

Wargame: Red Dragon Internal Mechanics Manual

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1 Introduction

This document lays out the structure and internal mechanics of the units in RTS video game Wargame: Red Dragon (and thereof, of the entire Wargame series). Over the course of its release the series has garnered a sizable modding community, one which has done much great work tinkering with the game and exploring the boundaries it lays out. Much credit goes in particular to Enohka, whose **Wargame Modding Suite** makes studying and patching the game's files easy and intuitive (or at least as easy and intuitive as modifying a game of this complexity can be).

This document was prepared and published in support of an initiative in the **extraction and datafication** of the 1,800+ units in Wargame: Red Dragon. In its attempt to summarize in detail all that is known about the game units' internals it has many precursors. Although there are other aspects to modding, unit creation and modification is easily the most heavily travelled and easiest aspect to modding the game, and it is the explicit focus of this text.

All numbers and counts in this guide refer to Wargame: Red Dragon circa late-2016, version 510049986.

2 Getting Started

This guide is written from the perspective of the Wargame Modding Suite. If you have not done so already, download this wonderful tool and point it to the most recent version of your game (refer to documentation elsewhere for instructions on how to do that).

Wargame: Red Dragon internals are organized in terms of files of the "ndf-bin" type. The most important of these is "everything.ndfbin", which contains nearly all easily modifiable attributes of the game. This file, decompiled by the Modding Suite, in turn consists of a couple hundred tables. These tables, or "modules", are linked to one another within a complex hierarchy.

The most important table, for our purposes, is TUnitAuSolDescriptor. This table is top-level object describing all of the purchasable and playable units in the game (as well as a variety of deprecated and occasional "special" ones):

Name	Name	Instances	Instance
95	TModuleSelectorFilter	1858	14672
101	TCompanyUnitModuleDescriptor	1837	14673
81	TUnitAuSolDescriptor	1818	14674
194	TWargameLabelModuleDescriptor	1815	14675
89	TAMmunition	1756	14676
103	TWeaponManagerModuleDescriptor	1661	14677
137	TTurnetTwoAxisDescriptor	1587	14678
207	TMissileCarriageSubDeceptionMissile	1568	14679
325	TWargameNationDeck	936	14680
219	TResourceAnimationMapHolder	915	14681
148	TTurnetUnitDescriptor	668	14682
165	TCompositeHappening	601	14683
145	TTurnetInfanterieDescriptor	592	14684
179	TMissileCarriageWeaponInfo	589	14685
357	TDeckConstraints	556	14686
200	TActionDescriptorLaunchEffectOn	421	14687
144	TMissileCarriageConnoisseur	404	14688
114	TMissileCarriageModuleDescriptor	404	14689
364	TStrategicMapEventPopupDescriptor	365	14690
350	TPoolElement	335	14691
176	TMissileCarriageSubDeceptionGei	319	14692
209	TMultipleResourceAnimationMap	318	14693
185	TUnit_ObsoleteAnimationFastAccess	317	14694
57	TSequencingActionHappening	317	14695
229	TGfDescriptorAnimation	309	14696
60	TActionCall	306	14697
147	TWeaponModelHolder	296	14698
146	TUnitBehaviourDescriptor	296	14699
115	TGroupCombatModuleDescriptor	296	14700
186	TSubDeception	265	14701
331	TACGeneralStrategyTransition	260	14702
235	TGofFastAccessKey	254	14703
107	TFuelModuleDescriptor	246	14704
87	TTransportableModuleDescriptor	242	14705
30	TAcknowledgeQintelDescriptor	239	14706
153	TAirplanePhysicsConfiguration	234	14707
121	TMovementHandlerAirplaneDes	229	14708

