

Balance It!

Introduction:

Balance It! allows for the turning movement volumes of up to 81 intersections (in a 9x9 grid) to be balanced, so that the volumes departing one intersection match those arriving at the downstream intersection.

Balance It! uses an iterative process to balance intersection volumes, and reduces or increases approach volumes proportional to their magnitude, much as an Engineer would do.

Instructions:

1. Open the Balance It.xls file.
2. Enable macros.
3. To enter volumes you wish to balance, click on a blue square, and enter volumes in the pop-up window.
4. Now click BALANCE to balance the volumes ... the program will show the balanced volumes screen.
5. Use the Entered Vols. and Balanced Vols. radio buttons to toggle between entered volumes and balanced volumes.
6. Balance It! shows the total intersection volume, and the delta between approach and departure volumes for intersections.
7. To save the file, click on SAVE and enter the name of the file.
8. To load a previous file click LOAD, and open the required file.
9. Click on Output to create a SYNCHRO UTDF file, and then use SYNCHRO to read in the balanced volumes.
10. Clear all entered volumes by clicking CLEAR.

Details:

- Balance It will default to the highest volume intersection as the location to balance volumes to. This means that the volumes at this intersection will not be altered, while surrounding intersection volumes will be manipulated (based on a weighing methodology) to balance. However, the user can also enter the coordinates of the intersection they wish to balance to, essentially overriding the program default.
- While in the volume screen, you are also able to enter a Peak Hour Factor (PHF) and Growth Factor. Thus, you don't have to manipulate volumes prior to entering, and you can balance volumes to account for different PHF's at different intersections.
- Also in the volume screen, you can enter appropriate SYNCHRO node ID's for outputting to UTDF format. These ID's should match nodes in a SYNCHRO network that you have already created. This allows for error free transfer to SYNCHRO.