER INFORMATION

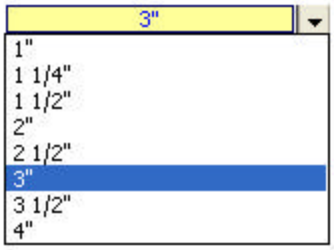
- **Overhead/Underground** (Select overhead or underground)
- **Meter-Main-Panel** (Select from pulldown menu)



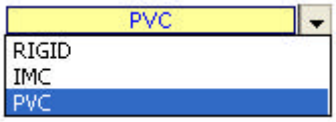
- **Main-Panel** (Select from pulldown menu)

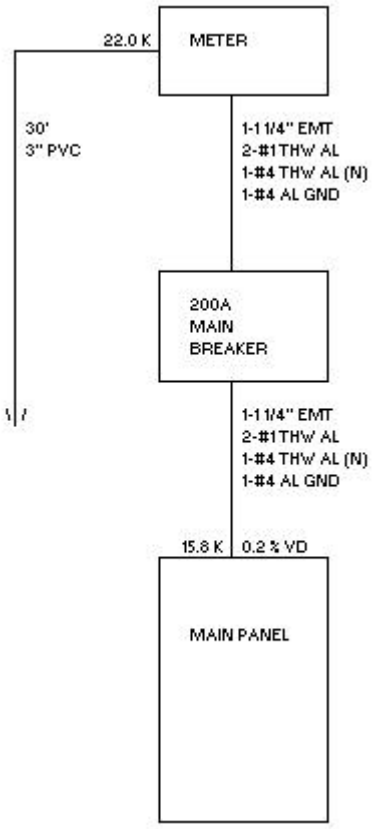


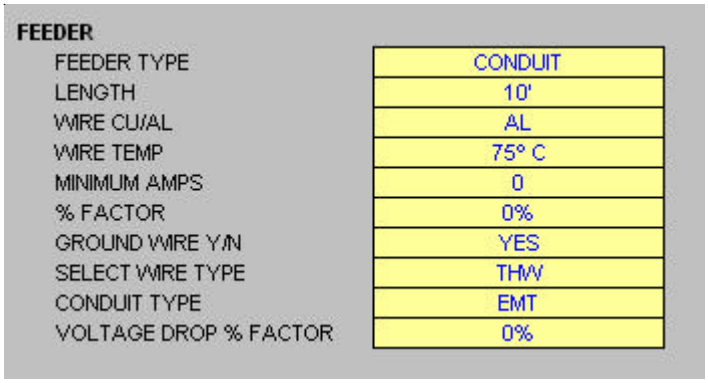
- **Conduit Size** (Select the conduit size)



- **Conduit Type** (Select conduit type)







FEEDER INFORMATION

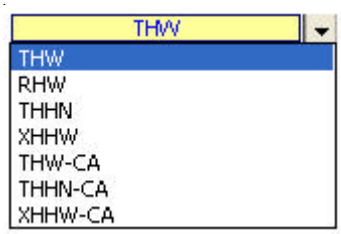
- **Select Feeder Type** (Conduit, SER cable or MC cable)
- **Length** (Enter length of main feeder)
- **Wire CU/AL** (Select CU or AL)
- **Wire Temp** (Select 60, 75, or 90)
- **Minimum Amps** (Enter minimum amps)

> Note: If you use the Optional calculation method the program automatically sizes the main feeder at a minimum of 100 amps per Code requirements.
>
> If you use the Standard calculation method the program automatically sizes the main feeder at a minimum of 60 amps.

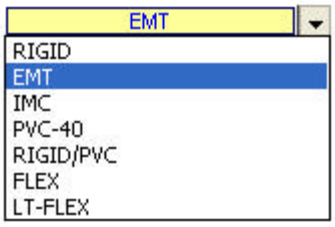
- **% Factor** (Enter % Factor)

> Note: This factor will ad the percentage of the connect load for future use.

- **Ground Wire Y/N** (Select YES or NO)
- **Select Wire Type** (Select from pulldown menu)



- **Conduit Type** Select from pulldown menu)

