

Range
Hit

Mission Commander

Macro Commands

Mission Control

CreateWave (Wave_Name); // This will make a designated group of ships active

Added complexity // not quite sure how to work this, yet.

SetPrimaryMissionObjectives(Objective_Num, Flag_Num); // when flag==true, objective complete
SetSecondaryMissionObjectives(Second_Objective_Num, Flag_Num);

Object Control

Attack(Object:TargetShip);
Destroy(Object:TargetShip);
Follow(Object:GroupLeader, Xoffset, Yoffset, Zoffset);
Defend(Object:TargetShip);
Patrol(Area or Point);
Goto(Object:Target);
SendComm(FX_Num);
Jump(Object:JumpBuoy);

Specific Objects

LaunchCarrierWave(Wave_Name or Ship_num)

Object Properties

// Something about controlling the damage of a ship.

Time

Wait(Seconds)
StartTimer() or StartTimer(Seconds)
ClearTimer()

Flags

CheckFlag(Flag_Num)
SetFlag(Flag_Num)

Added complexity

IncrementFlag (
DecrementFlag (
ToggleFlag(
OrFlag(
AndFlag(

TimerState
GotHit

	returns to gameflow with FINISHED if not set so that the player can replay the mission.
jump to next mission	Forces player to another mission without going to gameflow and uses the jump effect in the process.

World Functions

switch to camera

Mission Control

set autopilot	
set baseship	Sets ship player can land on
get ship damage	
set ship damage	
get num mines around spot	
get num enemy	
set cannot collide with	Parameters ship cannot collide with.
clear cannot collide with	Clear parameters ship cannot collide with.
has ship been shot	
ignore enemy	The ship will treat enemy as if they do not exist and go on with their AI.
get num ships leeched	Returns number of ships that are in "leech" mode. ie, 100% power out.
eject from ship	
play sample	
get ship type	
set cloak	Gives an object the ability to cloak
can object cloak	
set leech enemy	Tells object to leech instead of using lethal weapons
is object leeched	
set object leeched	
get camera gun shot count	
clear camera gun shot count	
is object docked	
tractor in object	Tells object to tractor in a specific object.
get tractored in object	Identifies what object was just tractored in.
get num turrets	Index of capital ship to query.
suppress wingman messages	
get gameflow flag	For interaction with gameflow flags.
set gameflow flag	

Questionable commands

attach mip to hp	CAST index of MIP to attach (ONLY USED FOR PLAYER).
set object mip fire status	CAST index of ship to set status for (ONLY USED FOR PLAYER).
start remote mission	
get remote mission status	
set jamming zone	
flash pack object	
is object flash packed	
set nebula effect	
set current objective	Forces (does not create) new nav point to be players destination

jump resurrect object	Brings a cast member back with Jump FX
test object cloaked	
make object enemy	
make object neutral	
make object friend	

Mission Objectives

take off	
landing	
go close to point	(optional) throttle setting (0 - 100)
goto way point	(optional) throttle setting (0 - 100)
destroy object	
defend object	
search and destroy	
dock to object	
undock from object	
cancel docking	
defend point	
follow leader	
radio message	
jump to point	Activates object with jump effect.
jump from point	Deactivates object from current area with jump effect.
landing clearance	Takes nothing. Returns TRUE in result, if clearance has been granted.
ask player response	Indicates that player needs to answer a question.
get player response	Returns TRUE in result, if player answers yes to a question.
set player response	Comm event. Forces the effect of a response from player.
wait seconds	We need multiple wait second counters.
clear wait seconds	Sets the current wait seconds clock to zero (0).
fire capship missile	
set leader	(caller is wingman)
set formation	
set wingman	
set visible	
set not visible	
set follower	
set not follower	
cease fire	
fly aimlessly	

Gameflow Commands

set scene	
set mission	
set gameflow flag	For interaction with gameflow.
get gameflow flag	For interaction with gameflow.
play movie	
set next mission	Sets next mission to play if player does not return to gameflow.
play next mission	Restarts the mission system. This facilitated the following in Wing 4:
	Either plays the next mission set above OR

Wing Commander V - Mission Command Needs

Control

CMD_return
CMD_call_program
CMD_call_work_program
CMD_exit
CMD_nothing
CMD_label
CMD_data
CMD_end_mission

