

24. INDEX

32-bit / 64-bit Operating System, see Hardware/Software Requirements	1.2
ACCEPT Profiles and Capacities	8.2
Actual Flows	5.1.11, 17.2
Actual Flows by User Class	15.21.4
A – Coefficient in flow-delay curves	8.4.2
ADEL	11.7.2.1
Advice Note 1A Speed-Flow Curves	15.9.2
AFTERS (Queues in future time periods)	17.6.2
AGAIN (Repeat Bat files using KEY)	14.5.8
AK_MIN	9.3.2
ALEX	6.3.3, 6.4.11, 8.5
All-or-Nothing Assignment	7.11.3
Alt + key input	19.4
AMY	6.3.1, 7.11.4
Appended data files	10.14
APRESV	8.8.3.1
Link-specific values in SATNET	6.4.14, 6.13.4
Arboreta	11.8.3, 15.26
Array Dimensions and Versions	15.28
ARRIVE Profiles	8.1.3
ASHORT	6.3.1
Assignment	2.1, 7
Assignment networks	5.5.1
All-or-nothing	7.11.3
Burrell; see Stochastic	
Convergence Statistics	9.9.2
Continuation runs (WIDDLE)	7.11.6
Elastic	7.4, 9.6, 9.10
Choice of technique - Wardrop/Stochastic	7.2.6
Fixed travel times	7.11.4
Flat Trip Matrix	7.11.5
Generalised Cost	7.11.1, 7.11.2
Link listings	11.10.4
Multiple User Class	7.3, 9.11
Networks	5.5.1
Partan	7.11.7
SATEASY	7.2.6
Shadow Networks	7.11.10
Summary Statistics	11.11.5
Stochastic User Equilibrium	7.2
System Optimal	7.11.9
Wardrop Equilibrium	7.1
Atkins MAPINFO Tools	23.4
ATLAS	6.3.1, 18.5.6
AUTNUC	15.15.2
Automatic Timer	14.5.4

Changes to	14.5.6
AUTOK	9.3.1
AUTONA	9.5.4(4)
AUTOX	6.3.1, 15.12
AUTOZ	6.3.1, 15.12
Auxiliary Network Plots	11.5.4
Averaged simulation/buffer statistics	9.7, 17.9.2
AVERK: Average Kirchoff violations	13.3.3.3
A-Z Banners	11.6.9
Banned/Penalised Turning movements	6.9
Simulation Networks	5.5.1, 6.9
Buffer Networks	15.56.7
Banner Displays	11.15
Banner Menus	19.4
BAT Files	14
Batch Procedures	14.7
Creating DIY batch files	14.11
BB109 (new release 10.9 blocking back rules)	6.3.1, 8.5.5, 8.5.6
BBKING	8.5.6
BCRP	6.3.3, 5.4
BEAKER	5.1.9, 6.3.1, 15.13, 17.8
BETA	6.3.3, 7.7.1
Units	7.7.6
BETA-2	6.3.3
BETA-D	6.3.3
Bitmap (.bmp, .pcx, .jpg) graphical image files	11.3.6, 15.43
Blocking Back	5.1.11, 8.5
Convergence tables	9.9.1
Boroughs: See Traffic Boroughs	
Break Option in KEY files	14.5.5
Buffer networks:	5.2, 5.3
Flow-delay curves	5.4.1
Queues and Bottlenecks	5.4.2
Summary Statistics	11.11.4, 17.9
Capacity restraint	5.4
Conversion from Simulation (SATBUF)	15.8.2
Conversion to Simulation (P1X)	11.9.12
Link data formats in network .dat files	6.6
Turning flows at buffer nodes (see also REFFUB)	11.11.12
Bugs in Previous Releases	App. E
BUSKER	6.3.1, 6.9.2
BUSPCU	6.3.3, 6.9.3
Bus-only Roads and Turns	6.4.4
Bus routes	6.9
Bus companies	6.9.3
Bus Lanes	6.4.9.2, 15.39
Route definitions	6.9.2
Editing bus routes	11.9.4
Interpolation	6.9.2, 15.18
Summary Statistics	11.11.6
As fixed pre-load flows	15.5.5

C Priority Modifier (See also Clear Exit)	6.4.2.6
CAPMIN	6.3.3, 8.2.3
Capacities:	
Accept Capacities	8.2
Buffer links	5.4
Simulation Links	6.4.12, 8.4.4
Simulation Turns	8.2
Simulation centroid connectors	5.1.8.2, 8.5.2
Capacity Indices	5.1.9, 6.4.12, 6.6
Default speed-flow curves	15.9.5
Names (CINAME)	6.3.4
Set in an X-File	6.13.4
Set as a "Global Data Field" from a text file	11.9.17
Capacity-Restraint Curves: See Speed-flow curves	
Car Parks	15.46, 20.5.3
CASSINI	15.54
Centroids/zones	5.1.6
Centroid connectors:	
Flows	15.16
Capacities due to blocking back	5.1.8.2, 8.5.2
In a simulation network	5.1.8, 6.5, 16.6
Via "spigots" or "stubs"	5.1.8.1, 11.9.4.1, 15.56.2.3
CFPs:	see Cyclical Flow Profiles
Chains (of one-way links)	5.1.12
Applications to blocking back	8.5.5
Applications to random delays	8.6.4
Charging (Tolls)	20
Distance-based charges	20.5.1
Cordon-based charging	20.5.2
Parking charges	20.5.3
Stochastic Charges (STOLL)	20.6
CHOKe Factors	8.4.4
Clear Exits (See C priority modifier)	6.4.2
Role in Y-merges	8.8.4.5
CLICKS: Variable speeds by User Class	15.47
Disaggregated by Capacity Index	15.47.2
CLIMAX: Fixed Maximum Speeds under CLICKS	15.47.3
Clipboard Outputs	11.3.6
COINS	6.3.4, 20.2
COBA10 speed flow curves	15.9.3
Best-fit Powers for Default Curves	15.9.6
COBA Output files (SATCOBA)	15.42
Cobweb Methods (Supply-Demand Equilibrium)	7.4.3, 7.4.4
Definition of O-D costs	7.8.6
Cold Start Re-assignments	11.10.7.4
COMPAS	6.3.1
Comma Separated Variables; see CSV	
Command Line Namelist Parameters	14.6
Comment cards in dat files	15.29
Comparing 2 matrices (M2)	10.9.2
Comparing 2 networks	

