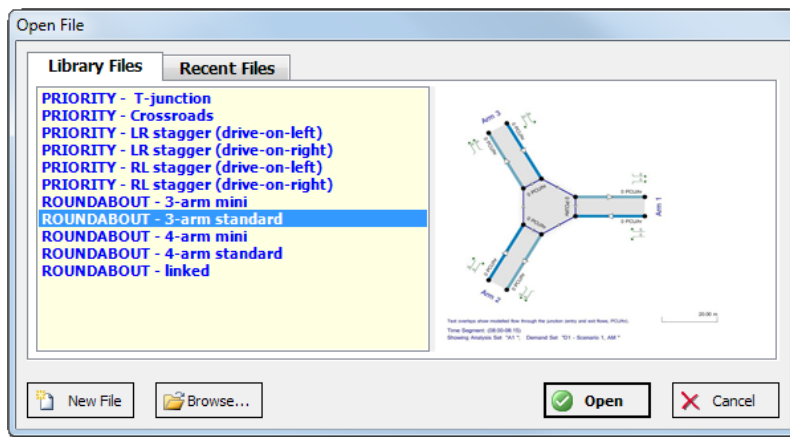


Quick-start guide to Junctions 8 for ARCADY/PICADY users

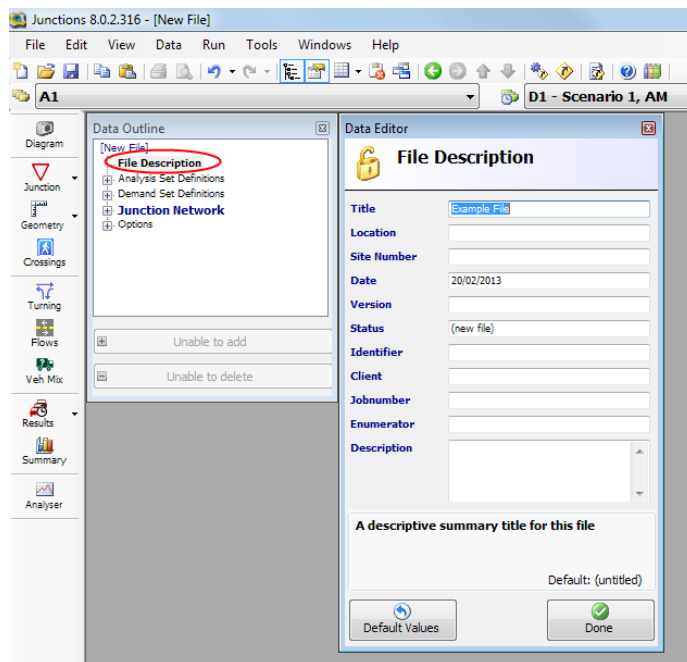
Using Junctions 8 you can very quickly set up an ARCADY or PICADY model.

This quick-start guide summarises the steps needed to set up a basic model for a 3-arm roundabout using the ONE HOUR (ODTAB) traffic profile. Setting up a PICADY model follows the same steps.

1. Launch the program.
2. Double click on the required junction type. This will create a new file.



3. OPTIONAL: Double click *File Description* in the Data Outline and enter a title and other details for the file.



- On the main toolbar, press the *Demand Sets* icon and the *Data Grid* button.



This will show a list of all demand sets. In a new file, there will only be a single demand set. In the Data Outline, make sure that the first demand set is selected, and then click the 'Add a copy' button. A second demand set will appear in both the Data Outline and in the data grid.

Now use the data grid to edit the properties of the demand sets. In this example there are two sets for AM and PM peaks in the base year (2013). Both sets use the default ONE HOUR (ODTAB) profile.