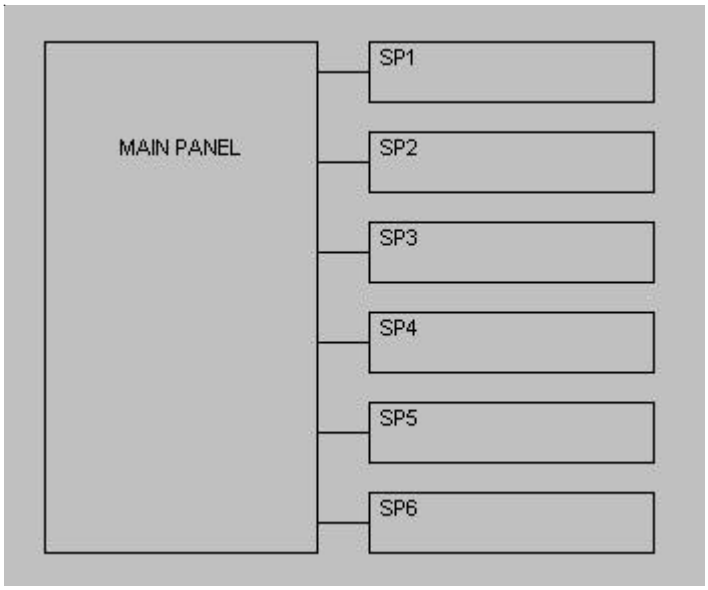


- **Voltage Drop % Factor** (Enter % Factor)

> Note: This factor will increase the wire size reducing voltage drop.

SUBPANELS

NUMBER OF SUBPANELS	6



SUBPANEL INFORMATION

- **Number of Subpanels** (Enter number of subpanels)

Note: You may have up to six (6) subpanels fed from the main panel. All calculations for sub panels use the standard calculation method per NEC requirements.

MAJOR APPLIANCES

DESCRIPTION	QTY	KVA (EA)
RANGE(S) & OVEN(S)	1	12
CLOTHES DRYER(S)	1	5.5
WATER HEATER(S)	1	4.5

MAJOR APPLIANCE INFORMATION

- **Ranges & Ovens** (Enter quantity & KVA)
- **Clothes Dryers** (Enter quantity & KVA)
- **Water Heaters** (Enter quantity & KVA)

BUILT-IN APPLIANCES (120 VOLT)

DESCRIPTION	QTY	AMPS
FURNACE	1	7.2
DISPOSAL	1	6.5
DISHWASHER	1	11.2
MIRCOWAVE	1	9
CENTRAL VAC	1	12

BUILT-IN APPLIANCES (120 VOLT) INFORMATION

- Enter the description, quantity, and amps for each load.

HEATING/COOLING

1.	ENTER 100% OF THE NAMEPLATE RATING(S) OF THE AIR CONDITIONING AND COOLING EQUIPMENT.	ENTER KVA: 4
2.	ENTER 100% OF THE NAMEPLATE RATING(S) OF THE HEAT PUMP WHEN THE HEAT PUMP IS USED WITHOUT ANY SUPPLEMENTAL ELECTRIC HEATING.	ENTER KVA: 0
3.	ENTER 100% OF THE NAMEPLATE RATING(S) IN KVA OF THE HEAT PUMP COMPRESSOR.	ENTER KVA: 0
	ENTER 100% OF THE SUPPLEMENTARY ELECTRIC HEAT USED WITH THE HEAT PUMP. NOTE: PROGRAM WILL AUTOMATICALLY ADJUST THIS AMOUNT TO 65%.	ENTER KVA: 0
4.	ENTER 100% OF THE NAMEPLATE RATING(S) OF ELECTRIC SPACE HEATING IF LESS THAN FOUR SEPARATELY CONTROLLED UNITS. NOTE: PROGRAM WILL AUTOMATICALLY ADJUST THIS AMOUNT TO 65%.	ENTER KVA: 0
5.	ENTER 100% OF THE NAMEPLATE RATING(S) OF ELECTRIC SPACE HEATING IF FOUR OR MORE SEPARATELY CONTROLLED UNITS. NOTE: PROGRAM WILL AUTOMATICALLY ADJUST THIS AMOUNT TO 40%.	ENTER KVA: 0
6.	ENTER 100% OF THE NAMEPLATE RATING(S) OF ELECTRIC THERMAL STORAGE AND OTHER HEATING SYSTEMS WHERE THE USUAL LOAD IS EXPECTED TO BE CONTINUOUS AT THE FULL NAMEPLATE VALUE. SYSTEMS QUALIFYING UNDER THIS SELECTION SHALL NOT BE CALCULATED UNDER ANY OTHER SELECTION IN 220.82(C).	ENTER KVA: 0

HEATING & COOLING INFORMATION

Enter the KVA of each item.

MISC. 120 VOLT LOADS

	DESCRIPTION	QTY.	AMPS EACH
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

MISC 120 VOLT LOAD INFORMATION

- Enter the description, quantity, and amps for each load.

NOTE: Do not include any loads listed under built-in appliances.

