

SIMULATION CONTROL				
Command	Description	Usage	Argument types	Function
HELP	Show help on a command, show pdf or write list of commands to file	HELP [command]/pdf/>filename	['txt']	[True]
DOC	Show extended help window for given command, or the main documentation page	DOC [command]	['txt']	[True]
MAKEDOC	Make markdown templates for all stack functions that don't have a doc page yet.	MAKEDOC	[]	[]
IC	Initial condition: (re)start simulation and open scenario file	IC [IC/filename]	['string']	[True]
OP	Start/Run simulation or continue after pause	OP	[]	[]
HOLD	Pause(hold) simulation	HOLD	[]	[]
QUIT	Quit program/Stop simulation	QUIT	[]	[]
RESET	Reset simulation	RESET	[]	[]
DT	Set simulation time step	DT dt	['float']	[False]
DTMULT	Sel multiplication factor for fast-time simulation	DTMULT multiplier	['float']	[False]
FF	Fast forward the simulation	FF [timeinsec]	['time']	[True]
FIXDT	Fix the time step	FIXDT ON/OFF [tend]	['onoff', 'time']	[False, True]
TIME	Set simulated clock time	TIME RUN(default) / HH:MM:SS.hh / REAL / UTC	['txt']	[True]
PCALL	Call commands in another scenario file	PCALL filename [REL/ABS]	['txt', 'txt']	[False, True]
SCHEDULE	Schedule a stack command at a given time	SCHEDULE time, COMMAND+ARGS	['time', 'string']	[False, False]
DELAY	Add a delayed command to stack	DELAY time offset, COMMAND+ARGS	['time', 'string']	[False, False]
ADDNODES	Add a simulation instance/node	ADDNODES number	['int']	[False]
BATCH	Start a scenario file as batch simulation	BATCH filename	['string']	[False]
SAVEIC	Save current situation as IC	SAVEIC filename	['string']	[False]
SCEN	Give current situation a scenario name	SCEN scenname	['string']	[False]
SEED	Set seed for all functions using a randomizer (e.g.mcre,noise)	SEED value	['int']	[False]
BENCHMARK	Run benchmark	BENCHMARK [scenfile,time]	['txt', 'time']	[True, True]
SYN	Macro for generating synthetic (geometric) traffic scenarios	SYN: Possible subcommands: HELP, SIMPLE,	['txt', '...']	[False, True]
PLUGINS	List all plugins, load a plugin, or remove a loaded plugin.	PLUGINS LIST or LOAD plugin or REMOVE plugin	['txt', 'txt']	[True, True]
DATAFEED	Select an ADS-B data source for traffic	DATAFEED [ON/OFF]	['onoff']	[True]

DISPLAY CONTROL				
Command	Description	Usage	Argument types	Function
PAN	Pan screen (move view) to a waypoint, direction or aircraft	PAN latlon/acid/airport/waypoint/LEFT/RIGHT/ABOVE/DOWN	['pandir/latlon']	[False]
ZOOM	Zoom display in/out, you can also use +++ or ----	ZOOM IN/OUT or factor	['float/txt']	[False]
++++	Zoom in 4 times			
----	Zoom out 4 times			
SYMBOL	Toggle aircraft symbol	SYMBOL	[]	[]
TRAIL	Toggle aircraft trails on/off	TRAIL ON/OFF, [dt] OR TRAIL acid color	['acid/bool', 'float/txt']	[True, True]
ECHO	Show a text in command window for user to read	ECHO txt	['string']	[False]
INSEDT	Insert text op edit line in command window	INSEDT txt	['string']	[False]
ND	Show navigation display with CDTI	ND acid	['txt']	[False]
SSD	Show state-space diagram (=conflict prevention display/predictive ASAS)	SSD ALL/CONFLICTS/OFF or SSD acid0, acid1, ...	['txt', '...']	[False, True]