Simulation Nodes: SATLOOK	11.11.18
DACHEX	12.4
Connectivity of networks and/or trip matrices	5.5.4
Continuation Runs with SATALL	9.12.1, 22.2.3
Control Procedures	14
Convergence:	
Within Wardrop Assignment	7.1.5
Within Elastic Assignment	7.5.5
Of Stochastic Assignment	7.2.5
Simulation convergence	8.3
Simulation-assignment convergence	9.2, 9.5, 9.8, 9.9
Guidance	9.2.5
Improved SATALL Convergence	9.5.1
SATME2 with Assignment	13.1.6
Display within P1X (10 Worst)	11.15
Display per node within SATLOOK	11.11.1
Of O-D routes	11.8.3.4
Relaxed control parameters	7.4.5.3, 9.5.4, 15.54
Supply-Demand (VDM) Models	7.8.6
Co-ordinates:	6.8
Choice of Units, etc.	15.43.2
Used to calculate distances	15.10
.xy sub files (in P1X)	11.9.6
Interpolating	6.8
Within GIS files	App. Z
Cordoning (see SATCH)	12.1
Within PIX	11.13, 12.1.4
Multiple User Classes	12.1.6
Cost-flow curves:	See flow-delay curves
Cost matrices	15.27.1
For Elastic Assignment, base-year	7.8.1
Use within Supply-Demand Models	7.8.6
Minimum Cost	11.11.14
Average costs (Forest skims)	11.11.9
Costs (generalised)	6.11, 7.11.1, 7.11.2
Units: time or pence	15.24.4
Fixed link costs	7.11.1
Defined within Supply-Demand loops	7.8.6
Counts:	
Input to SATNET	6.10
Input to SATME2	13.2.2
On links with centroids	15.16
.mcc externally input sub-files	11.7.1, 11.11.13
Compare to modelled flows	15.6, 11.7.1, 11.11.13
Inconsistencies: SATPIJA	13.3.3
Crow-fly distances	15.10.1, 11.11.16, App I.1
CROWCC (Buffer Centroid Connectors)	15.10.3, 15.41.5
CSV (Comma Separated Variables) Outputs:	
Matrices	10.5.4, 10.5.5
SATDB network data	11.10.9
Cumulative Density Functions (KOB = 3)	7.2.3.2

CURRENCY	6.6.3, 20.2
Curved links (for plotting)	5.7.1
Cyclical flow profiles	8.1.1
Network Data files; preparation of	6
Data requirements; general	3.2
DA Codes	see Dirck Access
DACHEX: File comparison	12.4
DADUMP: File transfer	12.5
DALOAD: File import	12.5
DALOOK: Examining files	12.3
DAT files	3.3
Data field editing (global)	11.9.17
.DBD Files (redundant)	11.10.9
DBDUMP	15.46
DCSV (Free-format speed-flow curves by C.I.)	15.9.5
Default link Speed-flow curves	15.9.5
DEFCAP	6.3.3
Delay calculations (Simulation)	8.4
Functions of Flows	8.4.2
Random delays	8.6
Upper limits	8.4.1
Equivalent DA codes	17.10
Definitions in P1X	App. I.1.3, I.2, I.3
Delta Function for Wardrop Equilibrium	7.1.4
Link-specific Delta	11.8.3.5
Demand Flows	17.2, 10.18
Demand Functions	7.7.1
Demand Models: See Elastic Equilibrium Assignment	
Demonstration program mode	14.5.4
Desire line (o-d) plotting	11.6.7
DETR Count Validations	11.7.1
Development traffic (loading single trees)	11.10.7.1
DEVTRIPS	11.10.7.1
Diadem: Linkages with SATURN	15.51
%Gap Equivalent Convergence Measure	7.5.5
DIADEM Option (for UPDATE and/or WSTART)	6.1, 15.51
Diagonalisation (of cost-flow curves)	9.1.2
Diamond Cross Exit (D priority modifier)	6.4.2.7
DIDDLE	6.3.1, 7.11.6, 9.4, 22.2.5
Differences between 2 Networks	
Simulation Nodes (SATLOOK)	11.11.18
DACHEX	12.4
Dirck Access (DA) Codes	15.21
Times and Delays	17.10
Capacities	8.9.5
Definitions	App. J
Direct Access Files:	
Help files	19.11
Distance:	
On links	6.4.5
Set as a "Global Data Field" from a text file	11.9.17

Distribution Models	7.10, 10.18
Distributed (parallel) Processors: See Multi-core	
DIY Fonts in P1X	11.3.8
Double click (P1X)	11.12.1
DOUBLE (plus TOPUP)	6.15.3
DRACULA Demonstration	11.13.7
Dtp Speed-Flow Curves (Advice Note 1A)	15.9.2
Dummy nodes	5.1.1.1
Part of chains	5.1.12
Simulation	8.1.1
Within blocking back	8.5.2(a), 8.5.5.2
Used with link capacity-restraint curves	8.4.4
DUTCH (Long node numbers)	6.3.1, 15.20
Dynamic assignment: see PASSQ	
E Priority modifier (C + D combined)	6.4.2.8
Economic Evaluation Models; see TUBA	
Edit Boxes (Windows)	19.9
Implications for LOG and KEY files	14.5.9
Editors (for ascii data files)	2.8
Editing Networks	11.9.1, 18.1
Global network data field editing	11.9.17
Simulation Node Editing	11.9.3
Elastic Equilibrium Assignment:	7.4
Algorithms	7.5.2
Convergence Measures	7.5.5
Cost Matrices	7.8
Demand Functions	7.7.1
Elasticities	7.7.5
Multiple User Class	7.9
Loops	9.6
Reference Trip and Cost Matrices	7.8
Within SATALL	9.10
Sample.dat file	7.12.3
Shadow Networks	7.11.10
Time Period Choice Models	App. V
Elasticities	7.7.5
Empirical	7.7.6
Supply based (speed flow sensitivity)	7.11.11
Emissions	15.33
EMME/2 formatted matrices	10.5.5, 10.15.1
Entry flows: Simulation links	5.1.8
Epsilon Convergence Parameter	7.1.5
Epsilon-2 Congestion Parameter	7.2.6
Equilibrium Assignment	See Wardrop
ERL (Error Listing) Files	15.58
Display as Selected Nodes in P1X	15.58.2
ERTM	4.3, 6.3.1
Errors	
Fatal & Non-fatal	2.9
Suppressing Errors (ERRYES)	2.9, 6.3.1, 6.12.2
Upgrading Errors (ERRNO)	6.3.1, 6.12.3

