

# ModeChoice Quick Reference

## Version 4.0.3

Syntax:

***ModeChoice [-flag] [control\_file] [partition]***

Purpose:

1. Apply mode choice models for tours and trips within tours by purpose
2. Changes or modifies the modes assigned in trip and/or activity files.
3. Updates modes assigned to specific households, persons, and trips.
4. Reports mode share details and summary statistics.

## Required Keys

NET_ACTIVITY_LOCATION_TABLE	[net_directory]/filename
HOUSEHOLD_FILE	[project_directory]/filename
TRIP_FILE (1)	[project_directory]/filename
ACTIVITY_FILE (1)	[project_directory]/filename
NEW_TRIP_FILE (1)	[project_directory]/filename
NEW_ACTIVITY_FILE (1)	[project_directory]/filename
TRIP_MODE_MODEL_#	[project_directory]/filename
TRIP_PURPOSE_RANGE_#	0 {1..100}

## 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 {(2)}
HOUSEHOLD_LIST	[project_directory]/filename[.partition]
POPULATION_FILE	[project_directory]/filename
NET_DIRECTORY	Pathname
NET_ZONE_TABLE	[net_directory]/filename
NEW_TRIP_FILE (1)	[project_directory]/filename
NEW_ACTIVITY_FILE (1)	[project_directory]/filename
MODEL_PROCESSING_METHOD	TRIP {(TRIP-TOUR, TRIP-TOUR-TRIP)}
TOUR_PURPOSE_HIERARCHY (8)	0 {1..100}
TOUR_MODE_MODEL_# (8)	[project_directory]/filename
TOUR_PURPOSE_RANGE_# (8)	0 {1..100}
MODE_DATA_MODE_#	0 {1..14} (5)

MODE_DATA_LABEL_#	string (no spaces or commas)
MODE_DATA_FIELD_#_#	<i>field_name</i> [,I,10] (9)
ZONE_SKIM_FILE_# (6)	[project_directory] <i>filename</i>
ZONE_SKIM_FORMAT_#	[default_file_format] {(2)}
TIME_PERIOD_EQUIVANCE_#	[project_directory] <i>filename</i>
SKIM_MEMORY_FACTOR_# (7)	1.0 {0.05..1.0}
DISTANCE_CALCULATION	STRAIGHT_LINE {(4)}
RANDOM_NUMBER_SEED	0 {>= 0}
MODE_SHARE_DETAILS	[project_directory] <i>filename</i>
MODE_SHARE_FORMAT	[default_file_format] {(2)}
TIME_OF_DAY_FORMAT	24_HOUR_CLOCK {(3)}
NET_DIRECTORY	<i>Pathname</i>
NET_ZONE_TABLE	[net_directory] <i>filename</i>
NET_DEFAULT_FORMAT	[default_file_format] {(2)}
NET_ACTIVITY_LOCATION_FORMAT	[net_default_format] {(2)}
NET_ZONE_FORMAT	[net_default_format] {(2)}
NEW_DEFAULT_FORMAT	[default_file_format] {(2)}
NEW_ACTIVITY_FORMAT	[new_default_format] {(2)}
NEW_PROBLEM_FORMAT	[new_default_format] {(2)}
ACTIVITY_FORMAT	[default_file_format] {(2)}
HOUSEHOLD_FORMAT	[default_file_format] {(2)}

## Reports

MODECHOICE_REPORT_#	TRIP_MODE_SCRIPT
	TRIP_MODE_STACK
	TOUR_MODE_SCRIPT
	TOUR_MODE_STACK
	TIME_PERIOD_EQUIVALENCE
	MODE_SHARE_DETAILS

## Notes

1	An input trip or activity files is required. If a trip files is provided, a new trip file is needed to save the mode choice results. If an activity file is provided, a new activity file is needed to save the mode choice results.
2	{VERSION3, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, LANL, SQLITE3}
3	{HOURS, SECONDS, 24_HOUR_CLOCK, 12_HOUR_CLOCK}
4	{STRAIGHT_LINE, RIGHT_ANGLE, SIMPLE_AVERAGE, WEIGHTED_AVERAGE}
5	1=Walk, 2=Drive, 3=Bus, 4=Rail, 5=Park-&-Ride Outbound, 6=Park-&-Ride Inbound, 7=Bicycle, 8=Magic Move, 9=School Bus, 10=2 Person Carpool, 11=3 Person Carpool, 12=4 Person Carpool, 13=Kiss-&-Ride Outbound, and 14=Kiss-&-Ride Inbound

6	Zone skim groups are optional. They are used for mode and time-of-day specific travel time, cost, and distance values between zone interchanges.
7	Initial memory allocation for the skim file is zones * zones * periods * factor. The factor is used to estimate the relative density of the skim matrix (e.g., the percentage of cells with data). Allocating sufficient memory up front has significant performance benefits for processing the skim file.
8	Required if the model method is TRIP-TOUR or TRIP-TOUR-TRIP
9	Field name[, type, [size[.decimal]] is the name and type of fields added to the data files passed between tour and trip processing scripts. The type options include I or INTEGER for an integer field, R, D, REAL, or DOUBLE for a floating point field, and S, C, STRING, or CHAR for a character string field. Size is the maximum number of characters in the field and, if floating point, decimal is the number of decimal points.