

Router - Quick Reference

Version 5.0.28



Usage

Router [-flag] [control_file] [partition]

Optional Flags:

- Q[uiet] = execute without screen messages
- H[elp] = show program syntax and control keys
- C[ontrol] = create/update a default control file
- K[eyCheck] = list unrecognized control file keys
- P[ause] = pause before exiting
- N[oPause] = never pause before exiting
- D[etail] = execute with detailed status messages
- X[ML] = write an XML file with control keys

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.

Configuration Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
TITLE	Text		
REPORT_FILE	File		filename[_partition][.prn]
REPORT_FLAG	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
PROJECT_DIRECTORY	Path		
MODEL_START_TIME	Time	0:00	>= 0 [seconds], 0.0 [hours], 0:00
MODEL_END_TIME	Time	24:00	> [model_start_time]

Configuration Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
UNITS_OF_MEASURE	Text	METRIC	METRIC, ENGLISH
RANDOM_NUMBER_SEED	Int.	0	0 = computer clock, > 0 = fixed
MAX_WARNING_MESSAGES	Int.	100000	>= 0
MAX_WARNING_EXIT_FLAG	Bool	TRUE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
MAX_PROBLEM_COUNT	Int.	0	>= 0
NUMBER_OF_THREADS	Int.	1	1..24
ROUTER_REPORT_*	Text		program report name

System File Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
<input checked="" type="checkbox"/> NODE_FILE	File		[project_directory]filename
<input checked="" type="checkbox"/> LINK_FILE	File		[project_directory]filename
<input checked="" type="checkbox"/> CONNECTION_FILE	File		[project_directory]filename
<input checked="" type="checkbox"/> LOCATION_FILE	File		[project_directory]filename
POCKET_FILE	File		[project_directory]filename
LANE_USE_FILE	File		[project_directory]filename
TURN_PENALTY_FILE	File		[project_directory]filename
PARKING_FILE	File		[project_directory]filename
ACCESS_FILE	File		[project_directory]filename
TRANSIT_STOP_FILE	File		[project_directory]filename
TRANSIT_FARE_FILE	File		[project_directory]filename
TRANSIT_ROUTE_FILE	File		[project_directory]filename
TRANSIT_SCHEDULE_FILE	File		[project_directory]filename
TRANSIT_DRIVER_FILE	File		[project_directory]filename
SELECTION_FILE	File		[project_directory]filename.*
HOUSEHOLD_FILE	File		[project_directory]filename.*
LINK_DELAY_FILE	File		[project_directory]filename

System File Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
VEHICLE_TYPE_FILE	File		[project_directory]filename
VEHICLE_FILE	File		[project_directory]filename.*
TRIP_FILE	File		[project_directory]filename.*
PLAN_FILE	File		[project_directory]filename.*
NEW_LINK_DELAY_FILE	File		[project_directory]filename
NEW_PROBLEM_FILE	File		[project_directory]filename.*
NEW_PLAN_FILE	File		[project_directory]filename.*

File Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
NOTES_AND_NAME_FIELDS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

Data Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
DAILY_WRAP_FLAG	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
SUMMARY_TIME_RANGES	Text	ALL	e.g., ALL, 0..97200 seconds, 0.0..27.0 hours, 0:00..27:00
SUMMARY_TIME_INCREMENT	Time	15 minutes	0, 2..240 minutes

Select Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
SELECT_HOUSEHOLDS	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECT_MODES	List	ALL	e.g., ALL or 1, 12..14 or WALK, HOV2..HOV4
SELECT_PURPOSES	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECT_START_TIMES	List	ALL	e.g., ALL, 0..97200 seconds, 0.0..27.0 hours, 0:00..27:00
SELECT_END_TIMES	List	ALL	e.g., ALL, 0..97200 seconds, 0.0..27.0 hours, 0:00..27:00
SELECT_ORIGINS	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECT_DESTINATIONS	List	ALL	e.g., 1, 2, 4..10, 100..200, 300

Select Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
SELECT_TRAVELER_TYPES	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECT_ORIGIN_ZONES	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECT_DESTINATION_ZONES	List	ALL	e.g., 1, 2, 4..10, 100..200, 300
SELECTION_PERCENTAGE	Dec.	100.0 percent	0.01..100.0 percent
DELETION_FILE	File		[project_directory]filename
DELETE_HOUSEHOLDS	List	NONE	e.g., 1, 2, 4..10, 100..200, 300
DELETE_MODES	List	NONE	e.g., ALL or 1, 12..14 or WALK, HOV2..HOV4
DELETE_TRAVELER_TYPES	List	NONE	e.g., 1, 2, 4..10, 100..200, 300

Flow, Time Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
UPDATE_FLOW_RATES	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
UPDATE_TURNING_MOVEMENTS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
CLEAR_INPUT_FLOW_RATES	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
UPDATE_TRAVEL_TIMES	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
LINK_DELAY_UPDATE_RATE	Int.	0	-1..5000
LINK_DELAY_FLOW_FACTOR	Dec.	1.0	1..100000
EQUATION_PARAMETERS_*	List	BPR, 0.15, 4.0, 0.75	BPR, 0.15, 4.0, 0.75

