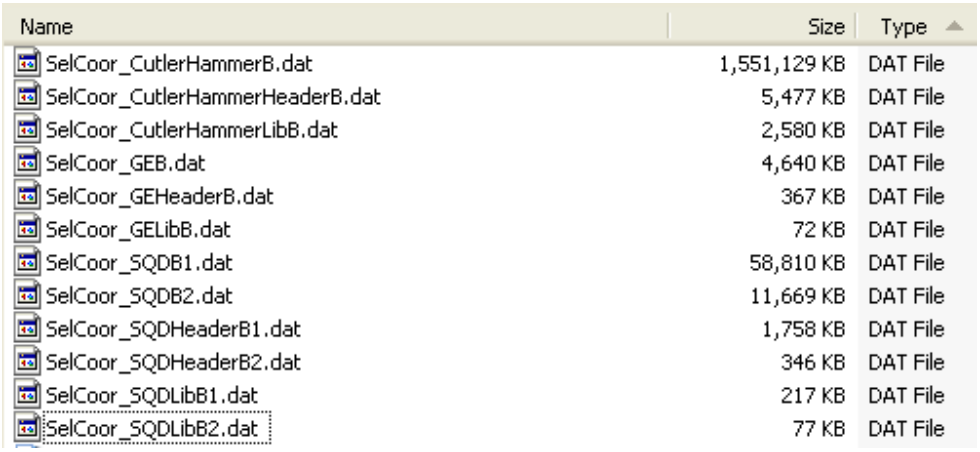
How Selective Coordination Feature Work in PTW

The Selective Coordination Feature in PTW allow users to pick selectively coordinated breakers for the upstream or downstream device from a list based on the manufacturer selectivity data.

For the feature to work, it is critical that the selective coordination *.dat files are in the same directory as the reference library of the project (by default it is found in C:\PTW32\Lib). Go to Project->Options->Library to verify the location of the reference library (eg. C:\PTW32\Lib)
See below for the list of selective coordination files:



Name	Size	Type
SelCoor_CutlerHammerB.dat	1,551,129 KB	DAT File
SelCoor_CutlerHammerHeaderB.dat	5,477 KB	DAT File
SelCoor_CutlerHammerLibB.dat	2,580 KB	DAT File
SelCoor_GEB.dat	4,640 KB	DAT File
SelCoor_GEHeaderB.dat	367 KB	DAT File
SelCoor_GELibB.dat	72 KB	DAT File
SelCoor_SQDB1.dat	58,810 KB	DAT File
SelCoor_SQDB2.dat	11,669 KB	DAT File
SelCoor_SQDHeaderB1.dat	1,758 KB	DAT File
SelCoor_SQDHeaderB2.dat	346 KB	DAT File
SelCoor_SQDLibB1.dat	217 KB	DAT File
SelCoor_SQDLibB2.dat	77 KB	DAT File

Using a simple circuit below showing the upstream breaker PD-0001 and the downstream breaker PD-0002, the upstream breaker will be used as reference to find a selectively coordinated downstream breaker.

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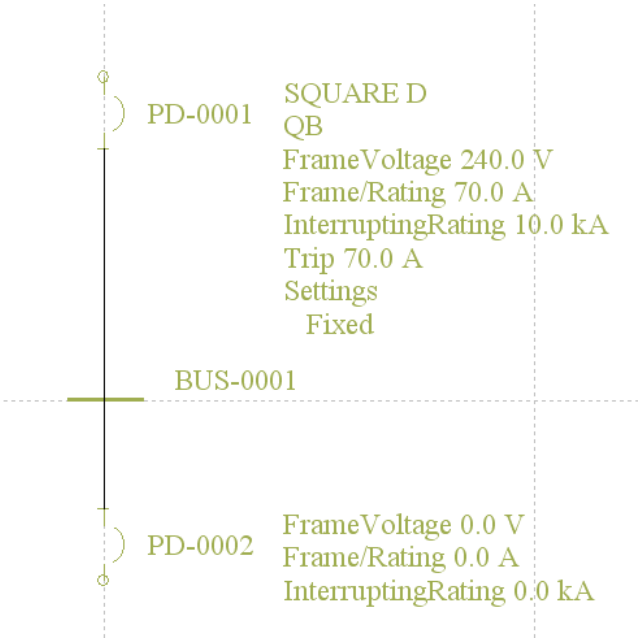
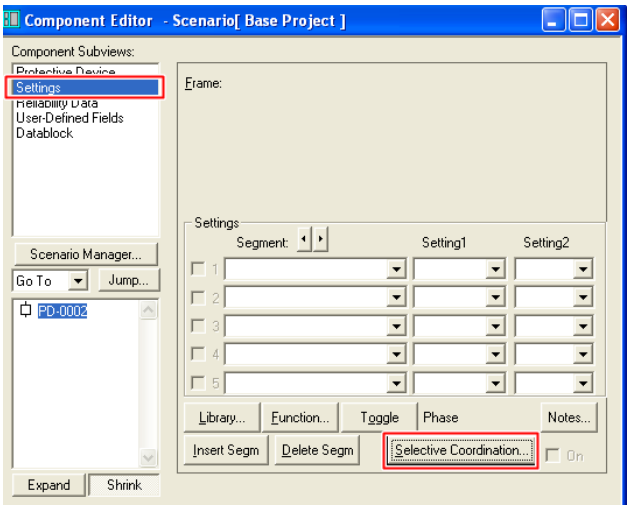