Name	Name	Type	Value
437	DescriptorId	Guid	00000000-0000-0000-0000-0000e803000
438	Modules	List	Collection[25]
439	ShortDatabaseName	TableString	Descriptor_Unit_152mm_SpGH_Dana
440	ClassNameForDebug	TableString	Unit_152mm_SpGH_Dana
441	StickToGround	Boolean	True
442	ManageUnitOrientation	Boolean	True
443	HitRollSizeModifier	Float32	0.05
444	DeathExplosionAmmo	ObjectReference	89 : 16533 (True) - TAMmunition
445	IconType	Int32	2
446	PositionInMenu	Int32	4
447	NameInMenuToken	LocalisationHash	8E14D59D2C0F8600
448	AliasName	WideString	DIANA
449	Category	Int32	3
450	AcknowUnitType	Int32	32
451	TypeOfAcknow	Int32	119
452	Nationalite	Int32	1
453	MotherCountry	TableString	TCH
454	ProductionYear	UInt32	1977
455	MaxPacks	UInt32	2
456	Factory	Int32	13
457	ProductionPrice	List	Collection[5]
458	MaxDeployableAmount	List	Collection[5]
459	ShowInMenu	List	Collection[5]
460	ProductionTime	Int32	10
461	CostElite	Int32	2
462	TextureForInterface	ObjectReference	78 : 16534 (True) - TUJResourceTexture
463	TextureTransportForInterf	ObjectReference	78 : 16535 (True) - TUJResourceTexture
464	TextureMotherCountryFori	TransTableReference	Typeface3D_TitleMono_CompensatePost
465	UnitTypeTokens	List	Collection[2]
466	UnitMovingType	Int32	3
467	VitesseCombat	Float32	4160
468	UpgradeRequire	Unset	null
469	IsPrototype	Unset	null
470	Key	Unset	null
471	HitRollECMMModifier	Unset	null

A sister table, TUnitDescriptor, describes both these units and additionally missiles, leading to a first, mildly amusing observation: missiles in the game are treated as their own units by the engine.

This table is our starting point.

Note that the first entry in this table is the 90-point Czech DANA artillery piece, which happens to, arbitrarily, have the lowest table ID in the game. This is followed by a Polish KUB-M anti-air unit, and then by a Russian Tunguska anti-air unit, as good a starting point as any other.

3 TUniteAuSolDescriptor

3.1 DescriptorId

This is a multi-part hex hash that is used internally by the engine. It is a unique key for the table. Don't touch it.

3.2 _ShortDatabaseName

Prepended version of _ClassNameForDebug.

3.3 _ClassNameForDebug

An always-present non-localized unit name. Sometimes not entirely serious: for instance, Li Jian are given the moniker "Chinese Swords", while South Korean elite spec ops are "Black Berets". Not the name displayed in-game.

3.4 StickToGround

True if the unit is a helicopter, else null.

Unknown: does this have any effect?

3.5 ManageUnitOrientation

Null for infantry units, True otherwise.

Infantry are implemented as a special kind of vehicle in-game, and this flag likely tells the engine to treat them in some special way. But its precise effect is unknown.

See also AutoOrientation in MouvementManager.

3.6 HitRollSizeModifier

The effect that the size of the unit has on the chance-to-hit of other units firing at it. Larger-than-average units have a high HitRollSizeModifier, smaller-than-average ones have a low HitRollSizeModifier. This statistic is one of many calculations that factors into chance-to-hit.

The "Size" statistic in the armory screen is a direct translation of this variable. May be set to any float, but the values used in-game are:

Value	Armory	Applies To	Example	Instances
-0.2	Very Small	Scout helos	AH6C Little Bird	37
-0.15	Very Small	Infantry	Morskaya Pehota	296
-0.1	Very Small	Light helos	MI2URPG	20
-0.05	Small	Light vehicles	Scorpion Light Tank	20
null	Medium	Most things	BMP-1K	958
0.05	Big	Tanks, Heavy AA	M11P Abrams	237
0.1	Very Big	Large helos	Mi-26	9

3.7 DeathExplosionAmmo

A reference to a TAmmunition module which explodes in-place when this unit dies. This is a clever secondary use of TAmmunition, which is covered elsewhere in this guide.

At present time, units explode with one of just 11 animations. This includes null (e.g. no animation) which probably in error applies only to the Polish Star 266 supply truck.

3.8 IconeType

Speculatively, appears to control the light blue overlay that appears when using a unit to target another unit. Options are 1 (default), 2 (artillery and anti-ship missiles), and 3 (anti-air).

3.9 PositionInMenu

Don't know.

3.10 NameInMenuToken

This localization hash controls the display name of the unit in the menu. So for example if you were to want to change the name of this unit to that of another unit, inject the designated unit's token into the source unit's token.

3.11 AliasName

A better-formed name for the unit. Does nothing in-game. Not editable. Units which have localized names do not have an AliasName, e.g. this entry is simply null.

3.12 Category

Unknown.