MISC. 208 OR 240 VOLT LOADS

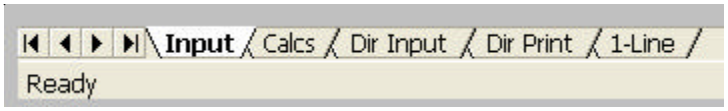
	DESCRIPTION	QTY.	AMPS EACH
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

MISC 208 or 240 VOLT LOAD INFORMATION

- Enter the description, quantity, and amps for each load.

NOTE: Do not include any loads listed under built-in appliances.

TABS



Located at the bottom of the screen are 5 tabs.

1. Input tab is used to enter your project's information.

2. Calcs tab is used to view and print your load calculations.

3. Dir Input tab is used to input the circuit directory information.

4. Dir Print tab is used to print the circuit directory.

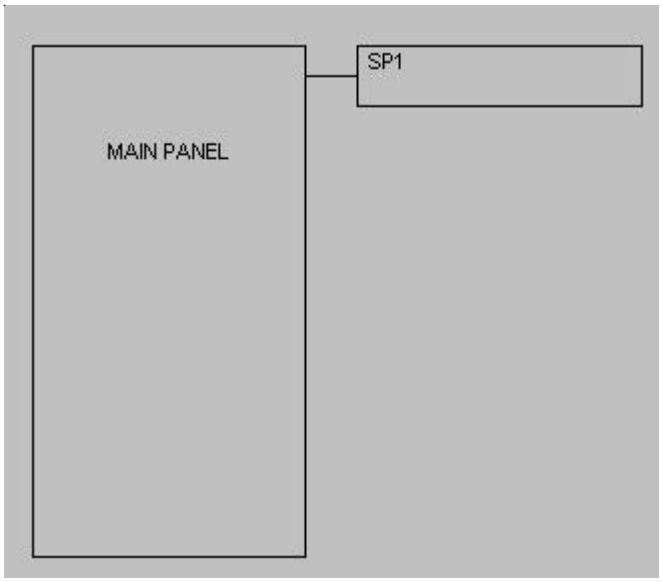
5. The 1-Line tab is used to print the 1-Line drawing.

WORKING WITH SUBPANELS

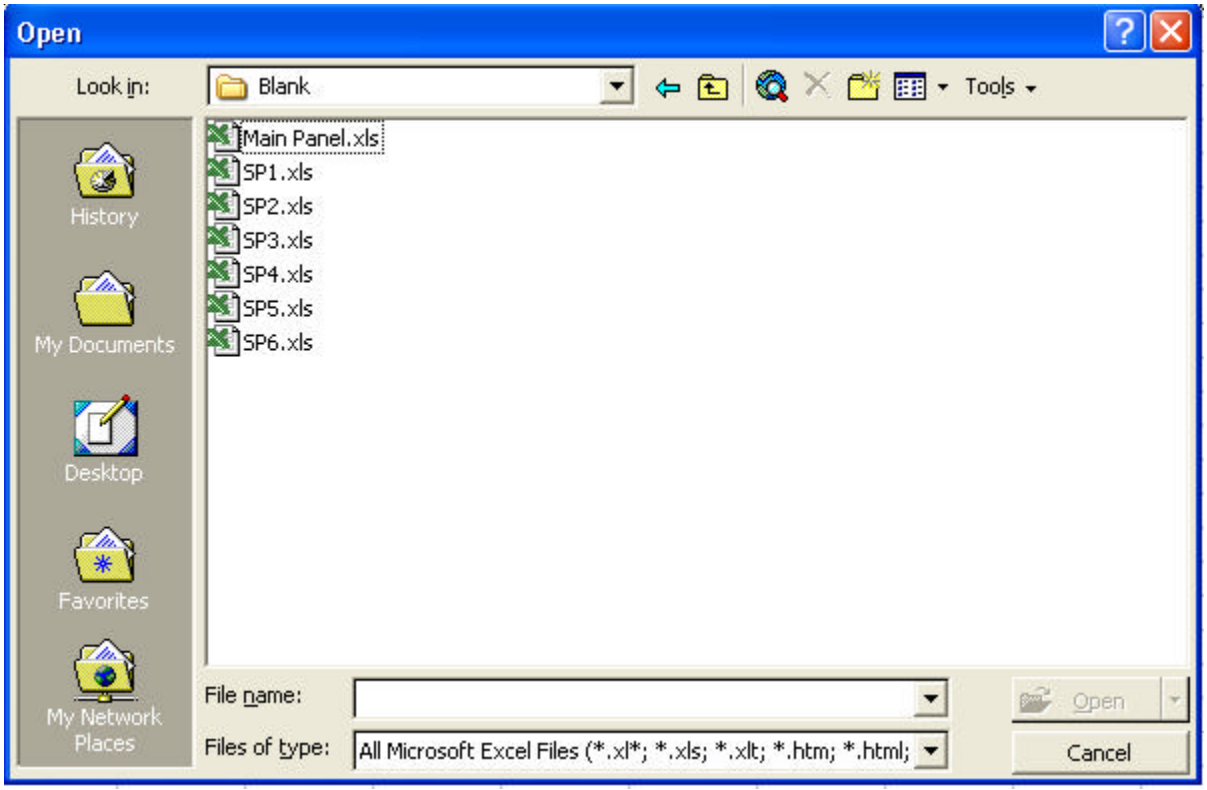
Let's say you wish to have a sub panel fed from the main panel.