In this example, the upstream breaker (PD-0001) is a 70A, Square D, type QB breaker rated at 240V. To find a selectively coordinated downstream breaker, go to the Component Editor of the breaker (PD-0002) and click on the Selective Coordination button under the Settings subview. (Note: the selective coordination button is also found in Captor TCC under the Settings tab).



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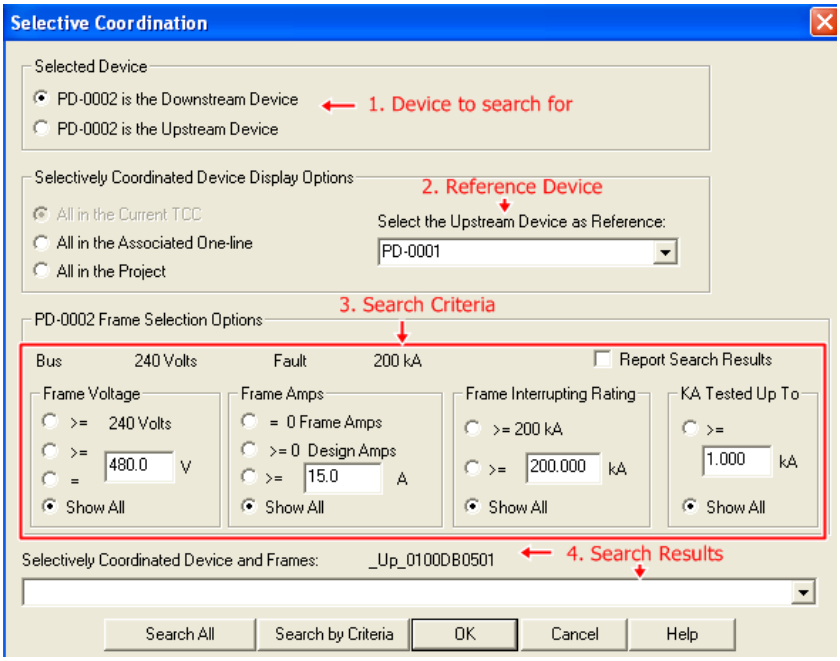
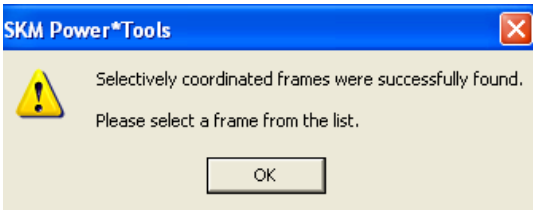
In the Selective Coordination Window shown below, refer to the following steps to find a coordinated breaker:

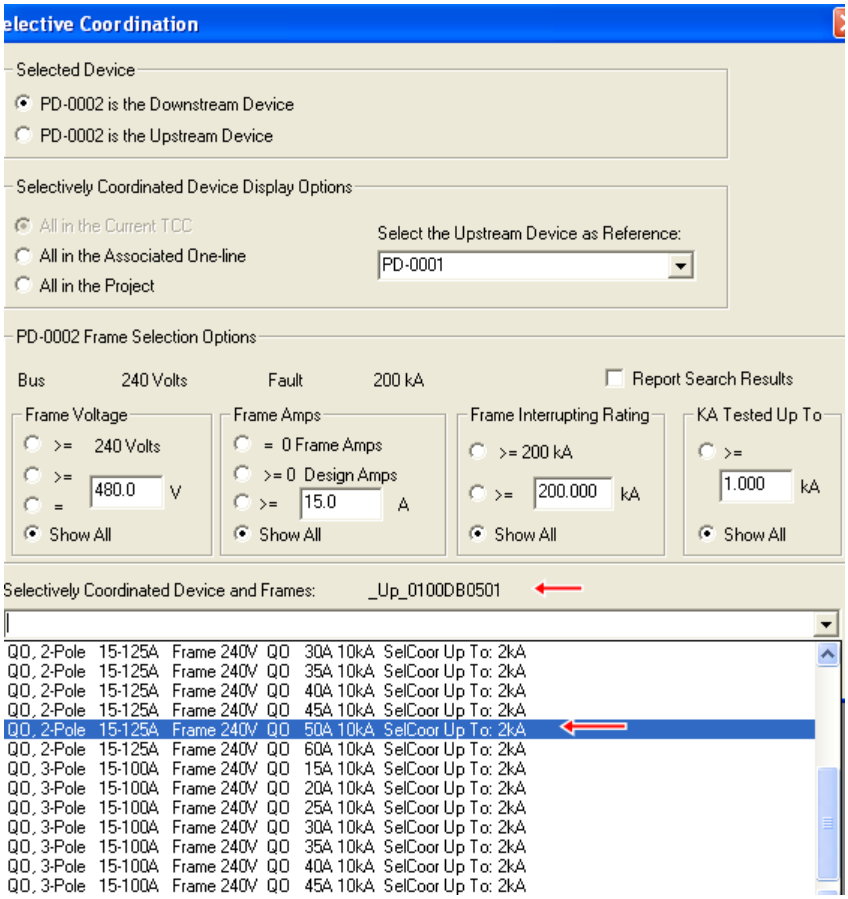


1. Choose whether the breaker being searched for (PD-0002) is upstream or downstream. Although, the program will automatically detect its connection in reference to the bus it is connected to and selects the appropriate location, it is a good practice to verify its location.
2. Select the reference device in which the breaker (PD-0002) will selectively coordinate from. Since the breaker being searched for is a downstream device, the reference device will be the upstream breaker (PD-0001). If the drop down list does not display the reference breaker you are looking for, click on “All in the Associated One-line” or “All in the Project” to expand the list.
3. Define the search criteria for the breaker ratings you are searching for. The criteria includes voltage, current, interrupting rating, and tested kAIC. A “Show All” option is available to expand the search without a specific criteria.
4. Once the search criteria is set, click on the “Search by Criteria” button to generate a list of coordinated breakers. A “Search All” button is also available to bypass the defined search

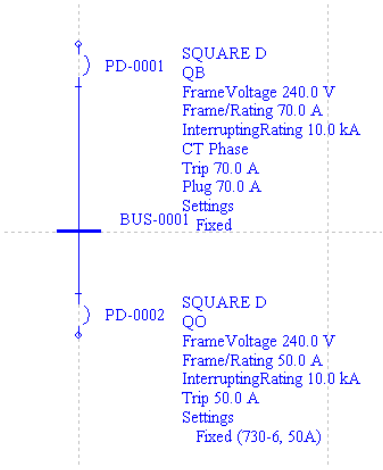
criteria and show all the coordinated breakers in the selectivity data from the reference device. The user will be prompted by a similar message below once the search is complete.

