Router Quick Reference

Version 4.0.56

Syntax:

Router [-flag] [control_file] [partition]

Purpose:

1. Generate travel plans for household activities that are connected by walk, drive, transit, park-&-ride, kiss-&-ride, bicycle, and magic move modes.
2. Generate travel plans for household and itinerant trips by walk, drive, transit, park-&-ride, kiss-&-ride, bicycle, and magic move modes.
3. Build travel plans from specified origins to specified destinations at specified times of day using a specified travel mode.
4. Selectively route activities or trips from specified origins, to specified destinations, at specified times of day, and/or by specified modes.
5. Generate problem files for those activities or trips that could not be routed for specific reasons.
6. Implement an incremental capacity restrained assignment algorithm.
7. Build travel plans for select household, person, and trip records.
8. Update an existing plan file.
9. Dump out an ArcView shapefile showing the links reached by a path building task that experienced problems of a selected type.
10. Routing by selected trip purposes.
11. A vehicle file is optional for plans that are not simulated.

Required Keys

NET_NODE_TABLE	[net_directory]*filename*
NET_LINK_TABLE	[net_directory]*filename*
NET_LANE_CONNECTIVITY_TABLE	[net_directory]*filename*
NET_PARKING_TABLE	[net_directory]*filename*
NET_ACTIVITY_LOCATION_TABLE	[net_directory]*filename*
NET_PROCESS_LINK_TABLE	[net_directory]*filename*
VEHICLE_FILE (1)	[project_directory]*filename*
TRIP_FILE (1)	[project_directory]*filename*
ACTIVITY_FILE (1)	[project_directory]*filename*
NEW_PLAN_FILE (2)	[project_directory]*filename*[.partition]

Optional Keys

TITLE	Text
REPORT_FILE	*Filename*
REPORT_FLAG	FALSE {true/false/yes/no/1/0}
MAX_WARNING_MESSAGES	100,000

MAX_WARNING_EXIT_FLAG	TRUE {true/false/yes/no/1/0}
PROJECT_DIRECTORY	*Pathname*
DEFAULT_FILE_FORMAT	VERSION3 {(4)}
TRAVELER_SCALING_FACTOR	100 {2..100}
NET_DIRECTORY	*Pathname*
NET_LANE_USE_TABLE	[net_directory]*filename*
NET_TOLL_TABLE	[net_directory]*filename*
NET_TURN_PROHIBITION_TABLE	[net_directory]*filename*
NET_TRANSIT_STOP_TABLE	[net_directory]*filename*
NET_TRANSIT_FARE_TABLE	[net_directory]*filename*
NET_TRANSIT_ROUTE_TABLE	[net_directory]*filename*
NET_TRANSIT_SCHEDULE_TABLE	[net_directory]*filename*
LINK_DELAY_FILE	[project_directory]*filename*
PLAN_FILE (10)	[project_directory]*filename*[.partition]
HOUSEHOLD_LIST (11)	[project_directory]*filename*[.partition]
HOUSEHOLD_RECORD_FILE (11)	[project_directory]*filename*[.partition]
HOUSEHOLD_FILE	[project_directory]*filename*
HOUSEHOLD_TYPE_SCRIPT	[project_directory]*filename*
PARKING_PENALTY_FILE	[project_directory]*filename*
SORT_VEHICLES	TRUE {true/false/yes/no/1/0}
IGNORE_VEHICLE_ID	FALSE {true/false/yes/no/1/0}
VEHICLE_TYPE_FILE	[project_directory]*filename*
TIME_OF_DAY_FORMAT	HOURS {(5)}
PLAN_FORMAT	VERSION3 {VERSION3/BINARY}
NEW_PLAN_FORMAT	VERSION3 {VERSION3/BINARY}
NODE_LIST_PATHS	TRUE {true/false/yes/no/1/0}
WALK_PATH_DETAILS	FALSE {true/false/yes/no/1/0}
NEW_PROBLEM_FILE	[project_directory]*filename*[.partition]
NEW_PROBLEM_FORMAT	[default_file_format] {(4)}
ROUTE_SELECTED_MODES	{1,2,3,4,5,6,7,8,9,10,11,12,13,14}
ROUTE_WITH_SPECIFIED_MODE	{1,2,3,4,5,6,7,8,9,10,11,12,13,14}
ROUTE_FROM_SPECIFIED_LOCATIONS (1)	All
ROUTE_TO_SPECIFIED_LOCATIONS (1)	All
ROUTE_AT_SPECIFIED_TIMES	All
ROUTE_BY_TIME_INCREMENT	0 minutes {0..240}
ROUTE_SELECTED_PURPOSES	All
LIMIT_PARKING_ACCESS	TRUE {{true/false/yes/no/1/0}
IGNORE_TIME_CONSTRAINTS	FALSE {true/false/yes/no/1/0}
END_TIME_CONSTRAINT	0 minutes
IGNORE_ROUTING_PROBLEMS	FALSE {true/false/yes/no/1/0}