On the main panel input tab enter 1 sub panel.

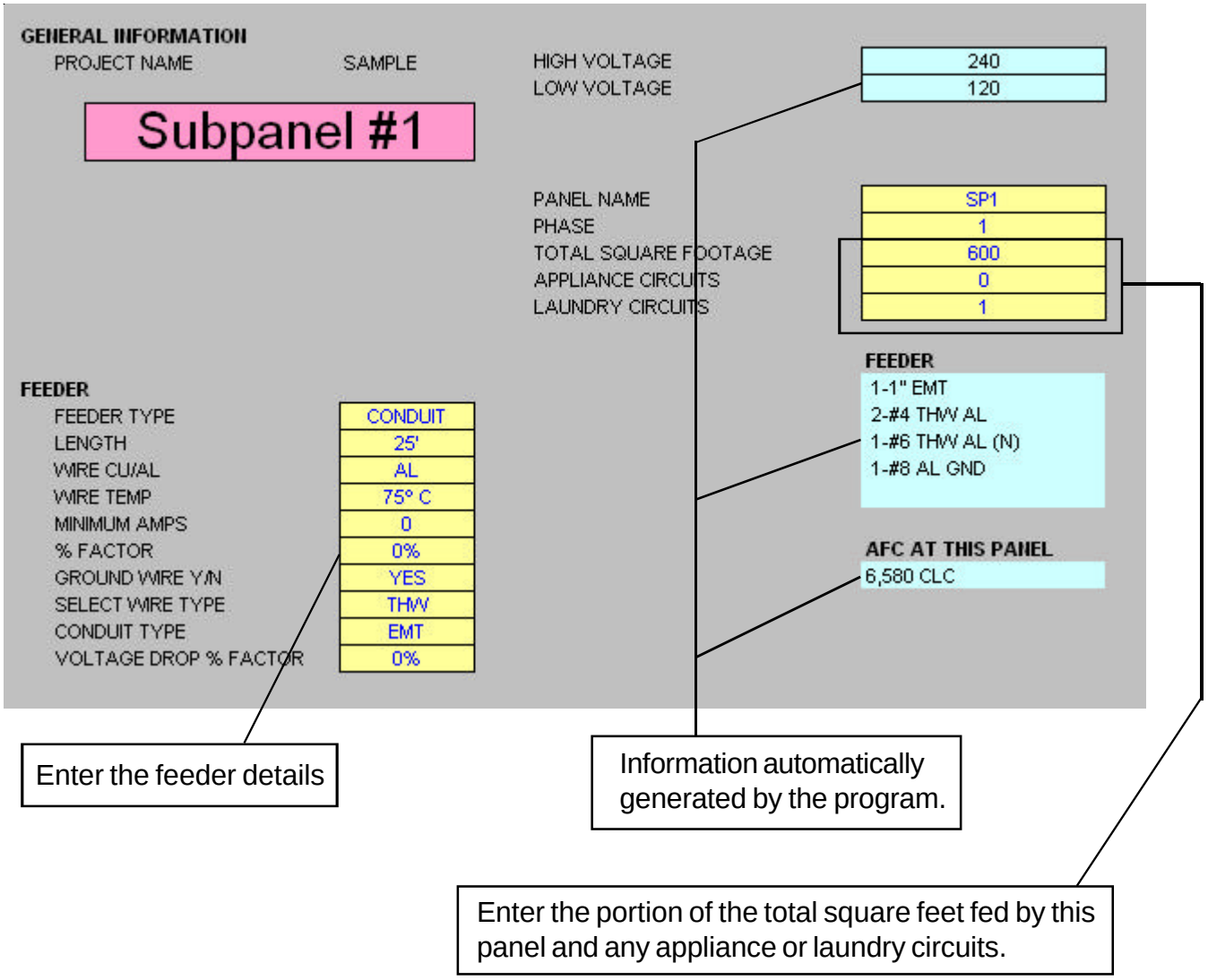
The display will now show 1 subpanel.

