HELLENIC ARMY COMMAND VIRTUAL

HELLENIC WARFARE MOD

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1.0 INTRODUCTION

The Hellenic Warfare Mod is an Armed Assault Total Conversion Mod, aiming at the realistic depiction of the consistency and tactical behavior of the Hellenic Army. Initially, the mod will be released in the form of add-on packs including new units, vehicles, weapons, objects, sounds, scripts until the implementation of a fully functional new island with dynamic campaign, all MP compatible, which will provide the player with a new gaming experience.
Please note that the mod is still in beta stage, so mistakes are bound to be there regardless of our strenuous efforts to eliminate them. Rest assure that we strive for improvement every day.
The HWM team is in close collaboration with the Hellenic Armed Assault Community, aka HAC, the only active Greek community in ArmA, operating as testers and generally as invaluable partners in this endeavor. For further information, please visit http://arma.unreal.gr , and, yes, we are recruiting Greek players…

2.0 TERMS OF USE

By installing HWM pack you agree that:

- Editing\Remodeling any p3d from this pack is prohibited.
- Editing\Changing any texture of this pack is prohibited.
- Changing any values in the configs of this pack and distributing it is prohibited
- Modification or improvement of any script without permission first is prohibited, but you can use any script as is for your custom add-ons/missions
- Generally any changes\modifications are prohibited until the final release of the mod (after that we can grant permissions on requests).
- You can use the pack to create any custom missions/campaign you wish
- You are not allowed to use this pack for commercial reasons (Games, etc)
- You are not allowed to use any content of this pack or this pack for any other game than ArmA

Please understand that these terms are necessary to protect the time, effort, money, blood, sweat, tears and family nagging we put into this project

3.0 THE TEAM

Aplion aka (Whiskey) :	HAC C/O, Textures, Models
Sparky :	HWM Founder, Models,Configs,Scripts
Mainframe :	Scripts, Configs, Models
AnzcsasSteve:	Sounds, Configs
Liongreek :	Military Consultant

4.0 SPECIAL THANKS

We would like to thank the following peoples for their help

Dr Eyeball for the Amazing Job on MFD/TADS/IHADSS/FLIR system without him the AH64 wouldn't be the same.

All the guys from the community for accepting the invitation for creating missions for this HWM Addon Pack (**Wolfrug, Mathias Eichinger ,UH60MG**) refer to the mission manual for more information about the missions. Also we would like to thanks **OFPEC** for the help provided in the effort of organizing the Mission Team.

Special Thanks to **Wolfrug, Mathias Eichinger,NBS VIerra PT** for Beta Testing the addons, the feedback was very useful.

Special Thanks for helping Authoring this manual (**Dr Eyeball, Wolfrug**), reviewing and correcting was hard task.

Arigram aka (HAC_Satyros) : Icons for vehicles

Leopard1A4 is a heavily remodeled version of Sigma 6, Leopard (Originally published for OFP). So we like to give him a Credit.

ArmoredSheep, for the useful information on critical issues

Hellenic ArmA Community, for beta testing and feedback

Wives and girlfriends, for not castrating us (close call…)

And to all the ArmA community, for the constructive comments.