PERCENT_RANDOM_IMPEDANCE	0 percent
RANDOM_NUMBER_SEED	0
WALK_SPEED	1.0 meters per second
BICYCLE_SPEED	4.0 meters per second
WALK_TIME_VALUE	20.0 units per second [,#,#,#,…] (3)
BICYCLE_TIME_VALUE	15.0 units per second [,#,#,#,…] (3)
FIRST_WAIT_VALUE	20.0 units per second [,#,#,#,…] (3)
TRANSFER_WAIT_VALUE	20.0 units per second [,#,#,#,…] (3)
VEHICLE_TIME_VALUE	10.0 units per second [,#,#,#,…] (3)
DISTANCE_VALUE	0.0 units per meter [,#,#,#,…] (3)
COST_VALUE	0.0 units per cent [,#,#,#,…] (3)
LEFT_TURN_PENALTY	0.0 units [,#,#,#,…] (3)
RIGHT_TURN_PENALTY	0.0 units [,#,#,#,…] (3)
UTURN_PENALTY	0.0 units [,#,#,#,…] (3)
TRANSFER_PENALTY	0.0 units [,#,#,#,…] (3)
STOP_WAITING_PENALTY	0.0 units [,#,#,#,…] (3)
STATION_WAITING_PENALTY	0.0 units [,#,#,#,…] (3)
BUS_BIAS_FACTOR	1.0 * transit type < 3 impedance [,#,#,#,…] (3)
BUS_BIAS_CONSTANT	0 transit type < 3 impedance [,#,#,#,…] (3)
RAIL_BIAS_FACTOR	1.0 * transit type > 2 impedance [,#,#,#,…] (3)
RAIL_BIAS_CONSTANT	0 transit type > 2 impedance [,#,#,#,…] (3)
MAX_WALK_DISTANCE	2000 meters [,#,#,#,…] (3)
MAX_BICYCLE_DISTANCE	10000 meters [,#,#,#,…] (3)
MAX_WAIT_TIME	60 minutes [,#,#,#,…] (3)
MIN_WAIT_TIME	0 seconds [,#,#,#,…] (3)
MAX_NUMBER_OF_TRANSFERS	5 transfers [,#,#,#,…] (3)
MAX_NUMBER_OF_PATHS	4 paths [,#,#,#,…] (3)
MAX_PARK_RIDE_PERCENTAGE	50 percent [,#,#,#,…] (3)
MAX_KISS_RIDE_PERCENTAGE	35 percent [,#,#,#,…] (3)
KISS_RIDE_TIME_FACTOR	2.5 * drive time [,#,#,#,…] (3)
KISS_RIDE_STOP_TYPES	STOP {STATION, EXTERNAL}
MAX_KISS_RIDE_DROPOFF_WALK	100 meters
MAX_LEGS_PER_PATH	1000 legs
ADD_WAIT_TO_TRANSIT_LEG	FALSE {true/false/yes/no/1/0}
FARE_CLASS_DISTRIBUTION	100% cash, 0% card, 0% special
PARKING_HOURS_BY_PURPOSE	0.0 hours [,#,#,#,…] (9)
LOCAL_ACCESS_DISTANCE	2000 meters {100..7500 meters}
LOCAL_FACILITY_TYPE	EXTERNAL (6)
MAX_CIRCUITY_RATIO	2.0 {0, 1.0..10.0}
MIN_CIRCUITY_DISTANCE	2000 meters {0..10000}