Semi-fatal (NAFF)	6.12.1, 18.4
Highlighting within P1X	11.6.5.4
List of explanations	App. L
ERL Files	15.58
Estuaries (Random Delays over Rivers)	8.6.3
EXCEL	11.10.9, 10.15
EXE files	3.4
Exit flows: Simulation links	5.1.8
EXPERT	6.3.1
EZBUS	6.3.1, 6.9.2
External simulation nodes:	
Definition	5.1.1.2
Sample coding	16.4
U-turns	18.9
Unconnected	18.10
(Matrix) Factoring	10.7
(Selected Area) Factoring:	
Interactive Control	10.7.1
Input Control File	10.7.2
FCF (Fixed Cost Flow Networks)	15.1
Creating FCF files with SATCH	12.1.11, 15.1.4
(Data) Field editing (global)	11.9.17
FIFO (See also TOPUP)	6.15.1
Filename conventions	3.3
FILCIJ	6.3.4, 7.12.4
FILGIS	6.3.4, 11.7
FILICE	6.3.4, 7.12.4, 13.1.6
FILKNB	6.3.4, 15.14.5, 15.42.3
FILTIJ	6.3.4, 7.12.4
Filters at Signals (Priority Marker F)	6.4.2.4
FILRED	6.3.4, 7.12.4
FISTOP	6.3.3, 7.1.5
Fixed Column Input Formats	2.8.1
Fixed Costs (on assignment links)	7.11.1
Fixed Flows	5.5.3
Flared Lanes	6.4.9.1
FLAREF – Nearside (Filter) lanes	6.4.9.3, 8.2.6
FLAREX – Offside (X-turns) lanes	6.4.9.3, 6.4.9.5, 8.2.6
FLAREX – In conjunction with MONACO	8.2.5.2
Link-specific values on link data Record 2B ...	6.4.14
... or on X-Files	6.13.4
Flat Trip Matrix	7.11.5
Flow-delay curves: (see also Speed-flow)	
Buffer links	5.4.1
Internal Simulation Links	6.4.12, 8.4.4
External Simulation Links	15.13
Simulation turns	8.4.2
Under ROSIE	8.4.3
DTp Advice Note 1A curves	15.9.2
COBA10 curves	15.9.3, 15.9.6
Default by Capacity Index	15.9.5

"Units" of the coefficient A	8.4.2
"Parametric" form of cost-flow equations	5.4.1
Flow Metering	5.1.11, 8.2.8, 17.2
FLPH	6.3.3, 15.32
FLPK	6.3.3, 15.32
FLPPS	6.3.3, 15.32
FLPSS	6.3.3, 15.32
Fonts (including DIY)	11.3.8
Forests:	15.26
Skimming	11.11.9, 15.27.3
Sector-to-sector	11.10.7.4
FORMATS: Changing .dat file formats	15.35
FORTTRAN Formats: Real Variables	2.8.3
FOZZY	6.3.1, 6.9.2, 15.18
F priority markers (filters)	6.4.2.4
Frank-Wolfe Algorithm:	
Single User Class	7.1.2
Multiple User Classes	7.3.3
Elastic Assignment	7.5.2
FRED	6.3.3, 7.5.3.2
FREDDY (See also .RGS files)	6.3.1, 6.4.3, 11.9.14
FREEXY	6.8
FRODO	13.1.6
Frozen or Inelastic Trip Cells	7.5.6
FTN95_NEW_MEMORY	21.7.2
FUNNEL/Funnelling	8.8.4
Furnishing a matrix	10.7
Trip Ends Set Interactively	10.7.3
Trip Ends Set from a Control File	10.7.4
Basic Trip Distribution Models	10.19.1
Furnish with SATME2	13.1.5, 13.1.12
Fuel Consumption	15.32
Gap Acceptance	8.2.2
Pushing in from minor arms (CAPMIN)	8.2.3
GAP Function (see also Delta)	
Assignment Gap	9.2.1
Link-specific assignment GAP functions	11.8.3.5
Simulation-assignment turn convergence gaps	9.9.1.2
Elastic Gap Functions	7.5.5
Supply-Demand Gap functions	15.42
GAP (Acceptance Parameter)	6.3.3, 15.15.1, 15.22
By Turn	6.13.5
GAPM	6.3.3, 15.15.1, 15.22
GAPR	6.3.3, 15.22
GEH Error Statistic	15.6.2
Direct calculation	11.10.8
Generalised Cost	6.11, 7.11.1, 7.11.2
Units: time or pence	15.24.2
GIS Files	5.7
Creating/Editing	5.7.2
Choosing within P1X	11.6.10

Formats	App. Z
Creating using Atkins MapInfo Tools	23.5
GIS Systems (e.g., MapInfo)	23
Give Way Markers (G)	6.4.2.1
GONZO	6.3.3, 7.11.5, 15.2
GO4IT	App-Y, 14.5.10
G priority markers (give ways)	6.4.2
GRAF.DAT	11.3.1
Graphics:	19.2
MX	10.12
P1X	11.2
SATED (Node graphics)	11.12.
Hardware / Software Requirements	1.2
Head of Queues at signals: extra capacities	8.2.5
Headline Summary Stats: .CSV files	11.11.4, 11.11.13
Heavy vehicle (HGV) flows	15.5.1
Help System	19.11
.hlp pathname suffixes	App. Y
HGVs (Heavy Goods Vehicles)	5.8.2
PCU factors	15.9.4
Highlighting errors	11.6.5.4
History Network Files	6.2
Hooked turns at signals	6.4.2.7
“How To” Tutorials	15.1
ICING	6.3.1, 7.5.6
IFCC	6.3.2, 6.6
IFRL	6.3.2, 6.6
ILOVEU	18.9
IN Profiles	8.1.3
\$INCLUDE	15.30
Converting from existing network files	11.9.2.6
Inelastic (“Frozen”) Trip Cells	7.5.6
Installing SATURN	3.6.1
Interactive programs	19
Intergreens (signals)	6.4.3
Interpolated (bus) routes	6.9.2, 15.18
Inverse Demand Functions	7.7.2
IPERT (Perturbation assignment options)	21.3
IROCKY	6.3.2, 5.1.7, 6.8
ISTOP; see also RSTOP	6.3.2, 9.1, 9.2.6
Joy rides	
Using P1X	11.8.2
Using SATLOOK	11.11.15
Within Validation	11.7.2.2
.JPG format input files	11.3.6
Junctions	5.1.1
KANGA (“jumps” in bus routes)	6.9.2
KDF	7.2.3.3
KEY files	14.5
KEY and LOG filenames	14.5.1
Automatic timing	14.5.4