Work

CMD_move_value_to_work
CMD_move_flag_to_work
CMD_xchg_work_and_flag
CMD_move_result_to_work
CMD_move_result_to_work
CMD_move_work_to_register
CMD_random_work_value
CMD_random_work_flag

Math

CMD_add_value_to_work
CMD_add_flag_to_work
CMD_add_value_to_flag
CMD_add_work_to_flag
CMD_sub_value_from_work
CMD_sub_flag_from_work
CMD_sub_value_from_flag
CMD_sub_work_from_flag
CMD_or_work_with_value
CMD_or_work_with_flag
CMD_and_work_with_value
CMD_and_work_with_flag
CMD_xor_work_with_value
CMD_xor_work_with_flag
CMD_mul_work_by_value
CMD_mul_work_by_flag
CMD_div_work_by_value
CMD_div_work_by_flag

Conditionals

CMD_compare_work_to_value
CMD_compare_value_to_work
CMD_compare_work_to_flag
CMD_compare_flag_to_work
CMD_compare_result_to_value
CMD_test_flag
CMD_if_result_label
CMD_if_not_result_label
CMD_branch_equal_label
CMD_branch_not_equal_label
CMD_branch_less_label
CMD_branch_more_label
CMD_branch_less_equal_label
CMD_branch_more_equal_label
CMD_goto_label
CMD_goto_work_label
CMD_goto_work_label

Flags

move work to flag
move result to flag
set flag
clear flag
toggle flag
increment flag
decrement flag
set debriefing happened set when mission generates the debriefing
get debriefing happened returns status of debriefing_happened flag
clear debriefing happened sets debriefing_happened=0