3.13 AcknowUnitTpye

Unknown.

3.14 TypeForAcknow

Unknown.

3.15 Nationalite

NATO units are null, PACT units are 1.

3.16 MotherCountry

An abbreviation for the country of origin of this unit. Currently one of 'URSS', 'US', 'POL', 'RDA', 'CHI', 'NK', 'TCH', 'ISR', 'UK', 'FR', 'RFA', 'ROK', 'HOL', 'ANZ', 'CAN', 'SWE', 'JAP', 'DAN', 'NOR'. Note that these are French acronyms, hence why URSS is "backwards".

3.17 ProductionYear

The year that the unit was produced. This is the only unit of text contained in everything.ndfbin which is reproduced faithfully in-game in the armory.

3.18 MaxPacks

The number of cards of this infantry which are available for deck-building. Ranges from 1 (542 instances) or 2 (995 instances, the most common) up to 9 (16 instances, for certain transports).

3.19 Factory

Armory tab. Values are:

Value	Tab	Count
3	Logistics	177
6	Infantry	233
7	Planes	214
8	Vehicles	335
9	Tanks	196
10	Recon	197
11	Helicopters	142
12	Ships	65
13	Anti-Air	259

3.20 ProductionPrice

The in-game production price. This value isn't provided straight, but is instead embedded into a Collection of five integer elements. This means that production price may have originally been intended to be dependent on the veterancy of the unit, but this mechanic is not used in-game. Instead, the first value in this list is the actual price, and the remainder are all placeholder values of 15.

3.21 MaxDeployableAmount

A Collection of integers. The amount of copies of this unit deployable at each veterancy level, per card. 0 for veterancies this unit is not available at.

3.22 ShowInMenu

A Collection of booleans which is always set to True for true units and always set to False for missiles.

3.23 ProductionTime

How long it takes, between an air unit being clicked on or a land unit being places on the map, for the unit to appear where it's expected. Airplanes have a ProductionTime of null (instantaneous), most units have a ProductionTime of 10, and helicopters have a ProductionTime of 5. This value is in seconds.

3.24 CoutEtiole

Means "Price Star" in French. A quickly-dropped mechanic in the first iteration of the series, Wargame: European Escalation, was that unit cards for your deck, besides the basic ones, would cost an in-game currency known as "stars" to unlock. This variable used to control this cost, and continues to exist today as a holdover. Seems to always be set to 1, 2, or 3, and doesn't do anything.

3.25 TextureForInterface

A reference to the texture resource for this object's deck display.

3.26 TextureTransportForInterface

Transport units can appear in the armory screen as seperate units, but most of the time they are viewed during deck building "behind" the units they are carrying, in which case this texture reference is called up and placed. Is set to null for non-transport units.

3.27 TextureMotherCountryForInterface

Controls which flag gets displayed in the corner of the card display.

3.28 UnitTypeTokens

A list of LocalizationHash instances which control which armory-screen filters the unit falls inside of.

3.29 UnitMovingType

Flags the unit movement type. Values are:

Value	Kind	Count
1	Foot	296
2	Wheeled, Supply Truck, Land-Only	36
3	Wheeled, Non-Supply Truck, Land-Only	215
5	Tracked, Land-Only	445
6	Planes, Helicopters	448
7	Wheeled, Amphibious	121
8	Tracked, Amphibious	225
9	Ship	32

A unit's track style controls how it moves, and this field contains some important information on this subject.

Units moving on foot (1) move at the same speed on land everywhere, can move on steep slopes, and cannot enter water.

Wheeled units in general (2, 3, 7) move at 150 kph on roads, regardless of off-road speed (specified in `MouvementManager`), and move at 33% of their off-road speed in forests. Amphibious wheeled units (7) can additionally enter water, moving at a globally-set 50% of their off-road speed when doing so. I do not know what the difference between (2) and (3) is.

Tracked units in general (5, 8) move at 110 kph on roads, regardless of off-road speed (specified in `MouvementManager`), and move at 50% of their off-road speed in forests. Amphibious tracked units (8) can additionally enter water, moving at a globally-set 50% of their off-road speed when doing so.

3.30 VitesseCombat

The speed of the unit when it is in combat (e.g. whenever the unit can see enemy units). It is surprising that this is a top-level variable. The input is an unsigned int; for information on what the unit of measurement is, refer elsewhere in this guide.