FILTERALT	Display aircraft on only a selected range of altitudes	FILTERALT ON/OFF,[bottom,top]	['bool', 'alt', 'alt']	[False, True, True]
LINE	Draw a line on the radar screen	LINE name,lat,lon,lat,lon	['txt', 'latlon', 'latlon']	[False, False, False]
PLOT	Create a graph of variables x versus y.	PLOT x, y [,dt,color,figure]	['txt', 'txt', 'txt', 'txt', 'txt']	[False, False, True, True, True]
SWRAD	Switch on/off elements and background of map/radar view	SWRAD GEO/GRID/APT/VOR/WPT/LABEL/ADSBCOVERAGE/TRAIL [dt]/[value]	['txt', 'float']	[False, True]
TRAFFIC COMMANDS				
Command	Description	Usage	Argument types	Function
CRE	Create an aircraft	CRE acid,type,lat,lon,hdg,alt,spd	['txt', 'txt', 'latlon', 'hdg', 'alt', 'spd']	[False, False, False, False, False, False]
DEL	Delete command (aircraft, wind, area)	DEL acid/ALL/WIND/shape	['acid/txt']	[False]
HDG	Heading command (autopilot)	HDG acid,hdg (deg,True)	['acid', 'float']	[False, False]
SPD	Speed command (autopilot)	SPD acid,spd (CAS-kts/Mach)	['acid', 'spd']	[False, False]
ALT	Altitude command (autopilot)	ALT acid, alt, [vspd]	['acid', 'alt', 'vspd']	[False, False, True]
VS	Vertical speed command (autopilot)	VS acid,vspd (ft/min)	['acid', 'vspd']	[False, False]
LNAV	LNAV (lateral FMS mode) switch for autopilot	LNAV acid,[ON/OFF]	['acid', 'onoff']	[False, True]
VNAV	Switch on/off VNAV mode, the vertical FMS mode (autopilot)	VNAV acid,[ON/OFF]	['acid', 'onoff']	[False, True]
MCRE	Multiple random create of n aircraft in current view	MCRE n, [type/*, alt/*, spd/*, dest/*]	['int', 'txt', 'alt', 'spd', 'txt']	[False, True, True, True, True]
MOVE	Move an aircraft to a new position	MOVE acid,lat,lon,[alt,hdg,spd,vspd]	['acid', 'latlon', 'alt', 'hdg', 'spd', 'vspd']	[False, False, True, True, True, True]
POS	Get info on aircraft, airport or waypoint	POS acid/waypoint	['acid/wpt']	[False]
NOISE	Turbulence/noise switch	NOISE [ON/OFF]	['onoff']	[True]

WIND	Define a wind vector as part of the 2D or 3D wind field	WIND lat,lon,alt/*,dir,spd,[alt,dir,spd,alt,...]	['latlon', 'alt', 'float', 'float', '...', '...', '...']	[False, True, False, False, True, True, True]
NOM	Set nominal acceleration for this aircraft (perf model)	NOM acid	['acid']	[False]
ENG	Specify a different engine type	ENG acid,[engine_id]	['acid', 'txt']	[False, True]
FLIGHT PLAN/FMS				
Command	Description	Usage	Argument types	Function
ADDWPT	Add a waypoint to route of aircraft (FMS)	ADDWPT acid, (wpname,lat,lon,FLYBY/FLYOVER/ TAKEOFF,APT/RWY),[alt,spd,afterwp]	['acid', 'wpt', 'alt/txt', 'spd', 'wpinroute', 'wpinroute']	[False, False, True, True, True, True]
AFTER	After waypoint, add a waypoint to route of aircraft (FMS)	acid AFTER afterwp ADDWPT (wpname,lat,lon),[alt,spd]	['acid', 'wpinroute', 'txt', 'wpt', 'alt', 'spd']	[False, False, False, False, True, True]
BEFORE	Before waypoint, add a waypoint to route of aircraft (FMS)	acid BEFORE beforewp ADDWPT (wpname,lat,lon),[alt,spd]	['acid', 'wpinroute', 'txt', 'wpt', 'alt', 'spd']	[False, False, False, False, True, True]
AT	Edit, delete or show spd/alt constraints at a waypoint in the route	acid AT wpname [DEL] SPD/ALT [spd/alt]	['acid', 'wpinroute', 'txt', 'txt']	[False, False, True, True]