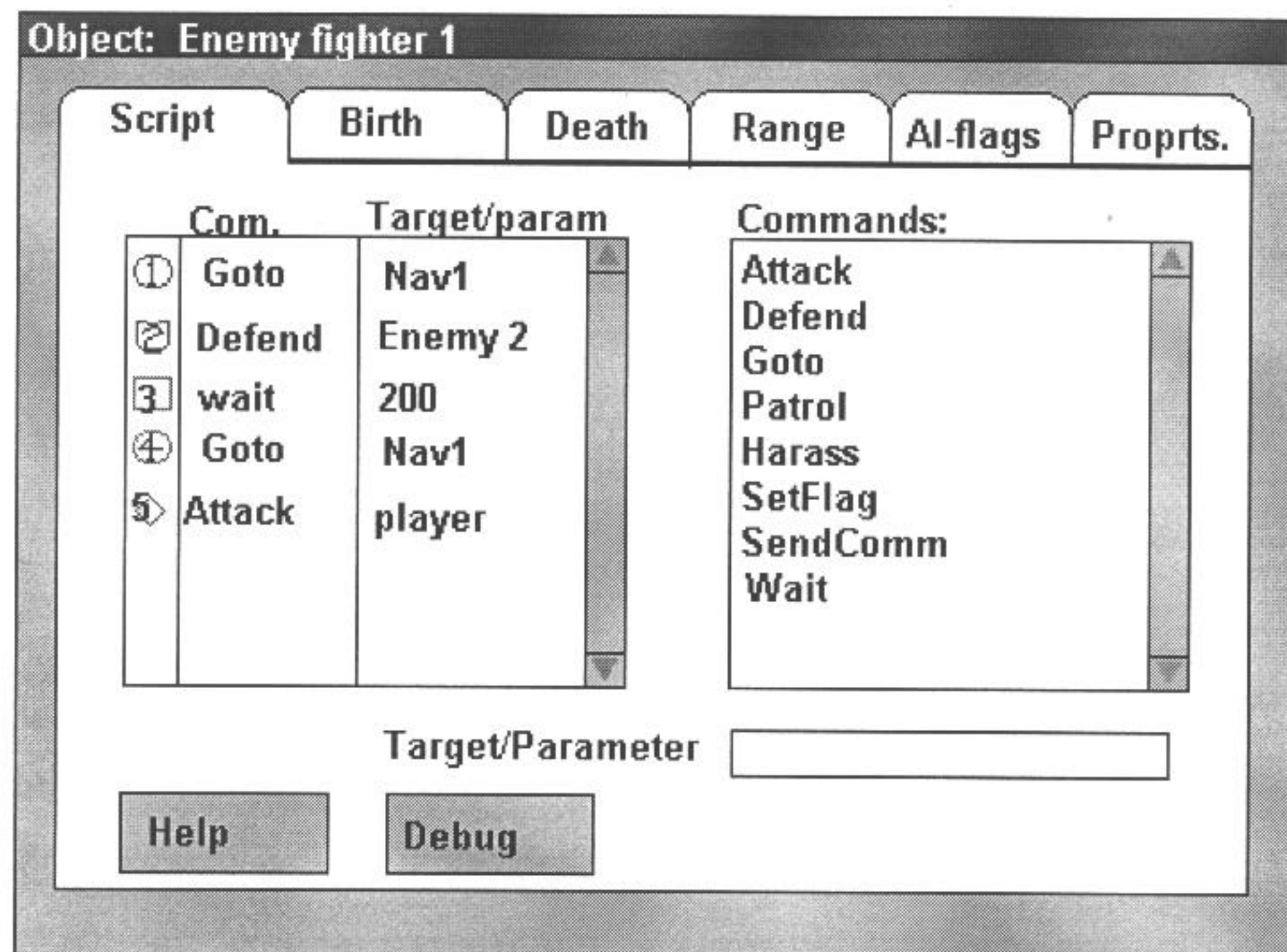
Areas

activate area
deactivate area
test area active
get work range from area

Objects

resurrect rel to object
activate object
deactivate object
test object active
test object dead
explode object
get work range from object
test object exists
resurrect object
get work range from spot
activate rel to object

Mission Editor: Object screen



Mission Commander

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Defend(Object:TargetShip);
Patrol(Area or Point);
Goto(Object:Target);
SendComm(FX_Num);
Jump(Object:JumpBuoy);

Specific Objects

LaunchCarrierWave(Wave_Name or Ship_num)

Object Properties

// Something about controlling the damage of a ship.

Time

Wait(Seconds)
StartTimer() or StartTimer(Seconds)
ClearTimer()

Flags

CheckFlag(Flag_Num)
SetFlag(Flag_Num)

Added complexity

IncrementFlag (
DecrementFlag (
ToggleFlag(
OrFlag(
AndFlag(

TimerState
GotHit

Range
Hit

ACTIVATEAREA [action sphere]
 create [target object]
 ...

CREATE [target object]

CREATEGROUP [name??]
 create [target object1, target object2, ...]

CREATE TIME GROUP at [time, time, ...]
 create [target object1, target object2, ...]

SENDCOMM
 to [target object]
 at [range]

PLAYMOVIE
 [movie#]

ASKPLAYER
 if [response == yes] then [command]
 if [response == no] then [command]

CLEAR FLAG [flag]

TOGGLE FLAG [flag]

INCREMENT FLAG [flag]

ACTIVATE OBJECT

PATROL

[location]

[location]

...

PATROLSPEED [speed number]

[location]

[location]

WAIT [time amount]

DEFEND [target] [front, behind, left, right, bottom]

GUARDAREA [action sphere to guard]

ATTACK [target]

MUSTATTACK [target]

ATTACKIF [conditional]

then [ship]

else [ship ??? or command?]

HARASS [target] to [location]

DONOTATTACK

[target object, target object]

SET PRIORITY

[target object1, target object2, target object3, etc...]

PLAYERRANGE is [range]

then [command]

EJECT

TRACTOR [object]

GO [location]

MUSTGO [location]

GOIF [conditional]
 then [location]
 else [location]

MUSTGOIF [conditional]
 then [location]
 else [location]

GOSPEED [speed number] to [location]

GOFLAG
 if [flag] = [number or flag] then [location]
 if [flag] = [number or flag] then [location]
 ...