3.31 UpgradeRequired

Contains a reference to another `TUnitAuSolDescriptor`. When this unit is pulled up in the armory, assuming you did all of the other categorization placements right, this unit will display after the linked unit in the horizontal list. If this is set to null, the unit will appear either on its own line or as the first unit in the horizontal list, if another unit references it itself.

3.32 IsPrototype

Whether or not the unit is a prototypal unit. Null if it isn't, True if it is. Affects deck-building, as prototypal units can't be used in global decks.

3.33 Key

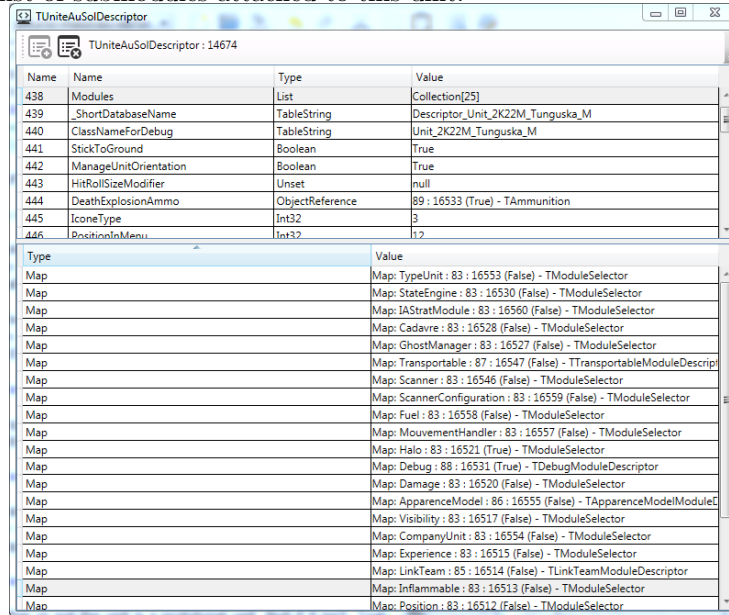
Unknown. Almost always null.

3.34 HitRolleECMModifier

The unit's ECM level. This only applies to planes and ships with higher than 0% ECM; all other units (including planes without ECM) have this value set to null.

3.35 Modules

A list of submodules attached to this unit:



Name	Name	Type	Value
438	Modules	List	Collection[25]
439	_ShortDatabaseName	TableString	Descriptor_Unit_2K22M_Tunguska_M
440	ClassNameForDebug	TableString	Unit_2K22M_Tunguska_M
441	StickToGround	Boolean	True
442	ManageUnitOrientation	Boolean	True
443	HitRollSizeModifier	Unset	null
444	DeathExplosionAmmo	ObjectReference	89 : 16533 (True) - Tammunition
445	IconType	Int32	3
446	PositionInMenu	Int32	12

Type	Value
Map	Map: TypeUnit : 83 : 16593 (False) - TModuleSelector
Map	Map: StateEngine : 83 : 16530 (False) - TModuleSelector
Map	Map: IAStratModule : 83 : 16560 (False) - TModuleSelector
Map	Map: Cadavre : 83 : 16528 (False) - TModuleSelector
Map	Map: GhostManager : 83 : 16527 (False) - TModuleSelector
Map	Map: Transportable : 87 : 16547 (False) - TTransportableModuleDescriptor
Map	Map: Scanner : 83 : 16546 (False) - TModuleSelector
Map	Map: ScannerConfiguration : 83 : 16559 (False) - TModuleSelector
Map	Map: Fuel : 83 : 16558 (False) - TModuleSelector
Map	Map: MouvementHandler : 83 : 16557 (False) - TModuleSelector
Map	Map: Halo : 83 : 16521 (True) - TModuleSelector
Map	Map: Debug : 88 : 16531 (True) - TDebugModuleDescriptor
Map	Map: Damage : 83 : 16520 (False) - TModuleSelector
Map	Map: ApparenceModel : 86 : 16555 (False) - TApparenceModelModuleDescriptor
Map	Map: Visibility : 83 : 16517 (False) - TModuleSelector
Map	Map: CompanyUnit : 83 : 16554 (False) - TModuleSelector
Map	Map: Experience : 83 : 16515 (False) - TModuleSelector
Map	Map: LinkTeam : 85 : 16514 (False) - TLinkTeamModuleDescriptor
Map	Map: Inflammable : 83 : 16513 (False) - TModuleSelector
Map	Map: Position : 83 : 16512 (False) - TModuleSelector

Each of these passes through a TModuleSelector to another table of some kind. We will now go through each of these in order of appearance.