Break to interactive mode	14.5.5
Changes to automatic timing	14.5.6
Comments	14.5.7
Single keystroke entries	14.5.2
Mouse entries	14.5.3
“AGAIN” option	14.5.8
Edit Box entries	14.5.9
Over-writing (or not) existing files	14.5.10
KEYSTROKE Responses	11.1.5
Kick Starts (Warm starts, etc.)	22.1
KINKY	15.38
Kirchoff’s Rule (SATME2)	13.3.3
KLUNK: Choice of methodology under CLICKS	15.47.2
KNOBS	6.3.2, 6.6, 15.14
Knob Files (KNBFIL)	15.14.5
Included in link fixed costs	7.11.2, 6.11
Used to define tolls	20.3
KNOBDUMP.bat	15.14.7
Transferring internal data to a Knob file	15.14.7
KOB	6.3.2, 7.2.3
KOMBI	6.3.2, 9.3
KONAL	6.6
KONSTP	9.2.3
KORN	6.3.2, 7.2.4
KP files	3.3
KPEXT	App. Y
KPHMIN	6.3.2
KPHMAX	6.3.2
K _s Factors	8.7.2
Lane definition	6.4.9.1
Lane Sharing and Choice Models	8.8
Lane width (plotted)	11.64
Last_P1X0.dat	11.4.4
Lateral Merges	8.8.4.1
LCY	6.3.2, 8.1.2, 15.15.3
Links:	
Alphanumeric Names	5.1.3
Assignment links	5.5.1, 11.10.4
Capacity Indices	5.1.9
Capacity Restraints	6.4.12, 15.9.4
COBA Speed-flow curves	15.9.6
Choice of Link Cost Stochastic Distributions	7.2.3
Counts	6.10
Default Speed-flow Curves	6.4.12, 15.9.5
Distances	6.4.5
Restricted	6.7
Simulation links/roads	5.1.3
Stacking Capacities	6.4.11
Speed-flow curves	6.4.12, 15.9.5
Times/speeds	6.4.5
Linked time periods:	see PASSQ
LEFTDR	6.3.1, 15.7.2, App. Y

LIST	6.3.1
liv95.dat: sample network file	2.7
livtrips.dat: sample trip matrix	2.7
Logit Demand Functions	7.6, 7.7.1, 7.8
Multinomial Logit Models	7.6.2
Nested Logit Models	7.6.3, 7.6.4
LOG files: See KEY files	14.5.1
Loops:	
SATEASY/SATSIM	9.1
SATALL	9.1
Terminating Criteria	9.2
LP files	3.3
LPG (Route flow) Files	12.6
LRTP	6.3.2, 8.6.1
LTP	6.3.2, 8.1.2, 8.4.1, 8.4.2,
8.4.5	
Macros (See Key Files)	14.5.1
MANOFF	12.2.3
Map Networks	5.5.2
Dumping Map nodes to text files	11.4.2.2
Dumping Map links to text files	11.4.2.3
MAPINFO (Atkins Tools)	23.4
MASL	6.3.2, 9.1, 9.12.1
MASL_F	7.5.3.4
Matrices:	
Comparison of 2 matrices (M2)	10.9.2
Compression:	
M3	10.16, App. W.1
M5	10.16, App. W.3
Dumping to Ascii Files	10.15, 10.20.15
Expansion (M5)	10.16, App. W.3
Copy a UFM file	10.4
(Minimum) Cost	15.27.1
Create a trip matrix file	4
Crow Fly distances	11.11.16
DAT and UFM files	
General Properties	10.2.1
Matrix input from a DAT file	10.5
Data inputs (standard)	10.5.1
Data inputs (non-standard)	10.5.2
Demand Models	10.18
Dimensions and Units	10.2.3
Distribution Models	10.18, 10.19.1
Estimation from counts (ME2)	13
EMME/2 Interface	10.5.5
Factoring	10.7
Selected Area Factoring:	
Interactive Control	10.7.1
Input Control File	10.7.2
File structure	10.3
Flared lanes	6.4.9.3

FLAREF	6.4.9.3
FLAREX	8.2.5.2, 8.2.6
Flat Matrix Creation	10.5.7
FORTTRAN equations	10.8.1
Furness	
Trip Ends Set Interactively	10.7.3
Trip Ends Set from a Control File	10.7.4
Graphics	10.12, 11.14
Log-sums (of cost matrices)	10.8.5
MXM1, etc..bat files	10.20
Negative trip matrix cells; see ERTM	
Output .UFM Matrices	10.16
Park 'n' Ride Skims	10.8.4
Printing	
Complete Matrix to Line Printer	10.13
Row and Column Totals	10.14
Read non-zero matrix elements only	10.5.3
Re-code a UFM File	10.4
Reduction (M4)	10.16, App. W.2
Rule of a Half	10.19.2
Screen Editing the Internal Matrix	10.10.4
Sectors	10.2.5
Select Options	10.6
Skim Matrices	15.27.2, 15.27.3
Spreadsheet input/output	10.5.4, 10.15
Stacking, unstacking matrices	10.2.4, 10.17
Statistical Analysis	10.9
Transposing a matrix	10.4, 10.8.2
Trip Length Distribution	10.9.3
UFM Output	10.16
Unconnected OD cells	5.5.4
Univariate Analysis of a Single Matrix	10.9.1
Viewing	10.10
Block of Cells	10.10.1
Multiple or stacked matrices	10.10.2
Single Rows and Columns	10.10.3
Sector-to-Sector Matrices	10.10.5
Row and Column Totals	10.11
Zone Editing	10.4
MAXDTP	6.3.2, 8.4.1
Maximum transient simulation queues	8.4.8
Maximum / Variable Array Dimensions	15.28
MAXLSF	6.3.2
MAXQCT	6.3.2, 8.4.1
MAXZN	6.3.2, 5.1.6
MCALG	6.3.2, 15.53.4.1
MCCS	6.3.2, 6.10
MCGILL	6.3.2, 7.12.2, 7.7.1, 7.9
MCNUM	6.3.2, 15.53.4.1
MCUBC	6.3.2, 7.10.2
Menus	19.3

Banners	19.4
Menu Bars	19.5
Text Menus	19.6
Single Lines	19.7
Merges (M Priority markers)	6.4.2
Y-merges	6.4.2.3, 8.8.3.1, 8.8.4.4
Capacity reductions ("Funnelling")	8.8.4
Gap Acceptance Rules	8.2.2
Lane choice	8.8.3
Lateral merges	8.8.4.1
Metered Flow (Actual Flow)	5.1.11, 8.2.8, 17.2
Method of Successive Averages	7.2.2, 7.4.4, 7.4.5
ME2 (SATME2)	13
ME2 data files	13.8
Mid-link capacities	6.4.12
MINDER (Min distance route interpolation)	6.9.2, 15.18
MINLSF	6.3.2
MINRED	6.3.2
MINSAT	6.3.2
MONACO	6.4.9.5, 8.2.5.1
In conjunction with FLAREX	8.2.5.2
MODET	6.3.2
MONITOR (Parallel operations)	15.52.1
Moons (dependent simulation nodes)	8.3.5, 11.6.5.3
Motorway links	16.7
Mouse: Use of	19.13
Entries in KEY files	14.5.3
vrs Keyboard Control	19.4
M priority markers (merging)	6.4.2.3
MSA Wardrop	7.2.2, 7.11.8
Multiple User Classes:	
Algorithms	7.3.3
MUC Assignment	7.3.2
within SATALL	9.11
Definition of classes	7.3.1
Elastic MUC Assignment	7.9
Generalised costs	6.11, 7.3.2
Updating Trip Matrices: SATME2	13.4
Multiple Crossing Points: SLA of Screen Lines	11.8.1.10
Multiple time period Modelling	17, App. V
Multi-core (Multiple processor) operations	15.52, 15.53
SATC_MC	15.53.3.6
SATPIJA_MC	15.53.3.2
SATUFO_MC	15.53.3.7
MX:	see under Matrices
MX Command Line batch file	10.1.2
MXM1 .bat file	4.1, 10.20.1
MXM2	10.9.2, 10.20.2
MXADD2	10.20.4
MXAVER2	10.20.5
MXBLOCK	10.20.10