EXIT [area] ship will head to location and jump out

JUMPOUT ship will jump out at location

DOCK [target object]

UNDOCK [location] assumes already docked, undocks, and flies to specified location

FOLLOW [target object]

Wing Commander V - Mission Command Needs

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Work

CMD_move_value_to_work
CMD_move_flag_to_work
CMD_xchg_work_and_flag
CMD_move_result_to_work
CMD_move_result_to_work
CMD_move_work_to_register
CMD_random_work_value
CMD_random_work_flag

Math

CMD_add_value_to_work
CMD_add_flag_to_work
CMD_add_value_to_flag
CMD_add_work_to_flag
CMD_sub_value_from_work
CMD_sub_flag_from_work
CMD_sub_value_from_flag
CMD_sub_work_from_flag
CMD_or_work_with_value
CMD_or_work_with_flag
CMD_and_work_with_value
CMD_and_work_with_flag
CMD_xor_work_with_value
CMD_xor_work_with_flag
CMD_mul_work_by_value
CMD_mul_work_by_flag
CMD_div_work_by_value
CMD_div_work_by_flag

Editor

Set formula Type
Set Player Info.
Enemy Counter

\rightarrow

\Leftrightarrow

\Rightarrow

Rudolph - Read \rightarrow Attack Player

Conditionals

CMD_compare_work_to_value
 CMD_compare_value_to_work
 CMD_compare_work_to_flag
 CMD_compare_flag_to_work
 CMD_compare_result_to_value
 CMD_test_flag
 CMD_if_result_label
 CMD_if_not_result_label
 CMD_branch_equal_label
 CMD_branch_not_equal_label
 CMD_branch_less_label
 CMD_branch_more_label
 CMD_branch_less_equal_label
 CMD_branch_more_equal_label
 CMD_goto_label
 CMD_goto_work_label
 CMD_goto_work_label

~~Don't~~ Don't ask clewanna

+ H.7
 + got Hit

logic

Flags

~~move work to flag~~
~~move result to flag~~
 set flag
 clear flag
 toggle flag
 increment flag
 decrement flag
~~set debriefing happened~~
~~get debriefing happened~~
~~clear debriefing happened~~

check mission flag

set when mission generates the debriefing
 returns status of debriefing_happened flag
 sets debriefing_happened=0

Group

Areas

activate area
 deactivate area
 test area active
~~get work range from area~~
 range

→ object

set Skill ()

Objects

~~resurrect rel to object~~
~~activate object~~
~~deactivate object~~
 test object active
 test object dead
 explode object
~~get work range from object~~
~~test object exists~~
~~resurrect object~~
~~get work range from spot~~
 activate rel to object

⇒ spawn ()
spawn ()

, relative to)

- who destroyed object

if got killed or not active

dupe

Part of mission

test Object Flag(); ~~set~~ active
 set object Flag(); cloaked

Mission Time
 Object Time

jump resurrect object
 test object cloaked
 make object enemy
 make object neutral
 make object friend

Brings a cast member back with Jump FX

Alignment

spawn(

good
 neutral
 evil

Test Flag
 set Flag.

Mission Objectives

take off
 landing (target: object)
 go close to point
 goto way point
 destroy object
 defend object
~~search and destroy~~
~~dock to object~~
 undock from object
 cancel docking
 defend point - w/ range

(optional) throttle setting (0 - 100)
 (optional) throttle setting (0 - 100)

Patrol or Defend or Guard (limit their range)
 # of Docking points (default range)

priorities for AB
 1. player
 2. torpedos

priorities
 Defend (Turret 1)
 Defend (Turret 2)
 Defend (Turret 3)

follow leader

radio message

jump to point

jump from point

landing clearance

ask player response

get player response

set player response

wait seconds

clear wait seconds

fire capship missile

set leader

set formation

set wingman

set visible

set not visible

set follower

set not follower

cease fire

fly aimlessly

Activates object with jump effect.

Deactivates object from current area with jump effect.

Does nothing. Returns TRUE in result, if clearance has been granted.

Indicates that player needs to answer a question.

Returns TRUE in result, if player answers yes to a question.

Comm event. Forces the effect of a response from player.

We need multiple wait second counters.

Sets the current wait seconds clock to zero (0).

(caller is wingman)

Defend.

property flags. In Nav map.

auto pilot
 disengage

Group Commands

mimic - leader
 attack in formation.
 set leader

select
 formation

Gameflow Commands

set scene

set mission

set gameflow flag
 get gameflow flag

play movie

set next mission

play next mission

For interaction with gameflow.

For interaction with gameflow.

Sets next mission to play if player does not return to gameflow.

Restarts the mission system. This facilitated the following in Wing 4:

Either plays the next mission set above OR

constants → object properties

15th
 16th

Global
 Flags

looks
 natural

dir K

Wed.