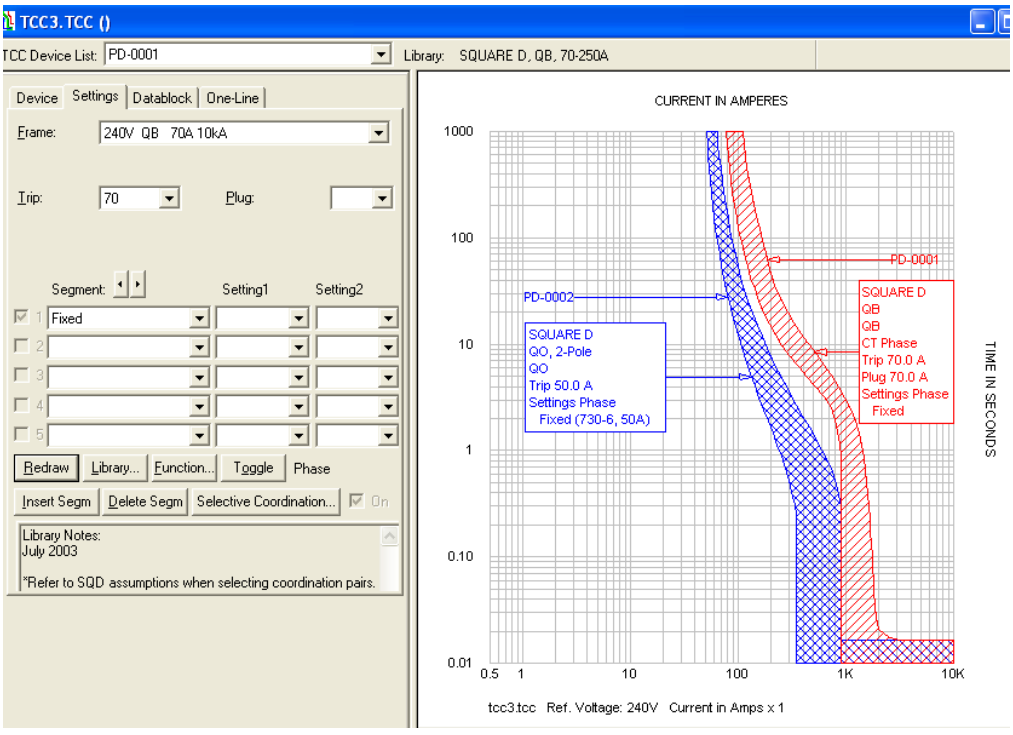


Click on the drop-down list and select the desired breaker frame to use. In this example, we will select the breaker frame shown below.



The coordinated breaker is now set. The TCC plot below shows the coordination between the upstream and downstream breaker.





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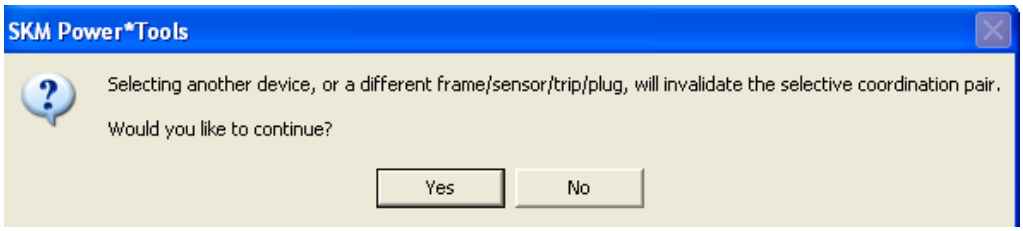
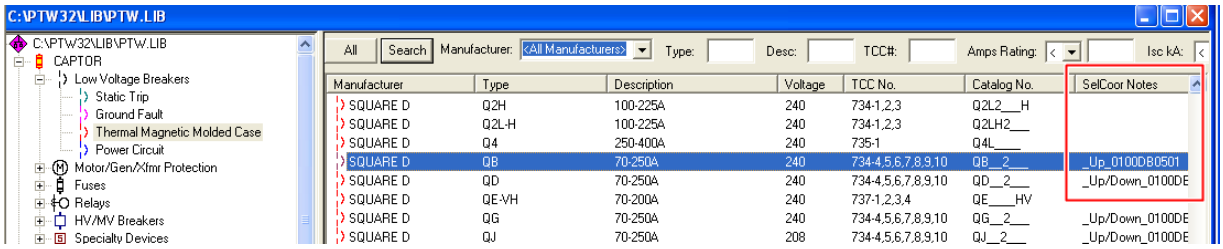
Additional Notes:

If one tries to change the frame selection or change the breaker library model of the coordination pair, the user will receive a warning prompt below.



There are instances when the reference breaker does not have selective coordination data in the library and the user will be prompted with the appropriate message.

To verify whether the reference breaker has selective coordination data, go to the library of the reference breaker and check the “SelCoor Notes” column. If it is blank, there is no selective coordination data available for this breaker. If there is one existing, it will show the SelCoor Notes description. The description will be marked with Up, Down, or Up/Down pre-fixes. These markers indicate whether the breaker can be used as the upstream device, downstream device, or both.



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Not all breaker frames will have selective coordination data. Thus, check the library under the "Up/Down SelCoor" and "Down/Up SelCoor" whether the selected frame has data similar to the one shown below.