MXFACTOR	10.20.3
MXKK	10.20.7
MXMSA (Successive Averages)	10.20.6
MXROH (Rule of a Half)	10.20.8
MXSTACK	10.20.9
MXSUB2	10.20.13
MXWEIGHT	10.20.14
MYTVV – Choice of signal optimisation algorithm	15.31.3
M108 (Merge rules post 10.8)	6.4.2.3, 8.8.4.5
NAFF (Semi-fatal) errors	6.12, 18.4
Namelist Input:	
Full implementation	App. A
Pseudo implementation	App. B
Via the command line	14.6
Navigation Options (P1X Menu bar)	11.5.5
NDPS – Number of Decimal PlaceS for text skims	15.41.4
Network Aggregation – see Spider Web Networks	
Network editing	11.9.1
Data field editing (global)	11.9.17
Networks:	2.3, 5
Assignment network	5.5.1
Beginner's Guide to Coding	5.6
Buffer networks	5.2
Buffer data input	6.6
Data files; preparation of	6
Editing (PMAKE)	11.9, 18
Map networks	5.5.2
Network title	6.2
&OPTION records	6.1
&PARAM records	6.3
Simulation networks	5.1
Simulation data input	6.4
Aggregated (Spider Web) networks	15.56
Comparing two simulation networks	11.11.18
NFT	6.3.2, 8.5
NIPS	9.12.2, 15.31.4
NISTOP	9.1
NITA	6.3.2, 7.1.5, 7.2.2
Low values of NITA	9.5.4
NITA_C (used under UFC109)	15.23.3
NITA_F	7.5.3.4
NITA_M	7.1.5, 9.5.1, 9.5.3, 9.5.4
NITA_S	15.23.4
NITS	6.3.2, 8.1.4, 8.3.2
NITS_M	8.1.4, 8.3.2
Nodes:	
Buffer to Simulation Editing	11.9.12
Co-ordinates	6.8, 11.9.7
Editing Simulation Nodes	11.9.3
Graphical Display	11.12.3
Names	5.1.2

Numbers	5.1.2
Parameters	6.4.10
Simulation nodes	5.1.1
Simulation summary statistics by node	17.7
Alphanumeric names	5.1.2
Data base facilities within SATDB	11.10.5
List of standard data options	App. I-3
NOMADS (Number of user classes)	6.3.2, 7.3
Non-Fatal Errors	2.9, App. L
NOPD	6.3.2
Normal Distribution: Stochastic Assignment	7.2.3
NOTUK	6.3.2, 15.7.1
NOXYC	6.8
NO333C	6.6
NUC	6.3.2, 8.1.2, 15.15.2
NUCJT()	15.15.2
NUCMIN	6.3.2
NUSKIM (New algorithms for skimming in SATLOOK)	15.27.8
OBA – See Origin-based Assignment	
Objective function (assignment)	7.1.1
Offsets (at traffic signals)	6.4.3
Optimisation; see SATOFF and/or SIGOPT	12.2, 15.31.6
Operating Systems (32-bit/64-bit) see Hardware / Software Requirements	
Order of Turns	6.4.8
Origin-based Assignment (OBA)	21.1.2, App.G
Use within VDM	7.4.5
Use with Warm Starts	22.5
Use with perturbation assignment	21.3.3
UFO files	21.4, 22.5.2
Output files (.otb, ont, .ost & .olg)	21.6
Splitting factors	22.5.2
OUT Profiles	8.1.3
Parallel Operations	15.52
Parking Lots: zones	16.6.6, 20.5.3
Parking Charges	20.5.3
Park and Ride Cost Skims	10.8.4
PARTAN	6.3.1, 7.11.7
Application under SAVEIT	15.23.4
Path-based Assignment	21.1.1, App. H
Path-based perturbations	21.3.2
UFQ files	21.4
Path flows (SAVEIT assignment)	15.23.2
See also Route flows	
PASSQ	6.1, 14.4.1, 17.3
PAUSE	19.12
P1X:	11.2
Alternative Device Output	11.3.2
Device parameters	11.3.4
Hard Copy Outputs	11.3.5
Highlighting errors	11.6.5.4

Input files	11.4.1
Link Annotation	App I.1
Node Annotation	App I.2
Output files	11.4.2
Plot display Definitions	11.6
Analysis Functions	11.8
Editing Facilities	11.9
Technical Specifications	11.16
Turn Annotation	App I.3
Validation	11.7
Matrix Graphics	11.14
Node Graphics	11.12
Windowing	11.5
PCNEAR	6.3.3, 9.1
PCU factors	4.2, 5.8.2, 15.9.4
PCX Files	11.3.6
.PS files	15.2.3
PCU's	15.17
Pedestrian (Walk) Networks	15.45
Penalised links & turns	5.1.5, 6.7, 7.11.1, 15.24.4
See also Banned Turns	
Perturbation Assignments	21.3, 22.2.6
See also Kick-Starts	
PIJA Factors	
From SATPIJA	13.2.1
Use in SATME2	13.1.1
PLFF3	15.5.4
PLOD	6.1, 14.4.4, 15.5
PMAX	6.3.3, 8.4.2
Plotters	11.3.5
PMAKE	18.1
Pollutants (Emissions)	15.32
POWER	6.3.3, 7.7.1
PPK	6.3.3, 6.11, 7.11.1
PPM	6.3.3, 6.11, 7.11.1
Preferences files	15.2
Pre-loaded Flow (PLOD)	14.4.4, 15.5
PLDFIL	6.1
Pre-loaded text data files	15.5.4
Pre-loaded bus flows	15.5.5
Printers	11.3.5
PRINT	6.3.1
PRINTF	6.3.1
Priority junctions:	
Sample coding	16.3
Priority Markers	6.4.2
Priority Modifiers	6.4.2
Proportionality of Route Flows	15.27.8
PRSFDF	6.3.1
Pseudo Link Cost-Flow Functions	7.7.3
Pseudo Link Objective Functions	7.7.4