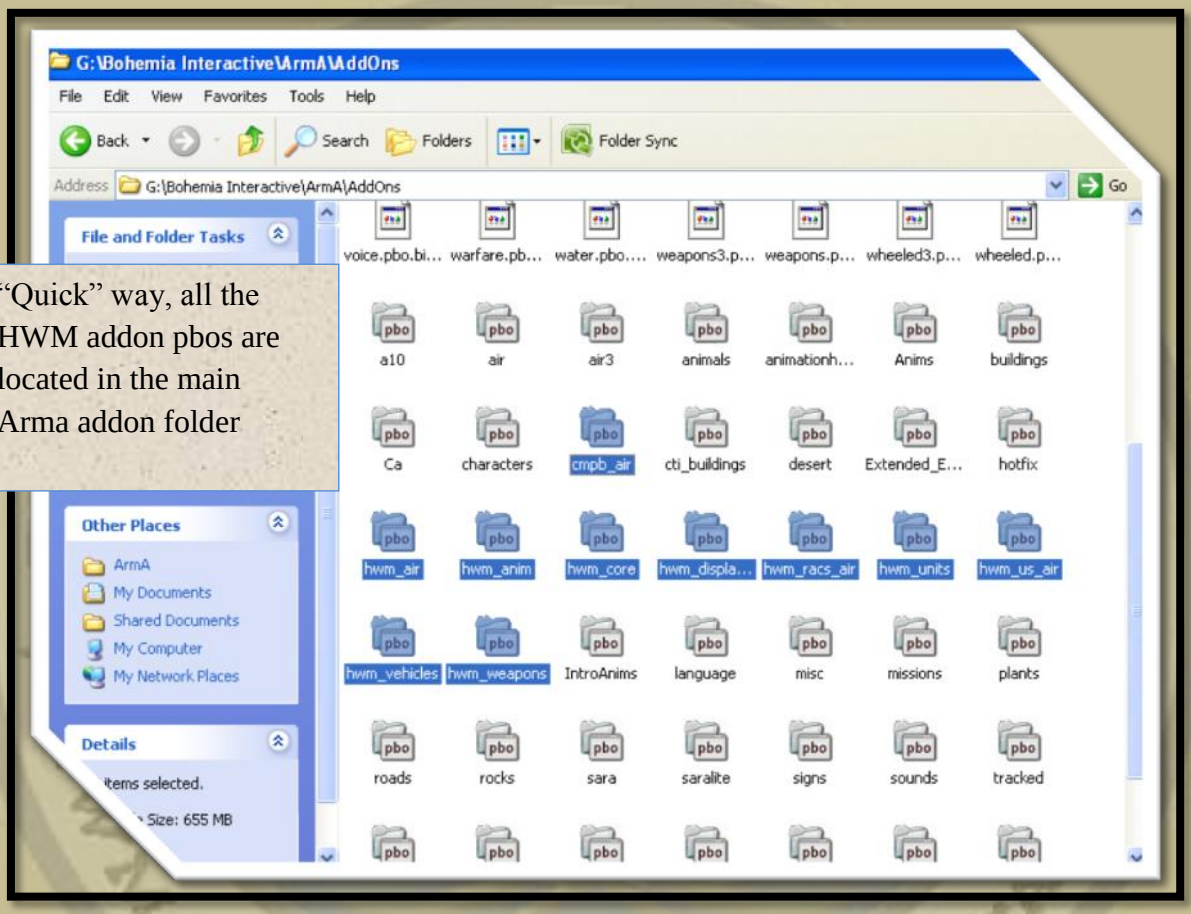
Contents

INSTALLATION

The latest release provides a variety of installation choices. Here all of them will be described.

1. **"Quick"**

The "quickest" but worst way to install HWM is to UnRAR/UnZip all the files directly into the addons folder located inside the root ArmA



directory (i.e. c:\Bohemia Interactive\ArmA\AddOns).

Note that HWM discourages this installation method since it can cause problems for ArmA default Addons and it is very inflexible.

2. **ModFolder use**

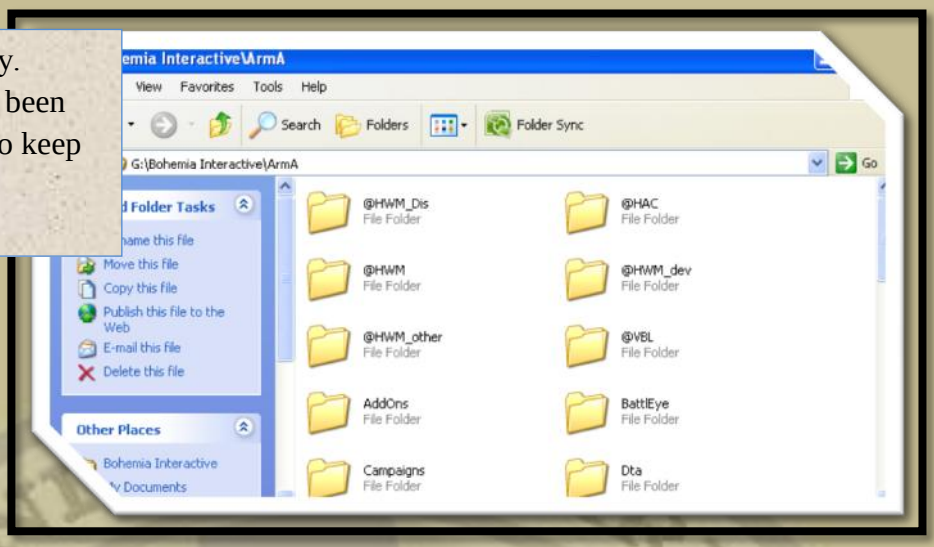
The alternative method is more ArmA game friendly since it avoids the possibility of conflicting with the original game addons.

Since this method is more complicated, we will at this point give you instructions on what a mod folder is and how it can be used.