Friday:

CATHERINE

Player scripts | set Nav points

returns to gameflow with FINISHED if not set so that the player can replay the mission.

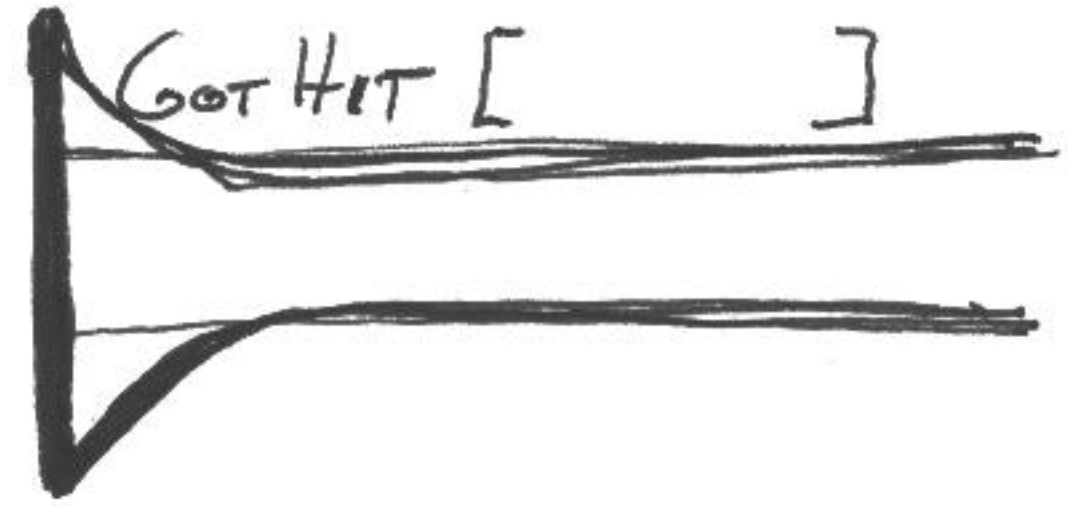
jump to next mission

Forces player to another mission without going to gameflow and uses the jump effect in the process.

World Functions

switch to camera

Set Scenes
Defend



Mission Control

set autopilot

true or false
player status

set baseship

Sets ship player can land on

get ship damage

set ship damage

return %

AI commands

Properties

get num mines around spot

get num enemy

no more enemies

set cannot collide with

Parameters ship cannot collide with.

clear cannot collide with

Clear parameters ship cannot collide with.

has ship been shot

shield hit or armor

ignore enemy

The ship will treat enemy as if they do not exist and go on with their AI.

get num ships leeched

Returns number of ships that are in "leech" mode. ie, 100% power out.

~~set camera gun shot count~~

specific missile

play sample

customize mission

get ship type

player ship

set cloak

object prop.

Gives an object the ability to cloak

can object cloak

set leech enemy

Tells object to leech instead of using lethal weapons

is object leeched

set object leeched

obj. prop.

~~get camera gun shot count~~

~~clear camera gun shot count~~

is object docked

obj prop. (flag)

tractor in object

Tells object to tractor in a specific object.

get tractored in object

Identifies what object was just tractored in.

get num turrets

Index of capital ship to query. → flags

suppress wingman messages

- cost as parameter, all, player's wingman.

get gameflow flag

For interaction with gameflow flags.

set gameflow flag

Questionable commands

attach mip to hp

CAST index of MIP to attach (ONLY USED FOR PLAYER).

set object mip fire status

CAST index of ship to set status for (ONLY USED FOR PLAYER).

start remote mission

get remote mission status

w2 remote

set jamming zone

set egg hands

flash pack object

is object flash packed

set nebula effect

egg hands

set current objective

Forces (does not create) new nav point to be players destination

object prop
conditional

sfx

Leech Attack
missile

tractor
trucks

GLOBAL


hack

Properties
ship shot? True/False

object



1. follow
leak



1. defend capship

Mission Editor

Object Behavior

Script Commands

Flags

SetLocalFlag(*Flagname*)
IncrementLocalFlag(*Flagname*)
DecrementLocalFlag(*Flagname*)
ClearLocalFlag(*Flagname*)

SetGlobalFlag(*Flagname*)
IncrementGlobalFlag(*Flagname*)
DecrementGlobalFlag(*Flagname*)
ClearGlobalFlag(*Flagname*)