Pushing in from give-way arms (CAPMIN)	8.2.3
Q105	8.4.7
Q Turn Priority markers	6.4.2, App. Q
QUEUE Profiles	8.1.3, 8.6.7
Display of queues	8.4.8
Transient queues	8.4.8
QUEEN	6.3.1, 8.5
QUICK: Minimum CPU parameter settings	14.10, 15.55
QUIET: Running programs in Background	14.9, 15.55
RAGS	8.6.2
Random delays	8.6
Random queues	8.6.5
Random Numbers (KORN)	7.2.4
RBKS	8.7.2
Link values set in an X-File	6.13.4
RB106 (Roundabout modelling post 10.6)	8.7.3
Real Variables: Input Conventions	2.8.3
Rectangular Distribution (Stochastic Assignment)	7.2.3
REDMEN	6.3.1, 7.5.3.2, 7.5.6, 22.2.4
References	App. C
REFFUB	6.3.1
Printing turning flows at buffer nodes	11.11.12
Relaxed convergence control parameters	7.4.5.3, 9.5.4, 15.54
Residual Frank-Wolfe path flows	15.57
RESTART	14.4.3, 15.4, 15.46
Restricted turns and/or links	5.1.5, 6.7
Resume Last P1X	11.4.4
Right-hand drive (NOTUK)	15.7.2
.Rgs files (transferring signal settings)	11.9.14, 6.4.3
See also FREDDY	6.3.1
Rivers	8.8.2, 8.9.3.4
Estuaries	8.6.3
Road User Charging	20
ROADIJ	6.3.4, 7.12
Roads	5.1.3
ROSIE:	6.3.1, 8.4.3
Wardrop Equilibrium under ROSIE	7.1.3
Roundabouts:	
Modelling Assumptions	8.7
RBKS	6.13.2, 8.7.2
Sample coding	16.2
Saturation flows	6.4.7
Routes:	
Fixed (Bus) Routes	6.9
"Other" Routes	6.9.4
Timing Points	6.9.5
Interpolation	15.18
Route flows	12.6
Uniqueness	15.23.8
Proportional Route Flows	15.23.9
RSTOP; see also ISTOP	6.3.3, 9.1, 9.2.6

RTP108 (Random delays by “estuary”)	8.6.3
Rule of a Half (Matrix calculations)	10.20.8
Running Programs	3.4
SATALL	9, 9.7
BAT procedure	9.13
Continuation Runs	9.7, 9.12.1
Convergence	9.8, 9.9
Files	9.15.1
Control File Input	9.15.2
Running via SATURN	9.13
Multi-core operation	15.53.3.1
SATASS	7
SATBUF (Simulation to Buffer Networks)	15.8.2
SATCH: Cordoning	12.1
Data input	12.1.2
Files	12.1.2
Creating files with P1X	11.13, 12.1.4
SATCH_MC: Distributed processor version	12.1.6, 12.1.12, 15.53.3.6
Creating FCF files	12.1.11, 15.1.4
SATCCS (Simulation CCs to buffer format)	15.8.3
SATCOST	15.27.7
SATCOBA	15.42
SATDB:	11.10
Miscellaneous data inputs	11.10.6
Node Data Base	11.10.5
Technical Specification	11.18
SATDYSK (Dynamic Skims)	12.7
SATEASY:	7, 7.13
Control File	7.13.2
Convergence Measures	7.5.5
Files	7.13.1
File Structure	7.12.1
Running via BAT file	7.12.4
SATED: (Discontinued post 10.9)	11.12
Node Graphics	11.12
Node Editing	11.12.4
Technical Specifications	11.19
Sat95key.dat	App. Y
SATKK (Time Period Choice Modelling)	App. V
SATLOOK:	11.11
Control Files	11.17.2
Files	11.17.1
Multi-core operation	15.53.3.2
SATME2:	13, 13.5
Data Input	13.2.2
Files	13.5.1
Stacked MUC Matrices	13.4.4, 13.4.5, 13.4.6
Combined counts: Screenlines, cordons etc.	13.1.8
SATNET:	6
Data Inputs	6.1 to 6.11
Files	6.16

SATOFF:	12.2
Optimum offsets	12.2.1, 15.31.4
Files	12.2.3
Optimisation within SATALL	9.12.2, 15.31.4
SATPIG: Dump Route Flows	12.6
SATRAP: Re-assignment to previous routes	11.10.7.4
SATPIJA	13.1.2
Control file	13.2.1
Technical Specifications	13.6
SATPIJA_MC: Multi-core operation	13.4.9, 13.6.3, 15.53.3.3
SATSIM:	8
Control File	8.9.2
Files	8.9.1
SATSTAT	15.49
SATSUMA	17.5
SATTIT.DAT	6.3.1, 15.21.1
SATTP (Running linked time periods with ps files)	17.4.2
SATTPX (Running linked time periods automatically)	17.4.3
SATTUBA	15.41
SATUFC – Re-creating .UFC files	15.23.5
SATUFO – Converting .UFC to .UFO files	15.23.7
SATUFO_MC – Multiple processor version	15.23.7, 15.53.3.7
SATU2	13.7
Saturation flows:	
Roundabouts	6.4.7
Turns	6.4.6
Set as a “Global Data Field” from a text file	11.9.17
SATURN:	
8.1	App D.1
8.2	App D.2
8.3	App D.3
8.4	App D.4
9.1	App D.5
9.2	App D.6
9.3	App D.7
9.4	App D.8
9.5	App D.9
10.1	App D.10
10.2	App D.11
10.3	App D.12
10.4	App D.13
10.5	App D.13
10.6	App D-15
10.7	App D-16
10.8	App D-17
10.9	App D-18
11.1	App D-19
Procedure(s)	14.3, 9.14
Suite contents	1.5
SATWIN	3.6
SAVEIT	6.3.1, 15.23.1

The (extra) SAVEIT Assignment	15.23.2
Accuracy of SAVEIT O-D routes	11.8.47, 15.23.2
Application of Aggregated (SPIDER) networks	15.56.5.3
SAVUFO	15.23.7, 22.5.7
Application of Aggregated (SPIDER) networks	15.56.5.3
SBT (Simulation Buffer Transformation)	15.1.6
Scatterplots (P1X)	11.7.1
Screen editing (Windows)	19.9
Implications for LOG and KEY files	14.5.9
Screen lines	
Count Sets	6.10
Select Link Analysis	11.8.1.9
SDM (Simple or Separable Demand Models)	7.4.1
SECRET	6.4, 11.4.2
Sectors	5.1.7, 6.8, 10.2.5
Co-ordinates	6.8
.Z2S files to convert zones to sectors	10.2.5, 10.5.1
Select Link Analysis (SLA)	11.8.1, 11.10.7.5, 15.19
Accuracy limitations of SLA	15.23.2
Select Link Matrices	11.8.1.3, 5.19
Select Options for Matrices	10.6
Selected Area Matrix Factoring	10.7.1
Semi-Fatal Errors	2.9
Separable (and non-separable) cost-flow equations	7.1.3
Serious Warnings	2.9, App. L
Shadow Networks	7.11.10
SHANDY Option	6.3.1, 15.10
Shortest O-D paths: see Tree Building	
Signals:	
Coding example	16.1
Co-ordination	8.2.7
Filter lanes (Priority Marker F)	6.4.2.4
Intergreens	6.4.3
Offsets	6.4.3
Optimum offsets - see SATOFF	12.2, 11.9.13.1
Optimum stage times	11.9.13.1, 15.31.2
Optimisation at selected nodes	11.9.13.2
Optimisation within SATALL	9.12.2, 15.31.4
Optimisation for improved convergence	9.5.1
Percentage link green time (DA 1598)	App I.1.1
.Rgs files of stage times	6.4.3, 11.9.14
Stages	6.4.3
SIGOPT: Signal Optimisation	
Namelist Parameter	6.3.1, 9.12.2, 15.31.4
Batch file to optimise all signals	15.31.6
Simulation:	8
Cyclical flow profiles	8.1.1
Convergence (internal)	8.3, 9.9.1
Delays	8.4.1
Flow-delay curves	8.4.2
Linked time periods	17.3