4 TTypeUnitModuleDescriptor

4.1 ControllerName

Always TypeUnitController. Immutable.

4.2 TypeUnitValue

Unknown.

4.3 TypeUnitHintToken

Unknown.

4.4 NameInMenuToken

A copy of the top-level attribute.

4.5 GenerateName

Unknown. Always True.

4.6 Filters

Unknown. May have to do with which filters this unit falls under in the armory.

4.7 MotherCountry

A copy of the top-level attribute.

4.8 UnitInfoJaugeType

Unknown.

4.9 Training

Unknown. Usually, maybe always null.

4.10 CIWS

The CIWS statistic, as displayed in the armory, carried by a naval unit. Set to null for non-naval units and for naval units without CIWS. This is a localization hash; to set it to a particular value, use one of the following:

Exceptional = 4F233E0000000000 Very Good = 4E96452000000000 Good = 4E96450000000000 Medium = D672711906000000 Bad = CEC2000000000000 None = Set the value to null.

Changing this value does NOT change a ship's CIWS, it only changes the quality of CIWS reported on the card in-game. In other words, this only controls a text display element.

4.11 Sailing

The ship's sailing type. This is similarly a LocalizationHash controlling a text display, not the real value (which is in MouvementControl). We don't have an equivalency table at hand, sorry.

5 TDebugModuleDescriptor

There is nothing interesting here.

6 TStateEngineModuleDescriptor

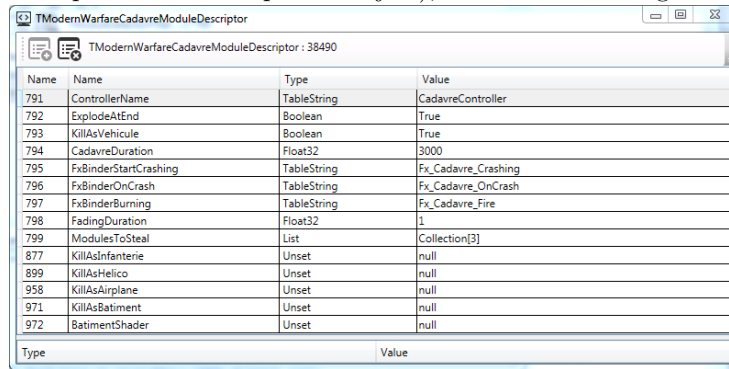
There is nothing interesting here.

7 TIAStratModule

This module contains a few hard-coded numerical references which are used for internal AI orchestration.

8 TModernWarfareCadavreModuleDescriptor

This module is buried in the logic section of the CadavreController top-level module object. It contains a number of interesting variables, all controlling what happens when a unit dies: how long it sticks around afterwards, how quickly it fades, whether or not it exploded on death (if it does, it uses the DeathExplosionAmmo top-level object), and a bunch of flags:



Name	Name	Type	Value
791	ControllerName	TableString	CadavreController
792	ExplodeAtEnd	Boolean	True
793	KillAsVehicule	Boolean	True
794	CadavreDuration	Float32	3000
795	FxBinderStartCrashing	TableString	Fx_Cadavre_Crashing
796	FxBinderOnCrash	TableString	Fx_Cadavre_OnCrash
797	FxBinderBurning	TableString	Fx_Cadavre_Fire
798	FadingDuration	Float32	1
799	ModulesToSteal	List	Collection[3]
877	KillAsInfanterie	Unset	null
899	KillAsHelico	Unset	null
958	KillAsAirplane	Unset	null
971	KillAsBatiment	Unset	null
972	BatimentShader	Unset	null

We will omit examining it in detail.

9 TTurretSkeletonModuleDescriptor

Contains a pointer to the unit's primary mesh.

10 TMissileCarriageModuleDescriptor

Contains pointers to art resources constituting missile carriages (which get reused).

11 TCommandManagerModuleDescriptor

When this module is set up properly, the unit is treated as a command unit in-game.

12 TGhostManagerModuleDescriptor

Unknown.