Router Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
IMPEDANCE_SORT_METHOD	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
SAVE_ONLY_SKIMS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
WALK_PATH_DETAILS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
IGNORE_VEHICLE_ID	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
LIMIT_PARKING_ACCESS	Bool	TRUE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
IGNORE_TIME_CONSTRAINTS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

Router Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
END_TIME_CONSTRAINT	Time	0 minutes	0..360 minutes
IGNORE_ROUTING_PROBLEMS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
PERCENT_RANDOM_IMPEDANCE	Dec.	0.0 percent	0.0..100.0 percent
HOUSEHOLD_TYPE_SCRIPT	File		[project_directory]filename
WALK_SPEED	Dec.	1.0 mps	0.5..4.0 mps
BICYCLE_SPEED	Dec.	4.0 mps	1.0..10.0 mps
WALK_TIME_VALUES_*	List	20.0 impedance/second	0..1000.0
BICYCLE_TIME_VALUES_*	List	15.0 impedance/second	0..1000.0
FIRST_WAIT_VALUES_*	List	20.0 impedance/second	0..1000.0
TRANSFER_WAIT_VALUES_*	List	20.0 impedance/second	0..1000.0
PARKING_TIME_VALUES_*	List	0.0 impedance/second	0.0..1000.0
VEHICLE_TIME_VALUES_*	List	10.0 impedance/second	0..1000.0
DISTANCE_VALUES_*	List	0.0 impedance/meter	0.0..1000.0
COST_VALUES_*	List	0.0 impedance/cent	0.0..1000.0
FACILITY_BIAS_FACTORS_*	List	1.0	0.5..2.0
LEFT_TURN_PENALTIES_*	List	0 impedance	0..10000
RIGHT_TURN_PENALTIES_*	List	0 impedance	0..10000
U_TURN_PENALTIES_*	List	0 impedance	0..10000
PARKING_PENALTY_FILE	File		[project_directory]filename
TRANSIT_PENALTY_FILE	File		[project_directory]filename
TRANSFER_PENALTIES_*	List	0 impedance	0..100000
STOP_WAITING_PENALTIES_*	List	0 impedance	0..100000
STATION_WAITING_PENALTIES_*	List	0 impedance	0..100000
BUS_BIAS_FACTORS_*	List	1.0	1.0..3.0
BUS_BIAS_CONSTANTS_*	List	0 impedance	0..10000
RAIL_BIAS_FACTORS_*	List	1.0	0.1..1.0
RAIL_BIAS_CONSTANTS_*	List	0 impedance	-1000..0

Router Service Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
MAX_WALK_DISTANCES_*	List	2000 meters	100..20000 meters
WALK_PENALTY_DISTANCES_*	List	2000 meters	100..10000 meters
WALK_PENALTY_FACTOR	Dec.	0.0	0.0..25.0
MAX_BICYCLE_DISTANCES_*	List	10000 meters	1000..40000 meters
BIKE_PENALTY_DISTANCES_*	List	10000 meters	1000..20000 meters
BIKE_PENALTY_FACTOR	Dec.	0.0	0.0..25.0
MAX_WAIT_TIMES_*	List	60 minutes	5..400 minutes
WAIT_PENALTY_TIMES_*	List	60 minutes	5..200 minutes
WAIT_PENALTY_FACTOR	Dec.	0.0	0.0..25.0
MIN_WAIT_TIMES_*	List	0 seconds	0..3600 seconds
MAX_NUMBER_OF_TRANSFERS_*	Int.	3	0..10
MAX_NUMBER_OF_PATHS_*	Int.	4	1..10
MAX_PARK_RIDE_PERCENTAGE_*	Int.	50 percent	1..100 percent
MAX_KISS_RIDE_PERCENTAGE_*	Int.	35 percent	1..100 percent
KISS_RIDE_TIME_FACTOR_*	Dec.	2.5	1.0..4.4
KISS_RIDE_STOP_TYPES	Text	EXTERNAL	
MAX_KISS_RIDE_DROPOFF_WALK	Dec.	100 meters	10..500 meters
MAX_LEGS_PER_PATH	Int.	1000	10..10000
FARE_CLASS_DISTRIBUTION	List	0	
DEFAULT_PARKING_DURATION	List	0.0 hours	0.0..24.0 hours
LOCAL_ACCESS_DISTANCE	Dec.	2000 meters	100..7500 meters
LOCAL_FACILITY_TYPE	Text	EXTERNAL	MAJOR..LOCAL, EXTERNAL
LOCAL_IMPEDANCE_FACTOR	Dec.	0.0	0.0..25.0
MAX_CIRCUITY_RATIO	Dec.	0.0	0.0..10.0
MIN_CIRCUITY_DISTANCE	Dec.	2000 meters	0..10000 meters
MAX_CIRCUITY_DISTANCE	Dec.	20000 meters	0..100000 meters
MIN_DURATION_FACTORS	List	0.1, 0.5, 0.8, 1.0	0.0..1.0

Control Keys

REQ? KEY	TYPE	DEFAULT	VALUE RANGES
UPDATE_PLAN_RECORDS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
REROUTE_FROM_TIME_POINT	Time	0:00	
PRINT_UPDATE_WARNINGS	Bool	FALSE	TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

Notes

Each '_FILE' key has a corresponding '_FORMAT' key. The following file formats can be used for input and output files.
TEXT, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, SQLITE3, VERSION3