Over-capacity junctions	17.1
Summary Statistics	11.11.4, 17.8, 17.9
Time units	15.15.1
Simulation networks:	
Bus-Only Roads	6.4.4
Centroid connectors	5.1.8, 6.5, 15.16
Conversion to buffer links (SATBUF)	15.8.2
Data input	6.4
Dummy nodes	5.1.1
Internal/external nodes	5.1.1
Junctions/nodes	5.1.1, 6.4.1
Link Speed Flow Curves	6.4.12
Node numbers	5.1.2
Restricted movements	5.1.5, 6.7
Roads/links:	5.1.3, 6.4.1
Signals	6.4.1
Summary statistics	11.11.4, 17.8, 17.9
Turns:	5.1.4, 6.4.6
SIM109	8.3.4
SIM111	8.6.5
Single-keystroke responses	19.7
Entry in key files	14.5.2
Skimming Trees/Forests	15.27.2, 15.27.3
New algorithms post 10.9.17 (NUSKIM)	15.27.8
Uniqueness of skimmed times, distances etc.	15.23.8
Use within Supply-Demand (VDM) Models	7.8.6
Skimmed Matrices (SATLOOK)	11.11.9
SKIM_ALL	15.27.7
SKIMDIST	15.27.7
SKIMPEN	15.27.7
SKIMTIME	15.27.7
SKIMTOLL	15.27.7
SLA See Select Link Analysis	
SO (System Optimal) Assignment: SOWHAT / WHATHO	7.11.9
SPARSE (Trip Matrix Storage)	7.11.12
Specimen network .dat file	6.12
Speed-flow curves:	
Buffer links	5.4.1
Conventional forms	15.9.1
DTp curves	15.9.2
COBA10 curves	15.9.3, 15.9.6
Default by Capacity Index	15.9.5
Best-fit Powers for Default DfT curves	15.9.3
Simulation links	6.4.12
See also flow-delay curves	
SPEEDS	6.3.1
Link Travel Times/Speeds	6.4.5
Set as a "Global Data Field" from a text file	11.9.17
Spider Web Networks (Network Aggregation)	15.56
Applications to SLA	11.8.1.12
Eliminating duplicate links	15.56.5.1


Eliminating zero-flow links	15.56.5.3
Spigot Centroid Connectors (aka stubs)	5.1.8.1, 11.9.4.1, 15.56.2.3
Spines (P1X Cordons)	11.13.5
Spreadsheet outputs	11.10.9, 10.15
Stacked matrices	10.2.4, 10.17
STACK (matrix batch file)	10.20.11, 10.17
Stacked matrices	10.2.4
Stacking Capacities on Links	6.4.11, 8.5.7
Negative input values to "break" chains	5.1.12, 6.4.11, 8.5.5
Chain stacking capacities	8.5.5.5
Stage times (signals)	6.4.3
Minimum and Maximum green stage times	6.4.13
Start/W	14.11
Statistical Analysis of a matrix	10.9
Stochastic User Equilibrium (SUE)	7.2
Choice vrs. Wardrop	7.2.6
Convergence	7.2.5
STOLL: Stochastic Toll Charges	20.6
Stops: Primary and Secondary	15.34
STPCPU	9.2.3
STPGAP	9.2.3
Stub centroid connectors: See Spigot	
Sub-files	15.30
SUBPQ within SATME2	13.1.4, 13.3.1, 13.4.8
Subscripted Namelist Variables	17.4.4, App. A, App. B
Successive Averages (Method of)	7.2.2, 7.4.4, 7.4.5
SUET	6.3.3, 7.2.3
User Class Value	6.11, 7.3.3
Suns (Independent simulation nodes)	8.3.5
Supply-Demand Equilibrium (see also VDM)	7.4.1
Convergence issues	7.8.6
SUZIE (Stochastic Assignment)	6.3.1, 7.2.2
SUZIEQ	6.3.1
System Optimal Assignment (SO)	7.11.9
System/Device Definitions	11.3
TAX	6.3.3, 6.4.2.2, 6.4.9.5, 8.2.4
Link-specific values in an X-FILE	6.13.4
Link-specific values on link records	6.4.14, 6.4.15
TDEL	6.3.3, 8.4.1
Text Editors (Eg., Notepad)	2.8.2
Text files: dumping from SATDB	11.10.9
Text Menus	19.6
TIJMIN	6.3.3
Time vrs Distance Plots	11.7.2.3
Timing Points	6.9.5
Application under Validation	11.7.2.1
Time-flow curves	See flow-delay curves
Time Period Definitions	17.3.3
Time Period Choice Models	App. V
Tolls (see also Charges)	20
Using KNOB Files	15.14.4, 20.3