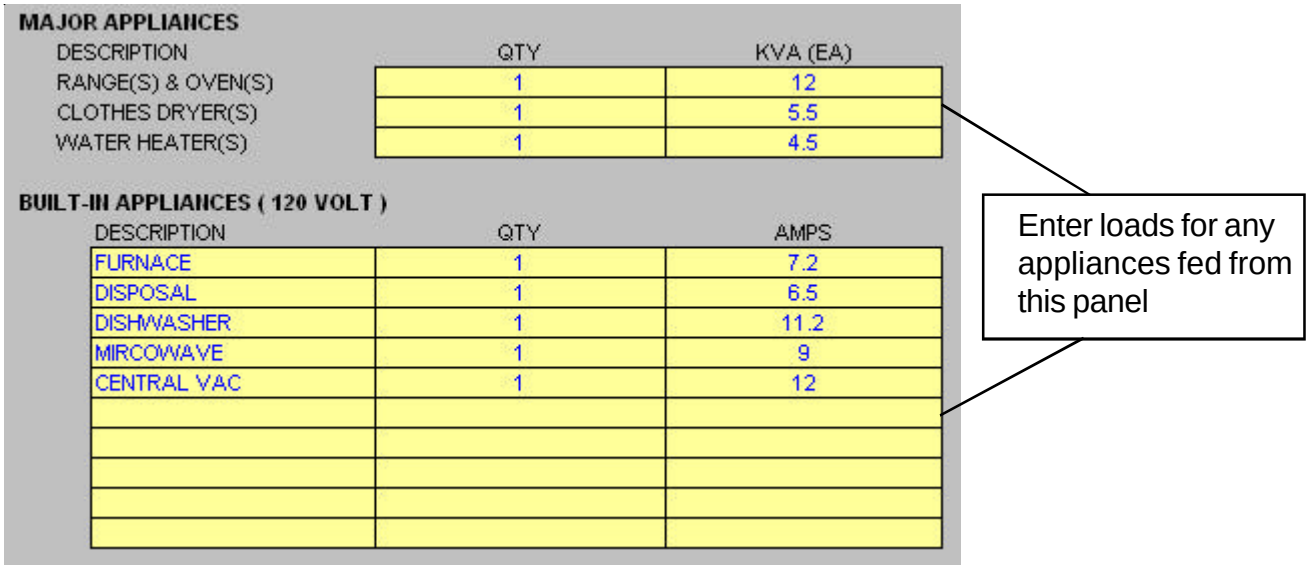


New use the FILE OPEN command and select SP1, then click open.