DIRECT	Go direct to specified waypoint in route (FMS)	DIRECT acid wpname	['acid', 'txt']	[False, False]
AIRWAY	Get info on airway or connections of a waypoint	AIRWAY wp/airway	['txt']	[False]
DEFWPT	Define a waypoint only for this scenario/run	DEFWPT wpname,lat,lon,[FIX/VOR/DME/NDB]	['txt', 'latlon', 'txt', 'txt', 'txt']	[False, False, True, True, True]
DELRTE	Delete for this a/c the complete route/dest/orig (FMS)	DELRTE acid	['acid']	[False]
DELRTE	Delete a waypoint from a route (FMS)	DELRTE acid,wpname	['acid', 'wpinroute']	[False, False]
DEST	Set destination of aircraft, aircraft will fly to this airport	DEST acid, latlon/airport	['acid', 'wpt/latlon']	[False, False]
ORIG	Set origin airport of aircraft	ORIG acid, latlon/airport	['acid', 'wpt/latlon']	[False, False]
DUMPRTE	Write route to output/routelog.txt	DUMPRTE acid	['acid']	[False]
LISTRTE	Show list of route in window per page of 5 waypoints	LISTRTE acid, [pagenr]	['acid', 'int']	[False, True]
POS	Get info on aircraft, airport or waypoint	POS acid/waypoint	['acid/wpt']	[False]
ASAS/CD&R				
Command	Description	Usage	Argument types	Function
ASAS	Airborne Separation Assurance System switch	ASAS ON/OFF/VMIN/VMAX	['onoff']	[True]
ASASV	Airborne Separation Assurance System Speed	ASASV MAX/MIN SPD (TAS in kts)	['txt', 'float']	[True, True]
DTLOOK	Set lookahead time in seconds for conflict detection	DTLOOK [time]	['float']	[True]
DTNOLOOK	Set interval for conflict detection	DTNOLOOK [time]	['float']	[True]
CDMETHOD	Set conflict detection method	CDMETHOD [method]	['txt']	[True]
CRECONFS	Create an aircraft that is in conflict with 'targetid'	CRECONFS id, type, targetid, dps, cpa, tlos_hor, dH, tlos_ver, spd	['txt', 'txt', 'acid', 'hdg', 'float', 'time', 'alt', 'time', 'spd']	[False, False, False, False, False, False, True, True, True]
PRIORULES	Define priority rules (right of way) for conflict resolution	PRIORULES [ON/OFF PRIORCODE]	['onoff', 'txt']	[True, True]
NORES	Switch off conflict resolution for this aircraft	NORES [acid]	['string']	[True]
RESO	Set resolution method	RESO [method]	['txt']	[True]
RESOOFF	Switch for conflict resolution module	RESOOFF [acid]	['string']	[True]
RFACH	Set resolution factor horizontal (to add a margin)	RFACH [factor]	['float']	[True]
RFACV	Set resolution factor vertical (to add a margin)	RFACV [factor]	['float']	[True]
RMETHH	Set resolution method to be used horizontally	RMETHH [method]	['txt']	[True]
RMETHV	Set resolution method to be used vertically	RMETHV [method]	['txt']	[True]
RSZONEDH	Set half of vertical dimension of resolution zone in ft	RSZONEDH [height]	['float']	[True]
RSZONER	Set horizontal radius of resolution zone in nm	RSZONER [radius]	['float']	[True]
ZONEDH	Set half of the vertical protected zone dimensions in ft	ZONEDH [height]	['float']	[True]
ZONER	Set the radius of the horizontal protected zone dimensions in nm	ZONER [radius]	['float']	[True]
AREA DEFINITION				
Command	Description	Usage	Argument types	Function
AREA	(not supported anymore, use BOX, CIRCLE, POLY, etc.)			