On Centroid Connectors (Wildcards)	15.14.5, 20.3
Stochastic tolls (STOLL)	20.6
Top Ten (Worst 10, Bottom 10 etc.)	
Link Selection	11.6.1.1
Convergence Statistics	9.9.1.2, 11.15
O-D Routes	11.8.3.4
TOPUP (duplicate coded simulation nodes)	6.15.2
Traffic Boroughs: Disaggregated Summary Stats	11.11.4
Transient queues (maximum length)	8.4.8
Tree Building:	
Link cost definition	15.24
Skimming trees/forests	15.27.2, 15.27.3
Stochastic	15.25
Trees v. forests	11.8.3, 15.26
To or from nodes and links	11.10.7.1
TRIBUT: See STOLL	20.6
Trip Length Distributions	10.12, App I.9
Within SATME2	13.3.11
Trip Matrices:	2.2
Creating a file using M1	4.1
Alternative M1 input formats	4.4
Factoring	10.7, 10.20.3
Multiple User Classes	7.3.2
Negative cell values; see ERTM	
.Trp files	12.6
TUBA output/input files	15.41, 10.5.6
Formats 1, 2 and 3	10.5.6
Conversion to/from .UFM files	10.20.15, 10.20.16
Uniqueness of time, distance etc. matrices	15.41.1
TURBO (MUC matrices in SATME2)	13.4.6
Turns:	5.1.4
Bus-Only	6.4.4
Counts	6.10
Order	6.4.8
Priority Markers (TPM) and Modifiers	6.4.2
Restricted	6.7
Saturation Flows	6.4.6
UF* files	3.3
UFC files; See also SAVEIT	15.23
UFC109: Alternative UFC Formats	15.23.3
SATUFC: Re-creating UFC files	15.23.5
Conversion to .UFO: SATUFO	15.23.6
UFM2 ... matrix .bat files	10.20.15
UFM(UN)STACK	10.20.17
UFO files	21.4, 22.5
Created under OBA	22.5.2
Created under Frank-Wolfe (SAVUFO)	22.5.3, 15.23.6, 15.23.7
Conversion to .UFC (SATUFC)	15.23.5
UFQ path files	21.4
UNCRTS: Assignment convergence stopping parameter	7.1.5, 9.5.4
UNIQUE:	15.48

Uniqueness of Wardrop Equilibrium Solutions	7.1.6
Route Flows	15.23.8
Skimmed matrices	15.27.6
Univariate Analysis of a matrix	10.11.1
“Unstack” a matrix	10.17
UK and non-UK use (NOTUK)	15.7.1
UNCRTS	6.3.3, 7.1.5, 9.2.3, 15.23.4
UNSTACK (Matrix batch file)	10.17, 10.20.12
UPBUS	6.9.2
Application to joy rides	11.7.2.2
Application to timed routes	6.9.4, 6.9.5
UPDATE	14.4.2, 15.3, 15.46, 22.2.1
UPFILE	6.1, 14.4.2
User Classes	5.8.1
Names (UCNAME)	6.3.4
Actual Flows	15.21.4
U-turns: At internal simulation nodes	5.1.4
At external simulation nodes	18.9.1, 16.6.2, 16.6.3
ILOVEU	18.9.2
Validation	11.7
Counts	11.7.1
Travel Time Routes	11.7.2
Variable Demand Models	7.4
Convergence issues	7.8.6
Variable Program Dimensions	15.28
Variational Inequalities	9.2
VCPCU (PCU factors by vehicle class)	15.17.2
VDM (Variable Demand Models; see also Supply-Demand)	7.4.1
External Loops with SATURN (Cobweb)	7.4.5
Convergence issues	7.8.6
VDU files	3.3, 11.1.3
Change the VDU mode	14.5.6
Vehicle Classes	5.8.2
Names (VCNAME)	6.3.4
PCU Factors	15.17.2
Updating trip matrices	13.4.6
Vertical editing of network data fields	11.9.17
WAIT (Parallel operations)	15.52
Walking Networks	15.45
Wardrop Equilibrium	7.1
Choice vrs. Stochastic	7.2.6
Delta Function for measuring success	7.1.4
MSA	7.2.2, 7.11.8
PARTAN variation	7.11.7
ROSIE option	7.1.3
Stopping criteria	7.1.5
Uniqueness	7.1.6
Warm Starts (WSTART/IPERT)	21.3, 22.3
Altered Networks and/or Matrices	22.5
Identical Networks	22.4
With Elastic Assignment	22.6

Warnings	2.9, App.L
Weave Priority Markers (W) at a single junction	6.4.2.5, 15.40.7
Weaving on Motorways (between junctions)	6.4.9.4, 15.40
Using Network Aggregation	15.56.7
WHATHO	7.11.9
WIDDLE	7.11.16
Wildcard entries on KNOB Files	15.14.5.2
Defining tolls on centroid connectors	20.3
Windows (screen editing)	19.9, 19.10
Windows Operating Systems, see Hardware / Software Requirements	
WINDY	6.3.1
Word Processors	2.8.3
Worst converged nodes, routes etc; see Top Ten	
WRIGHT	6.12.2, App. L
WSTART – See Warm Starts	6.1, 21.3, 22.3
XCCSK (Exclude Centroid Connectors in Skims; SATTUBA)	15.41.5, 15.27.7
XCL files: Extended Command Lines	14.8
X priority markers	6.4.2.2
X-Files	6.13
X,Y Co-ordinates; see Co-ordinates	
XFSTOP	6.3.3, 7.1.5
XY sub-files	11.9.7
Output from P1X	11.4.2
XYB files (for .bmp images)	15.43.1
XYFORM	6.3.4, 6.8
XYUNIT	6.3.3, 6.8
Corrected by SHANDY	15.10.2
Y merges	6.4.2.3, 8.8.3.1, 8.8.4.4
ZILCH (Allowing zero trip matrices)	9.12.13
Zipped (.ufm) files	10.2.1
Zones/Centroids	5.1.6
Alphanumeric names	5.1.6
Co-Ordinates of zones	6.8
Sequential Numbers and Names	10.2.2
Z2S files: Zones to sectors	10.2.5, 10.5.1, App W.3

24.1 Version Control

JOB NUMBER: 5101396		DOCUMENT REF: Section 24 Index.doc				
Revision	Purpose / Description					
		Originated	Checked	Reviewed	Authorised	Date
1	Re-formatted (Final to DVV)	TF / BG	NS	IW	IW	06/05/06
2	Various	DVV				09/07/06
3.2	Web release – Sept 06	DVV	NP	IW	IW	08/09/06
3.3	Web release – Jan 07	DVV	NP	IW	IW	04/01/07
3.4	SATURN v10.7 Release	DVV	NP	IW	IW	16/03/07
3.5	Web release – Jul 07	DVV	NP	IW	IW	19/07/07
3.6	SATURN v10.8 Release	DVV	NP	IW	IW	25/03/08
3.7	Web release – Jul 08	DVV	NP	IW	IW	07/07/08
3.8	Web release – Dec 08	DVV	NP	IW	IW	12/12/08
3.8.21	Web release – Feb 09	DVV	NP	IW	IW	16/02/09
3.8.22	Web release – Feb 09	DVV	NP	IW	IW	16/06/09
10.9.10	SATURN v10.9 Release	DVV	DG	IW	IW	04/09/09
10.9.12	SATURN v10.9 Release (Full)	DVV	DG	IW	IW	22/10/09
10.9.17	Web release – Jun10	DVV	NP	IW	IW	22/06/10
10.9.22	Web release – Dec10	DVV	AG	IW	IW	07/12/10
10.9.24	SATURN v10.9 Release (Full)	DVV	AG	IW	IW	23/05/11
11.1.09	SATURN v11.1 Release (Full)	DVV	AG	IW	IW	31/03/12