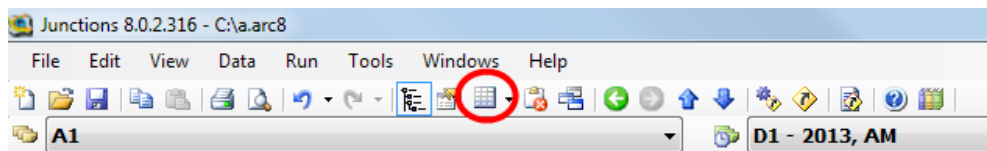
Data Grid - Demand Set - Showing 2 of 2 items

Custom Grids ▾ Filters ▾ Rotate grid Full-size mode

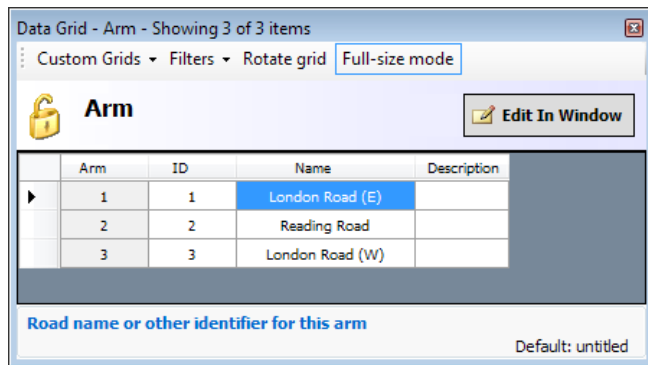
Demand Set Edit In Window

Demand Set	Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
1	2013, AM	2013	AM		ONE HOUR ▾	07:30	09:00	90	15	<input type="checkbox"/>	<input type="checkbox"/>
2	2013, PM	2013	PM		ONE HOUR ▾	16:30	18:00	90	15	<input type="checkbox"/>	<input type="checkbox"/>

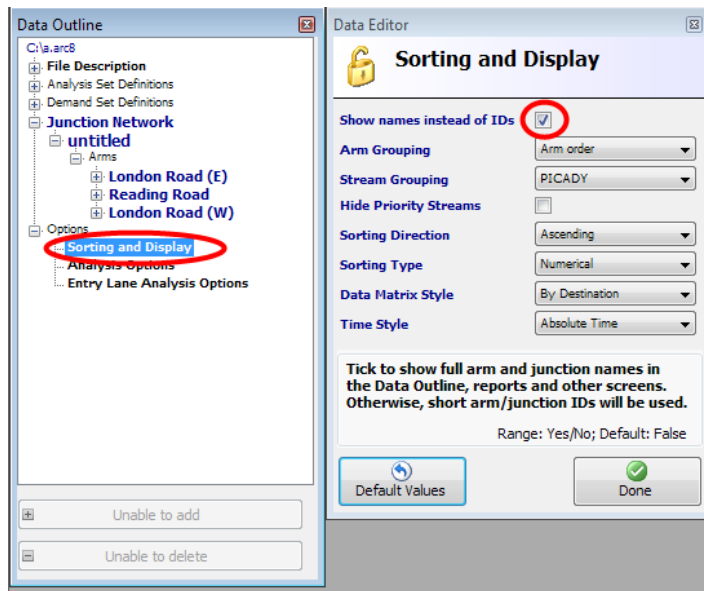
- Click the *Diagram* icon on the main left-hand toolbar. This will show a schematic of the junction. You do not need to ever display this diagram, but, it can be a quick way of selecting arms and other data.
- You should not need to change the number of arms, because they were set when you first started the file. If you do need to do so, right-click on any arm in the diagram and choose *Add another arm*.
- OPTIONAL: click on any arm in the diagram (click on the label, e.g. "Arm 1") and drag with your mouse to position in roughly the correct position.
- Click on any Set arm in the diagram and, if necessary, show a new data grid.



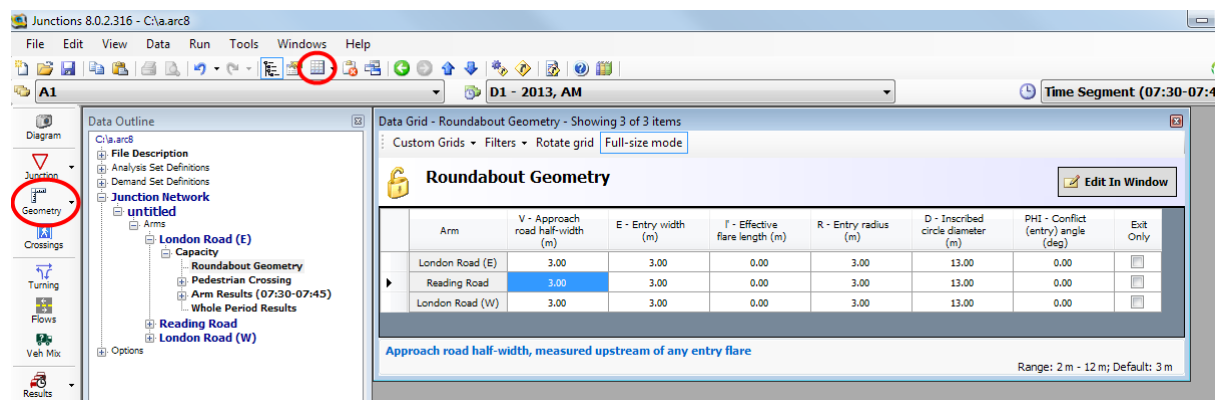
Edit the name of each arm in the data grid:



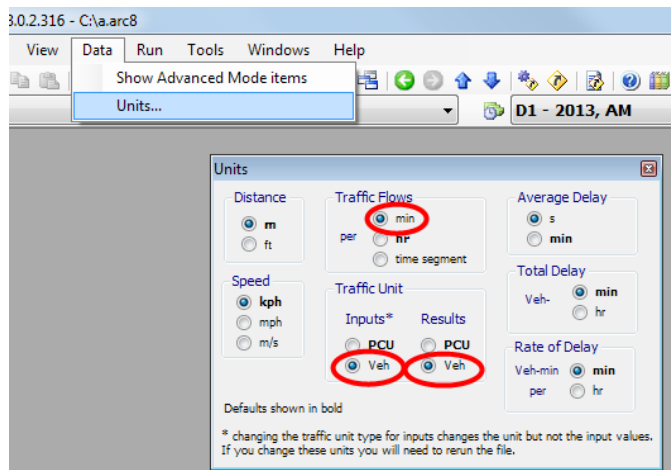
9. OPTIONAL: Use the Data Outline as shown below to turn on the *Show names instead of IDs* option. The diagram and other screens will then show e.g. “London Road” instead of “Arm 1”.



10. Press the *Geometry* button on the main left-hand toolbar. Show a new data grid if required. Enter the ARCADY geometries for each arm.



11. OPTIONAL: Press the *Crossings* button on the main left-hand toolbar. Show a new data grid if required. Select the crossing type for each arm. If any arm has a crossing, the Data Outline will show an additional section within the *Pedestrian Crossing* section, where you can enter the relevant details. Again, you can use a data grid to do this for all arms.
12. Click *Data>Units* and choose whether you would like to work in, for example, PCU/hr or Veh/min. (You can change at any time). In this example we have chosen Veh/min for both inputs and results. (NOTE: you can save a template file to save having to set this up for every file.)

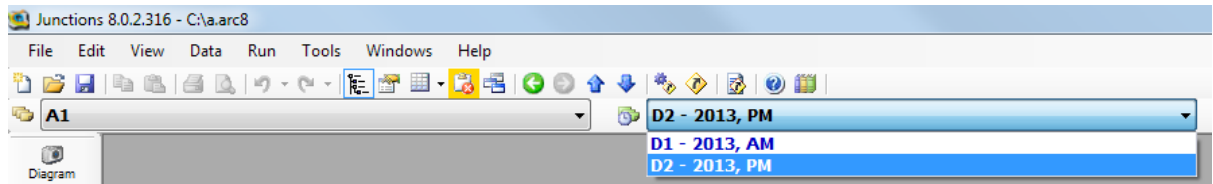


13. Press the *Turning* button on the main left-hand toolbar. Enter the hourly turning count demand data for the AM peak for each arm, taking note of the units (in this case, veh/min). NOTE: you can click *Edit>Paste* on the main toolbar to paste in data from Excel. (To see an example of the required format, click *Edit>Copy* and paste into Excel.)

From \ To	London Road (E)	Reading Road	London Road (W)	Total
London Road (E)	0.00	20.00	15.00	35.00
Reading Road	5.00	0.00	20.00	25.00
London Road (W)	9.00	10.00	0.00	19.00
Total	14.00	30.00	35.00	-

14. OPTIONAL: Press the *Flows* button on the main left-hand toolbar. This screen can be used to set up additional options and confirm the flows that will be used by the model. If there are any pedestrian crossings, use the *Pedestrian Demand* section of this screen to enter the pedestrian flow for each arm.
15. Press the *Veh Mix* button on the main left-hand toolbar. Enter the Heavy Vehicle percentages for the AM peak for each arm. NOTE: you can click *Edit>Paste* on the main toolbar to paste in data from Excel. (To see an example of the required format, click *Edit>Copy* and paste into Excel.)