13 TScannerModuleDescriptor

This module is only present if the unit has special vision privileges. It contains a TModernWarfareVisibilityRollRule as a subtable, which in turn contains TModernWarfareVisibilityRollRuleDescriptor and TModernWarfareDistanceMultiplierRollRuleDescriptor dependencies.

A relatively small number of tables of the latter two types ultimately control large swatches of unit vision ranges, so you might find that e.g. tweaking one Very Good recon unit's table's vision range up will turn up vision for ALL Very Good recon units, and other similar shenanigans.

Types of vision controlled by this module are Air, Sea, and Land.

This module only contains multipliers. Base vision values are set by the module below.

14 TScannerConfigurationDescriptor

This module, if present, controls the base vision values for units granted above-normal vision. All of the base values come from here, but interact with values in TScannerModuleDescriptor above. If one of these two modules is present, both are, as they are dependent on one another.

14.1 ControllerName

Always ScannerConfigurationController. Immutable.

14.2 UnitType

A reference to the domain of the unit in question itself. UnitType 1 refers to ground, UnitType 4 refers to planes, and UnitType 6 refers to ships.

14.3 DetectionTBA

Maximum range at which you can see an unidentified helicopter.

14.4 PorteeVision

Maximum range at which you can see an unidentified ground unit.

14.5 OpticalStrength

Optical strength against ground units, used to determine whether a unit can see enemy units in cover.

14.6 OpticalStrengthAltitude

Optical strength against aircraft (including helicopters).

14.7 SpecializedOpticalStrengths

This is a Collection of float pair mapping; each of the maps binds a UnitType and then the range at which they can be detected. UnitType 4 refers to planes, while UnitType 6 refers to ships, and UnitType 1 refers to Land. The value Optican strengths against

14.8 SpecializedDetections

Maximum range at which you can see an unidentified unit. This is a Collection of float pair mapping; each of the maps binds a UnitType and then the range at which they can be detected. UnitType 4 refers to planes, while UnitType 6 refers to ships, and UnitType 1 refers to Land.

14.9 PorteVisionTBA

Maximum spotting range for helicopters. This attribute is only populated for helicopters, in which case it controls helicopter-to-helicopter sighting. It is otherwise null.

14.10 OpticanStrengthAntiradar

Maximum anti-radar spotting range. Only populated for anti-radar units; null otherwise.

14.11 _ShortDatabaseName

Same as the top-level parameter, but this seems to always be null.

15 TFuelModuleDescriptor

15.1 ControllerName

Uninteresting.

15.2 FuelCapacity

The number of units of fuel that this unit can stockpile.

15.3 FuelMoveDuration

Autonomy in kilometers; the same as the statistic displayed in the Armory.

16 TMovementHandlerLandVehicleDescriptor

This module will only be present if the vehicle in question is, indeed, a land unit.

16.1 ControllerName

Uninteresting.

16.2 Maxspeed

The unit's max speed, in engine distance units (the meaning of which is covered elsewhere).

16.3 UnitMovingType

The same as that set in TUnitMouvementDescriptor.

16.4 SpeedBonusOnRoad

A multiplier on the unit's base speed. Always set to whatever it needs to be set to to give the unit 110kph tracked speed or 150kph wheeled speed, meaning that these are constants but must be set on the local level!

16.5 TempsDemiTour

The amount of time, in seconds, it takes for a unit to make a half-turn (the translation is literal). If you tell a unit to move in a direction directly opposite to its current orientation, it will do a reverse-accelerate V-turn to the side, and this variable controls how long this takes.

Presumably this value also controls how long it takes to make turns that are less than 360 degrees, but still significant. The cutoff value at which a unit starts to make a reverse turn, instead of just turning in place, is unknown.

16.6 MaxAcceleration

The acceleration the unit applies when it is speeding up.

16.7 MaxDeceleration

How hard to breaks hit. Tends to be twice MaxAcceleration for tracked and wheeled land units.

16.8 VehicleSubType

Unknown, often null.

16.9 CriticalEffectModule

A module pointer whose contents is a TCriticalEffectModuleDescriptor describing what happens when this units is hit with a critical. Unfortunately it ultimately points to hashes, not to any descriptions of the effects of the criticals themselves...

16.10 TerrainsToIgnoreMask

This is set to certain magic values for ship units which are allowed and not allowed to enter different water depths: 16 if it can enter all waters, 24 if it's a coaster, and 26 if it's a bluewater ship.