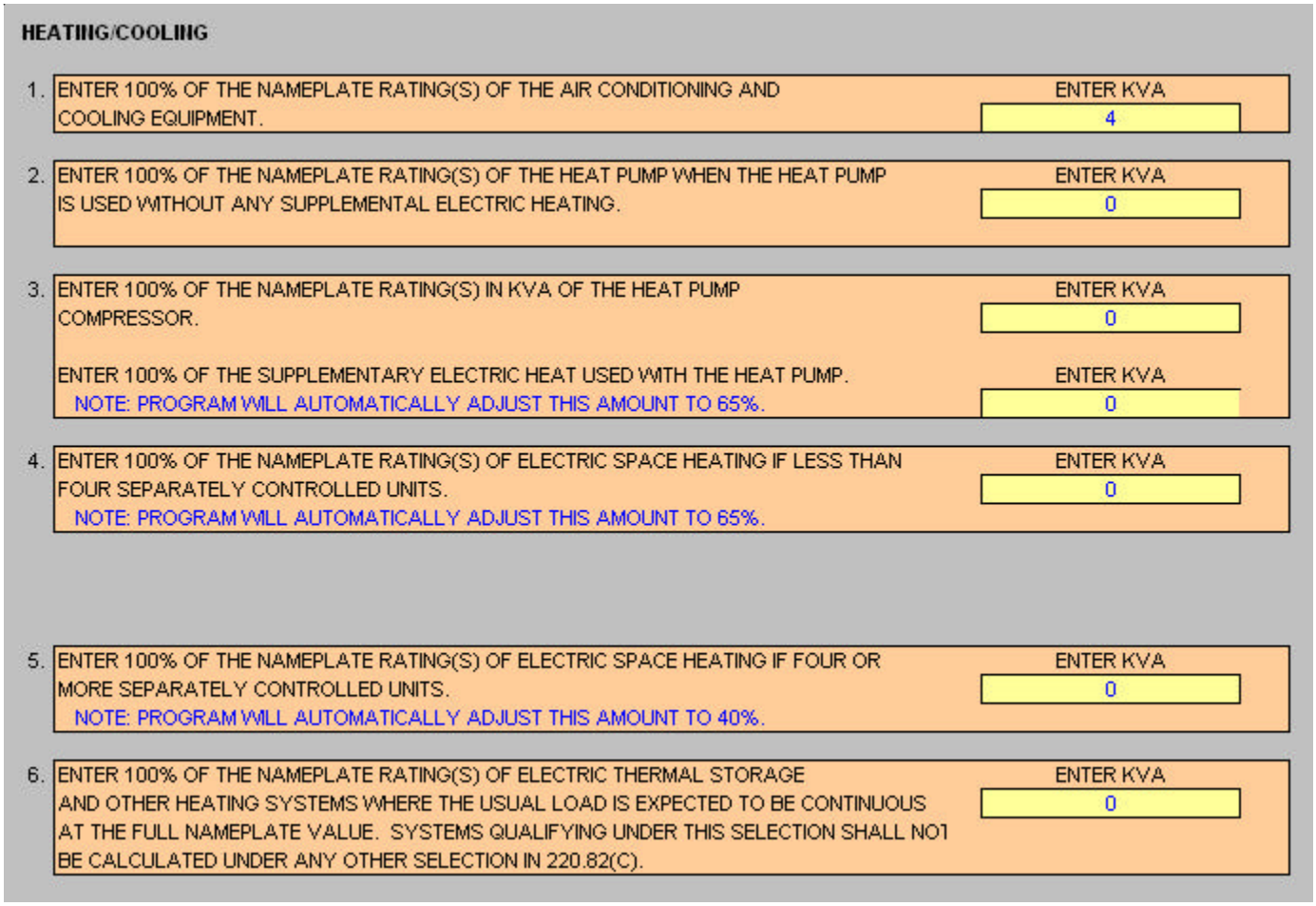


GENERAL ENTRIES



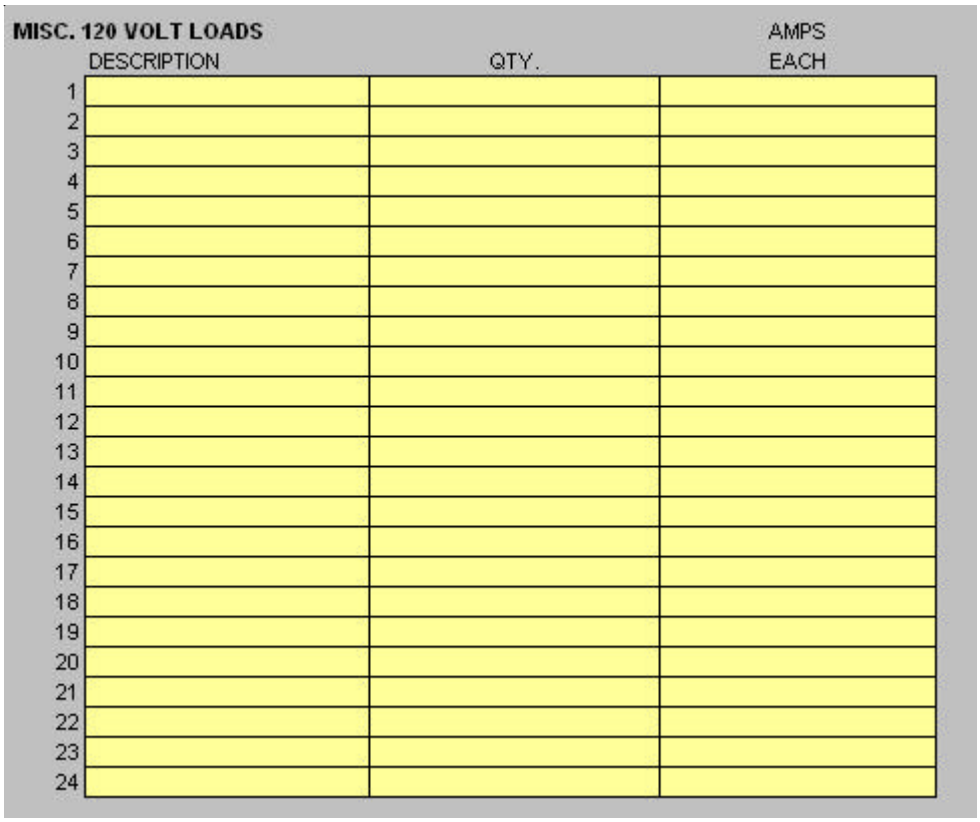


HVAC ENTRIES



Enter heating & cooling loads fed from this panel.