16. Demand data has now been entered for the first demand set (AM peak). Next, select the second demand set (PM Peak) from the dropdown menu at the top of the screen and repeat the previous three steps. If there are more demand sets, repeat as necessary.



17. The file is now ready to be run. Press the *Run* button on the main toolbar.



The ARCADY model will be run and a set of summary results for the currently selected demand set will appear:

AM				
	Queue (Veh)	Delay (s)	RFC	LOS
A1 - 2013				
London Road (E)	10.03	59.65	0.94	F
Reading Road	8.90	53.11	0.92	F
London Road (W)	0.35	10.49	0.26	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

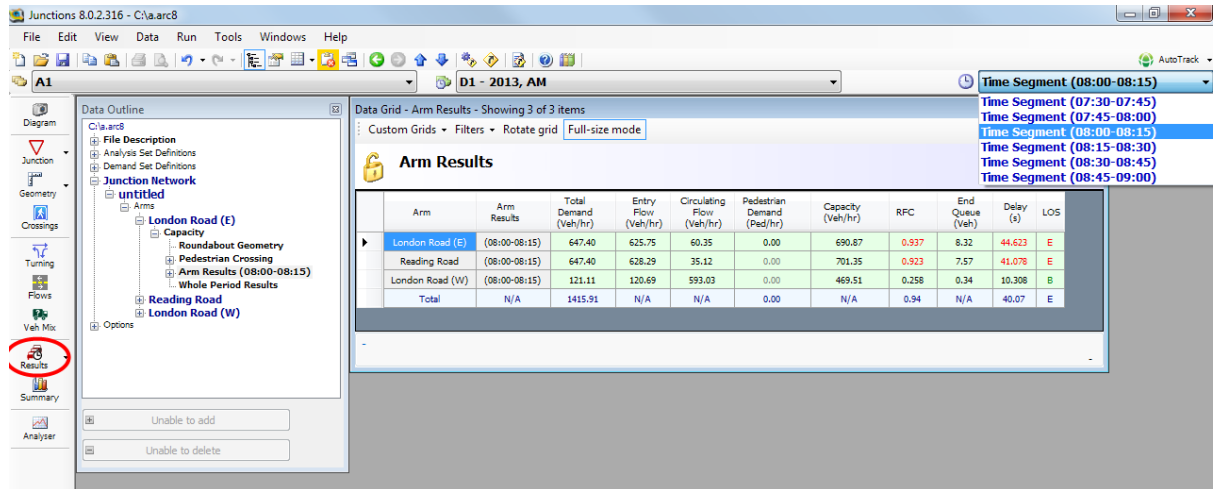
Often it is useful to see summary results for ALL demand sets. To do so, use the *Mode* menu in the Summary Results screen and then re-run the file:

PM								
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 - 2013								
London Road (E)	10.03	59.65	0.94	F	0.45	7.41	0.31	A
Reading Road	8.90	53.11	0.92	F	0.45	7.41	0.31	A
London Road (W)	0.35	10.49	0.26	B	0.45	7.41	0.31	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2013, AM" model duration: 07:30 - 09:00
 "D2 - 2013, PM" model duration: 16:30 - 18:00
 Run using Junctions 8.0.2.316 at 20/02/2013 11:40:19

18. OPTIONAL: to see more detailed results, press the *Results* button on the main left-hand toolbar. If necessary, show a new data grid. The *Time Segment* menu at the top of the screen can be used to select the time segment to show results for. If necessary you can use the Data Outline to drill down to further results.



19. OPTIONAL: Click *Run>Generate Report* to show a full report of the data file inputs and results. Within the Report Viewer, click *Convert>Save as PDF* to create a PDF version of the report.

Junctions 8 includes many more options and features. For full details, please see the User Guide supplied with the program.

If you have any questions or comments about any aspect of Junctions 8, please contact us at software@trl.co.uk.