Object

Attack(*TargetObject*) and Attack(*TargetObject*, *WithinRange*)
MustAttack(*TargetObject*) //Ignore all other enemies
PriorityAttack(*TargetObject1*, *TargetObject2*, *TargetObject3*)
Defend(*TargetObject or Location*) and Defend(*TargetObject or Location*, *WithinRange*)
PriorityDefend(*TargetObject1*, *TargetObject2*, *TargetObject3*)
Ignore(*EnemyType*) and Ignore(*Target1*, *Target2*, etc.)
Harass(*TargetObject*, *Location*) //Attack, then lure to location
Evade(*EnemyType*) and Evade (*TargetObject*)
Patrol(*Location*, *Location*, *Location*, etc.) and Patrol(*Location*, *Location...WithinRange*, *Speed*)
Goto(*Location*, *WithinRange*) and Goto(*Location*, *Speed*)
MustGo (*Location*)
SetWingman(*TargetObject*) and SetWingman(*TargetObject*, *RelativePosition:X,Y,Z*)
Follow(*TargetObject*)
ActivateObject(*TargetObject or Area*) and ActivateObject(*TargetObject*, *RelativePosition:X,Y,Z*)
DeactivateObject(*ObjectName*)
SetObjectPropertyFlag(*ObjectFlag*)
ClearObjectPropertyFlag(*ObjectFlag*)
JumpIn(*Object*, *Location*)
JumpOut(*Object*, *Location*)
Launch()
Land(*Object*) and Land(*Object*, *BayNumber*)
Dock(*Object*)
Undock()
SendComm(*CommMovieName*) //Separate system to handle comm branching
SuppressMessages(*CastMember*)
PlaySfx(*SfxName*)
PlayMovie(*MovieName*)
Wait(*Seconds*)
Create(*ObjectType*, *X*, *Y*, *Z*) and Create(*ObjectType*, *RelativeObject*, *Xoff*, *Yoff*, *Zoff*)
CreateWave(*GroupName*) and CreateWave(*GroupName*, *RelativeObject*, *Xoff*, *Yoff*, *Zoff*)
Tractor(*TargetObject*)
SwitchCamera(*NewPosition*)
TestObjectPropertyFlag(*ObjectFlag*)
Eject()

Object Properties

Type

Ship (Many different types of ships)

NavPoint

CommandPoint

JumpPoint

Timer (A timer can have birth and Death events, so when the time expires, commands are run)

Status flags (Boolean)

VisibleInNavMap

Cloak

Baseship //Player can only land if this bit is set

Active

Dead

leeches

Follower //for Autopilot

collision

invulnerable

Loadout (if ShipType)

- Cargo
- Weapons

AI (if ShipType)

Flags

HostileToPlayer

HostileToRace1

HostileToRace2

Skill

Ace

Average

Wimp

Pilot

GenericRace1

GenericRace2

SpecificCharacter

Events

When these conditions are checked every game loop. When the conditions are met, ScriptCommands are executed

Birth

When an object is created

Death

When Object dies

Range

UserDefinable Range. When the player (or some other ship) crosses these boundaries, run a ScriptCommand

User Defined (ArmorHit, ShieldHit, 80%Damaged, etc.)

When theses conditions are met, run a ScriptCommand

TimeRange

At this time (absolute mission time) run these ScriptCommands

Logic Operations (still fuzzy)

If (*FlagName*)

ScriptCommand1
ScriptCommand2

...

else

ScriptCommand1
ScriptCommand2

OR

If (conditional)

ScriptCommand1
ScriptCommand2

...

else

ScriptCommand1
ScriptCommand2

Editor Screen

Object: Enemy fighter 1

Script		Events	Object Properties
	Com.	Target/param	Commands:
①	Goto	Nav 1	Attack
②	Defend	Enemy 2	Defend
③	wait	200	Goto
④	Goto	Nav 2	Patrol
⑤	Attack	player	Harass
			SetFlag
			SendComm
			Wait

Target/Parameter

Help Debug Cancel OK

Not make commands items
make ~~item~~ command queue

~~ACTIVATEAREA [action sphere]
create [target object]~~

...