CIRCLE	Define a circle-shaped area	CIRCLE name,lat,lon,radius,[top,bottom]	['txt', 'latlon', 'float', 'alt', 'alt']	[False, False, False, True, True]
BOX	Define a box-shaped area	BOX name,lat,lon,lat,lon,[top,bottom]	['txt', 'latlon', 'latlon', 'alt', 'alt']	[False, False, False, True, True]
POLY	Define a polygon-shaped area	POLY name,lat,lon,lat,lon, ...	['txt', 'latlon', '...']	[False, False, True]
POLYALT	Define a polygon-shaped area in 3D: between two altitudes	POLYALT name,top,bottom,lat,lon,lat,lon, ...	['txt', 'alt', 'alt', 'latlon', '...']	[False, False, False, False, True]
DATA LOGGING				
Command	Description	Usage	Argument types	Function
INSTLOG	INSTLOG data logging on	INSTLOG ON/OFF,[dt] or LISTVARS or SELECTVARS var1,...,varn	['txt', 'float/txt', '...']	[True, True, True]

SKYLOG	SKYLOG data logging on	SKYLOG ON/OFF,[dt] or LISTVARS or SELECTVARS var1,...,varn	['txt', 'float/txt', '...']	[True, True, True]
SNAPLOG	SNAPLOG data logging on	SNAPLOG ON/OFF,[dt] or LISTVARS or SELECTVARS var1,...,varn	['txt', 'float/txt', '...']	[True, True, True]
MISCELLANEOUS				
Command	Description	Usage	Argument types	Function
CALC	Simple in-line math calculator, evaluates expression	CALC expression	['string']	[False]
DIST	Distance and direction calculation between two positions	DIST lat0, lon0, lat1, lon1	['latlon', 'latlon']	[False, False]
GETWIND	Get wind at a specified position (and optionally at altitude)	GETWIND lat,lon,[alt]	['latlon', 'alt']	[False, True]
POS	Get info on aircraft, airport or waypoint	POS acid/waypoint	['acid/wpt']	[False]

Synonyms	Equivalent with	Description
?	HELP	Show help on a command, show pdf or write list of commands to file
ADDAIRWAY	ADDAWY	
AIRPORT	POS	Get info on aircraft, airport or waypoint
AIRWAYS	AIRWAY	Get info on airway or connections of a waypoint
AWY	POS	Get info on aircraft, airport or waypoint
CALL	PCALL	Call commands in another scenario file
CLOSE	QUIT	Quit program/Stop simulation
CONTINUE	OP	Start/Run simulation or continue after pause
CREATE	CRE	Create an aircraft
DEBUG	CALC	Simple in-line math calculator, evaluates expression
DELETE	DEL	Delete command (aircraft, wind, area)
DELROUTE	DEL RTE	Delete for this a/c the complete route/dest/orig (FMS)
DELWPT	DELWPT	Delete a waypoint from a route (FMS)
DIRECTTO	DIRECT	Go direct to specified waypoint in route (FMS)
DIRTO	DIRECT	Go direct to specified waypoint in route (FMS)
DISP	SWRAD	Switch on/off elements and background of map/radar view
END	QUIT	Quit program/Stop simulation
EXIT	QUIT	Quit program/Stop simulation
FWD	FF	Fast forward the simulation
HEADING	HDG	Heading command (autopilot)
HMETH	RMETHH	Set resolution method to be used horizontally
HRESOM	RMETHH	Set resolution method to be used horizontally
HRESOMETH	RMETHH	Set resolution method to be used horizontally
LOAD	IC	Initial condition: (re)start simulation and open scenario file
OPEN	IC	Initial condition: (re)start simulation and open scenario file
PAUSE	HOLD	Pause(hold) simulation
Q	QUIT	Quit program/Stop simulation
RESOFACH	RFACH	Set resolution factor horizontal (to add a margin)
RESOFACV	RFACV	Set resolution factor vertical (to add a margin)
RTF	DTMULT	Set multiplication factor for fast-time simulation
RUN	OP	Start/Run simulation or continue after pause
RUNWAYS	POS	Get info on aircraft, airport or waypoint
SAVE	SAVEIC	Save current situation as IC
SPEED	SPD	Speed command (autopilot)
START	OP	Start/Run simulation or continue after pause
STOP	QUIT	Quit program/Stop simulation
TRAILS	TRAIL	Toggle aircraft trails on/off
TURN	HDG	Heading command (autopilot)
VMETH	RMETHV	Set resolution method to be used vertically

VRESOM	RMETHV	Set resolution method to be used vertically
VRESOMETH	RMETHV	Set resolution method to be used vertically