Otherwise null.

17 TMouvementHandlerHelicopterDescriptor

17.1 ControllerName

Uninteresting.

17.2 Maxspeed

The unit's max speed, in engine distance units (the meaning of which is covered elsewhere).

17.3 MaxAcceleration

The acceleration the unit applies when it is speeding up.

17.4 MaxDeceleration

How hard the breaks hit.

17.5 UnitMovingType

The same as that set in TUnitMouvementDescriptor. Here this will always be 6, for air.

17.6 CyclicManoeuvrability

Controls movement.

17.7 GFactorLimit

Controls movement.

17.8 LateralSpeed

Controls movement.

17.9 Mass

Controls movement.

17.10 MaxInclination

Controls movement.

17.11 RotorArea

Controls movement.

17.12 TorqueManoeuvrability

Controls movement.

17.13 UpwardsSpeed

Controls movement.

17.14 CriticalEffectsModule

A module pointer whose contents is a `TCriticalEffectModuleDescriptor` describing what happens when this units is hit with a critical. Unfortunately it ultimately points to hashes, not to any descriptions of the effects of the criticals themselves...

17.15 TempsDemiTour

The amount of time, in seconds, it takes for a unit to make a half-turn (the translation is literal). For helicopters this requires a dive to the left. It's uncertain whether or not this variable is still used for anything.

18 TMouvementHandlerAirplaneDescriptor

18.1 Maxspeed

Maximum speed this unit can go at. Since airplanes fly at a constant speed, this is also the only speed.

18.2 UnitMovingType

Always 6, for air (other values are 4 for sea and 1 for land).

18.3 FlyingAltitude

The height the plane usually flies at.

18.4 MinimalAltitude

Below which the plane will not dip. Will cause it to break off from certain attacks at certain heights.

18.5 PhysicsConfiguration

A reference to a `TAirplanePhysicsConfiguration` module, which controls the plane's various movement parameters.

18.6 CriticalEffectsModule

A module pointer whose contents is a `TCriticalEffectModuleDescriptor` describing what happens when this unit is hit with a critical. Unfortunately it ultimately points to hashes, not to any descriptions of the effects of the criticals themselves...

18.7 GunMuzzleSpeed

Unknown. Always 300000.

18.8 LandingGearOutPhysicalPropertyName

Unknown. Always "InShowRoom".

18.9 LandingGearSubDescriptionName

Unknown. Always "Landing Gear".

18.10 FrontLandingGearMeshNodeName

Unknown. Always "Train_Avant".

18.11 BackLandingGearMeshNodeName

Unknown. Always "Train_Arriere".

19 THaloModuleDescriptor

Does a bunch of things which control the circle that gets drawn when a unit is selected.

20 TWeaponManagerDescriptor

21 TModernWarfareDamageModuleDescriptor

22 TAppearanceModelDescriptor

Controller for things related to the unit's appearance.

23 TVisibilityModuleDescriptor

23.1 ControllerName

Uninteresting.

23.2 UnitStealthBonus

A multiplier applied to the unit's visibility, and the only interesting contents of this module. The multipliers are:

Value	Stealth	Examples	Counts
0.1	Bad	Hatsuyiki	1
0.3	Bad	Luda	1
0.4	Bad	Oliver Hazard Perry	1
0.5	Bad	Jianghu III	3
0.6	Bad	Nanushka III	4
0.7	Bad	Donghae	5
0.8	Bad	Chamsuri	4
0.9	Bad	Shmel	2
1	Poor	AMX-30B	1349
1.2	Medium	Komar	1
1.25	Poor (!)	MiG-29S	1
1.5	Medium	VLB Minstral Recon	139
1.75	Good	PAH-2 Tiger	4
2	Good	US Marines	200
2.5	Very Good	Spetsnaz GRU	91
3	Exceptional	Spetsnaz VMF, Nighthawk	7

23.3 _ShortDatabaseName

The same as that set in the top-level object, but seemingly always null.

24 TCompanyUnitDescriptor

Companies are what the game terms sets of units ranging in size from 1 (lone) to 4 (max size; helicopters can only be grouped in 2s and planes and boats in

1s). This module contains a bunch of elements which define the logic of giving orders to a company of units, as well as the number limiting how many of the unit stack.