NOTE:
Displayed above is the heating & cooling loads for the 2020, 2017, 2014, 2011, and 2008 NEC. Other Code years will appear differently.



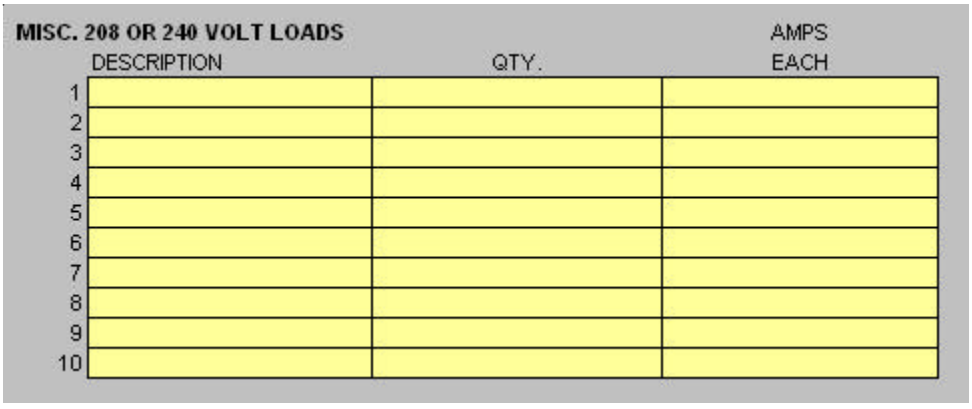
MISC. 120 VOLT LOADS

	DESCRIPTION	QTY.	AMPS EACH
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

MISC 120 VOLT LOAD INFORMATION

- Enter the description, quantity, and amps for each load fed from this panel.

NOTE: Do not include any loads listed under built-in appliances.



MISC. 208 OR 240 VOLT LOADS

	DESCRIPTION	QTY.	AMPS EACH
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

MISC 208 or 240 VOLT LOAD INFORMATION

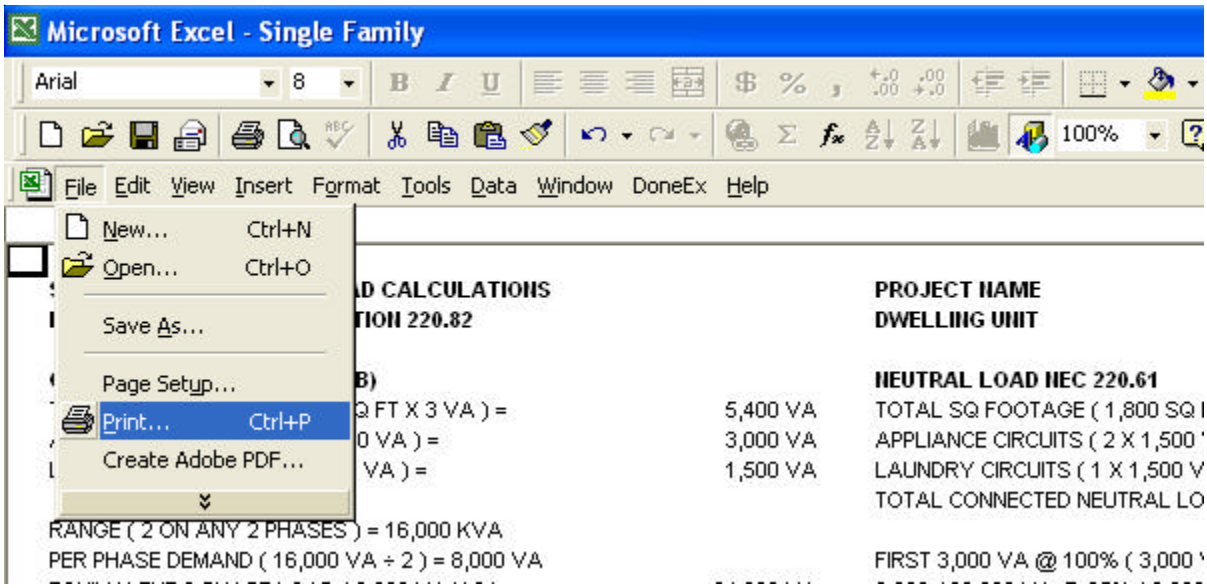
- Enter the description, quantity, and amps for load fed from this panel.

NOTE: Do not include any loads listed under built-in appliances.