~~CREATE [target object]~~

~~CREATEGROUP [name??]
create [target object1, target object2, ...]~~

~~CREATE TIME GROUP at [time, time, ...]
create [target object1, target object2, ...]~~

~~SENDCOMM
to [target object]
at [range]~~

~~PLAYMOVIE
[movie#]~~

~~ASKPLAYER
if [response == yes] then [command]
if [response == no] then [command]~~

~~CLEAR FLAG [flag]~~

~~TOGGLE FLAG [flag]~~

~~INCREMENT FLAG [flag]~~

~~ACTIVATE OBJECT~~

✓ GO [location]

✓ MUSTGO [location]

✓ GOIF [conditional]
 then [location]
 else [location]

✓ MUSTGOIF [conditional]
 then [location]
 else [location]

✓ GOSPEED [speed number] to [location]

✓ GOFLAG
 if [flag] = [number or flag] then [location]
 if [flag] = [number or flag] then [location]
 ...

✓ EXIT [area] ship will head to location and jump out

✓ JUMPOUT ship will jump out at location

✓ DOCK [target object]

✓ UNDOCK [location] assumes already docked, undocks, and flies to specified location

✓ FOLLOW [target object]

~~PATROL~~

[location]

[location]

...

~~PATROLSPEED~~ [speed number]

[location]

[location]

~~WAIT~~ [time amount]

~~DEFEND~~ [target]

~~GUARDAREA~~ [action sphere to guard]

~~ATTACK~~ [target]

~~MUSTATTACK~~ [target]

~~ATTACKIF~~ [conditional]

then [ship]

else [ship ??? or command?]

~~HARASS~~ [target] to [location]

~~DONOTATTACK~~

[target object, target object]

~~SET PRIORITY~~

[target object1, target object2, target object3, etc...]

~~PLAYERRANGE~~ is [range]

then [command]

~~EJECT~~

~~TRACTOR~~ [object]

(AI Commands, Functions, Statements, Whatever... (Ideas)

IGNORE

Attack/Engage - attack nearest non-friendly target according to a) mission priority
b) threat level

Defend/Escort - defend specified target (A) while staying within distance (X) attack all non-friendly targets within (X) in accordance with threat/aggression levels

Evade - attempt to gain separation (minimum distance x?) between self & closest non-friendly target or any target currently engaged with self. use evasive maneuvers, speed variations, counter-measures, etc. until (x?) distance separation is achieved

Recon - similar to Evade - but staying within mission defined parameters (speed, course)
ex. must stay within 80% KPS of mission assigned speed and 1000 meters of mission assigned course

Retreat - similar to Evade - attempt to exit action sphere at earliest possible chance while Evading

Dock - uh like you know... land on/dock with object

Disable - similar to Attack/Engage

A) using special weapons attack closest non-friendly target in order of mission/threat priority until units are disabled (leech missile/gun, or ion cannon ala star wars)

B) using standard weapons attack closest non-friendly target according to mission/threat priority until target AI switches to retreat

Content - mission defined cargo carried by self

Skill - pilot flight skill level (Rook, Average, Veteran, Ace) with each level using different special maneuvers or combinations of maneuvers ie. how hard they are to "shake" or "tail"

Aggressiveness - governs amount of force used in combat situation

ex.. standard - guns only

High - guns and some limited # of missiles

Maximum - use all weapons available until target is destroyed

Persistence - governs when and to what kind of AI switching takes place

Low, Med., High, Banzai

ex. Low - after taking 20%? damage Evade then re-Engage
after 50%? dmg Retreat

Damage - duh.. %damage, %hull integrity etc..

Patrol - Travel along assigned course and look for non-friendly targets within X distance of patrol route and react according to mission priority/threat levels

Threat Level - numeric value assigned to each type of object - modifiable dependant on what other types of objects are present. used in conjunction with Mission Priority to determine what targets are attacked, ignored, etc.

ex. non-friendly bombers TL might double in the presence of friendly CapShips

Ignore - used to tell objects to ignore other objects of a specific type

Unless - modifies other statements

Mission Priority - used to determine what targets are attacked. how a target is selected depends on MP, Threat Level, and range to target

ex.

- 1-mission specific target
- 2- targets TL 18 or greater
- 3- Bombers
- 4- Hvy Fighters
- 5- transports
- etc.

EVENT

ACTION

Comm —

/