MAX_CIRCUITY_DISTANCE	20000 meters {0..100000}
MAX_ROUTING_PROBLEMS	100000 problems {0..10000000}
MAX_LINK_DELAY_ERRORS	100000 errors {0..10000000}
LINK_DELAY_UPDATE_RATE	0 disabled {0..1000000}
LINK_DELAY_VOL_FACTOR	1.0 * partition volume
EQUATION_PARAMETERS_# (7)	BPR, 0.15, 4.0, 0.75 (8)
NET_DEFAULT_FORMAT	[default_file_format] {(4)}
ARCVIEW_PROBLEM_DUMP	[project_directory]*filename.shp*
PROBLEM_DUMP_TYPE	0 {(12)}
PERCENT_PROBLEMS_DUMPED	100 percent {0.1..100.0}
NET_NODE_FORMAT	[net_default_format] {(4)}
NET_LINK_FORMAT	[net_default_format] {(4)}
NET_LANE_CONNECTIVITY_FORMAT	[net_default_format] {(4)}
NET_PARKING_FORMAT	[net_default_format] {(4)}
NET_ACTIVITY_LOCATION_FORMAT	[net_default_format] {(4)}
NET_PROCESS_LINK_FORMAT	[net_default_format] {(4)}
NET_LANE_USE_FORMAT	[net_default_format] {(4)}
NET_TOLL_FORMAT	[net_default_format] {(4)}
NET_TURN_PROHIBITION_FORMAT	[net_default_format] {(4)}
NET_TRANSIT_STOP_FORMAT	[net_default_format] {(4)}
NET_TRANSIT_FARE_FORMAT	[net_default_format] {(4)}
NET_TRANSIT_ROUTE_FORMAT	[net_default_format] {(4)}
NET_TRANSIT_SCHEDULE_FORMAT	[net_default_format] {(4)}
DEMAND_FILE_FORMAT	[default_file_format] {(4)}
VEHICLE_FORMAT	[demand_file_format] {(4)}
HOUSEHOLD_FORMAT	[demand_file_format] {(4)}
LINK_DELAY_FORMAT	[demand_file_format] {(4)}

Reports

ROUTER_REPORT_#	HOUSEHOLD_TYPE_SCRIPT
	HOUSEHOLD_TYPE_STACK
	FARE_DATA_REPORT

Notes

1	A trip or activity file is required if specified origins or destinations are not provided. Trip and activity files can be processed in the same application. The trip file will be processed first. If a trip or activity file is provided, a vehicle file is required. A trip or activity file should not be provided when generating plans from selected origins to selected destinations.
2	If a new plan file is not provided, the program will build and check paths, but not save them.
3	Multiple parameters correspond to “type” values defined in the household type script.

4	{VERSION3, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, LANL, SQLITE3}
5	{HOURS, SECONDS, 24_HOUR_CLOCK, 12_HOUR_CLOCK}
6	{MAJOR, MINOR, COLLECTOR, LOCAL, EXTERNAL} EXTERNAL disables local processing
7	# equals facility type code {1 = freeway, 2 = expressway, 3 = principal arterial, etc.}
8	{BPR, BPR_PLUS, EXPONENTIAL, CONICAL, BPR+, EXP, CON}, *A*, *B*, *C*, *D*
9	Multiple parameters correspond to trip purpose codes in the trip and activity file.
10	If an input plan file is provided, the new plans are merged with the input plan file in traveler-trip sort
11	A household list or a household record file may be provided, but not both.
12	A problem type code: 0 = all types, 1 = Path Building, 2 = Time Schedule, 3 = Zero Node, 4 = Vehicle Type, 5 = Path Circuity, 6 = Travel Mode, 7 = Vehicle Access, 8 = Walk Distance, 9 = Wait Time, 10 = Walk Access, 11 = Path Size, 12 = Park-&-Ride Lot, 13 = Bike Distance, 14 = Departure Time, 15 = Arrival Time, 16 = Link Access, 17 = Lane Connectivity, 18 = Parking Access, 19 = Lane Merging, 20 = Lane Changing, 21 = Turning Speed, 22 = Pocket Merge, 23 = Vehicle Spacing, 24 = Traffic Control, 25 = Access Restriction, 26 = Transit Stop, 27 = Activity Location, 28 = Vehicle Passenger, 29 = Vehicle Location, 30 = Kiss & Ride Lot, 31 = Vehicle ID, 32 = Data Sort, 33 = Walk Location, 34 = Bike Location, 35 = Transit Location, 36 = Person Match