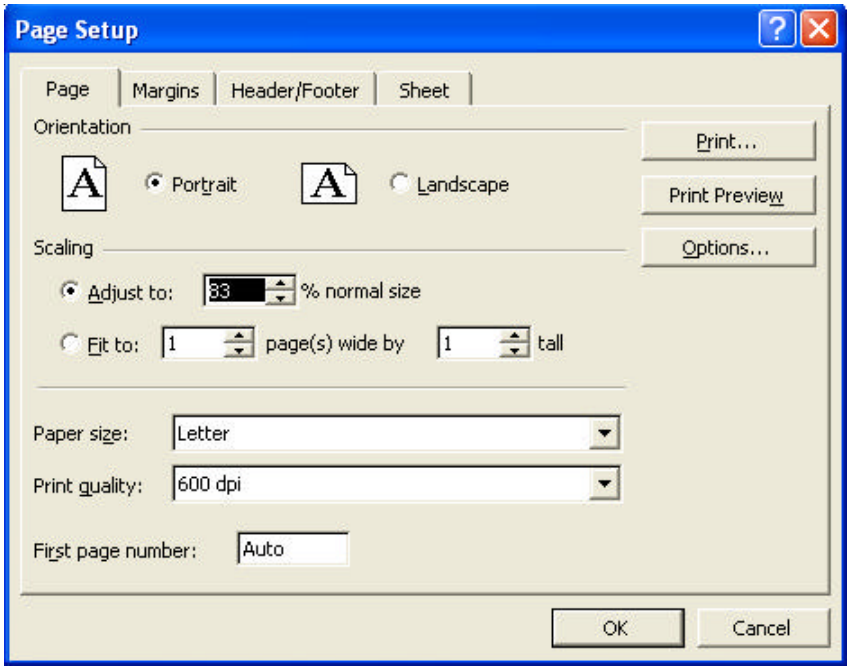
PRINTING

To print your load calculations, circuit directory, or 1-Line click on the Calcs Tab.

Select the File Print Command

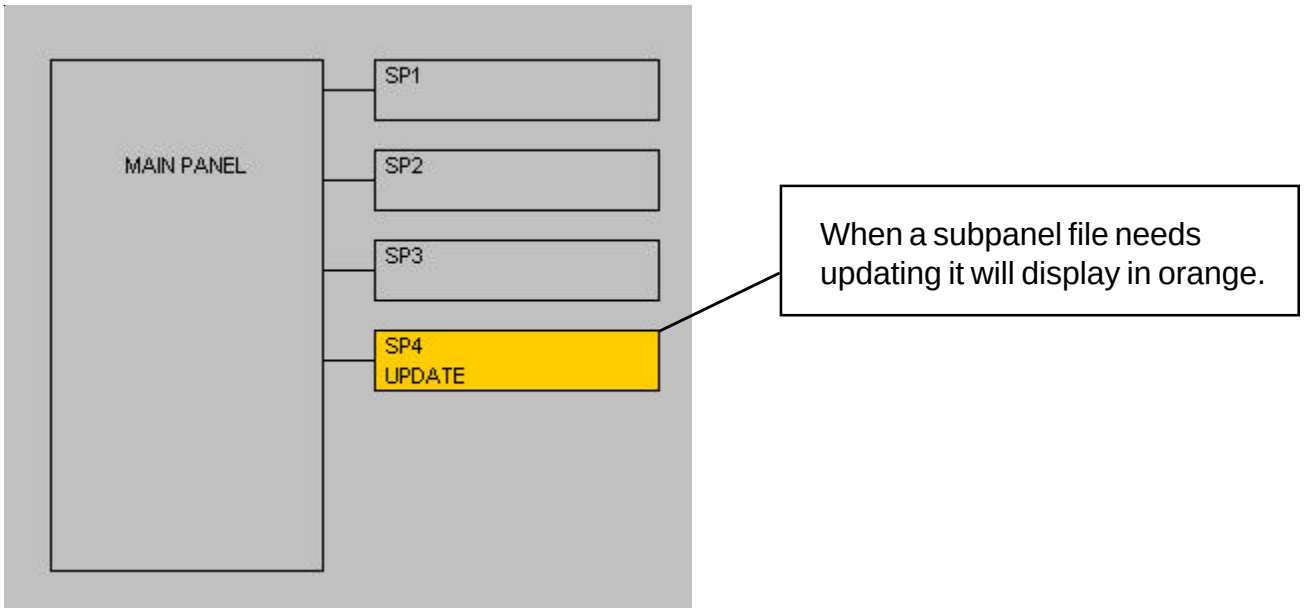


If the calculations print on more than one page, go to the “File Page Setup Command” and reduce the percentage.



UPDATE

The subpanel files link to the main panel file. When certain information in the main panel changes the subpanel file may require updating.



To update a file use the FILE OPEN command and select the desired file.