MODFOLDER

A modfolder is a user created folder inside ArmA's main installation directory. This folder by convention starts with a "@" symbol and contains inside it a sub folder named "Addons".

"ModFolder" way. Modfolders have been created in order to keep the addon pbos.



The image above represents the general idea of a modfolder.

The user can create a variety of different modfolders that provide the ability to organize the addon content in different modfolders and "mount" the one they want at any time.

Once the modfolder is ready, there is another step in order to "mount" the content of the modfolder into ArmA. In order to do that a new ArmA shortcut must be created, and the appropriate modfolder must be added in shortcut's properties window after the -mod command. A shortcut line must look something like this.

"G:\Bohemia Interactive\ArmA\arma.exe" -mod=@HWM_dev;@HWM_other

Where:

"G:\Bohemia Interactive\ArmA\arma.exe" is the Target exe of this shortcut.

After the -mod=, enter the name of the mod folder you have previously created. In cases where more than one modfolder is desired they can be separated with a ; symbol.

The user has created a shortcut named "@HWM Dev" and inside the target field has added the appropriate "modfolder" command in order to mount a modfolder named "@HWM_Dev" and another named "@HWM_Other"

The following instructions assume you are utilizing the "modfolder" technique.

HWM releases utilize a small pbo named "HWM_Disable_Patch", this small pbo has a single purpose; to eliminate all Greek classes from the editor. At this point note that ArmA at the start still loads them, only that they aren't visible in the editor and can't be accessed with scripting commands like "CreateVehicle" etc. This pbo can serve in use cases where the player wants to have the US/RACS/Vietnam Versions of HWM vehicles but without having the Greek in the editor. Since the US/RACS/Vietnam versions are dependent on the core HWM pbos, it is not possible to use only the other versions independently: **in other words, no matter the combination, you WILL have to load the HWM addons to be able to use the other variations!**

There are two options for installing HWM.

1. "All in the pot"

The following installation is the simplest. The user just puts all the HWM addons in a single modfolder, named for example "@HWM". The "HWM_disable_patch.pbo" is optional, therefore the best practice is to put it in a different modfolder containing only the pbo, example "@HWM_dis". This leads to two possible scenarios:

1. A shortcut that loads everything, in which case the shortcut's Target line should look like this:

"Arma Installation Path" -mod=@HWM

2. A shortcut that loads everything but eliminates Greek Classes from the Mission Editor, in this case the shortcut's Target line should look like this:

"Arma Installation Path" -mod=@HWM;@HWM_dis

2. "Organizing the Addons"

This installation method is more advanced but more flexible. In this scenario the user has the ability to put all the greek addons in a single modfolder named "@HWM", and to split the US/RACS/Vietnam variations into different modfolders. Users can tell what a pbo contains by reading the pbo's filename.

Pbo filename	Containment
HWM_XXX	Greek version
HWM_Racs_XXX	Racs Version
HWM_Us_XXX	US Version
CMPB_XXX	Custom (currently Vietnam)

The user can put the RACS version in his RACS addons modfolder named for example “@RACS”, the US addons in his modfolder named for example “@US” and the Vietnam in his Vietnam addons modfolder named for example “@NAM”. The following table provides the different variations of the shortcuts that can come up by combining the different modfolders.

-mod=	Loads
@HWM	Greek
@HWM;@RACS	Greek/RACS
@HWM;@RACS;@HWM_Dis	RACS
@HWM;@US	Greek/US
@HWM;@US;@HWM_Dis	US
@HWM;@NAM	Greek/Vietnam
@HWM;@NAM;@HWM_Dis	Vietnam
@HWM;@RACS;@US;@NAM	All
@HWM;@RACS;@US;@NAM@HWM_dis	All except Greek

VEHICLES

GD240

Armament	
Weapon	Qty
MG3	6X200

Specification	
Speed	130
Armor	60
Cargo Space	3

Utilizing Systems
Animated Sections
Destruction System

M113A1

Armament	
Weapon	Qty
M2	6X100

Specification	
Speed	60
Armor	450
Cargo Space	11

Utilizing Systems
Animated Sections
Destruction System
Enterable Geometry

LEOPARD 1A4GR

Armament	
Weapon	Qty
L7A3	40XHEAT
	15XAPDS
MG3coaxial	5000
MG3	5X200
Smoke Chargers	2X6

Specification	
Speed	65
Armor	900
Cargo Space	0

Utilizing Systems
Smoke Screen
Destruction System
Camo Net

AIR

UH1H M60D MOUNTED

Armament	
Weapon	Qty
2XM60D	2X1500

Specification	
Speed	205
Armor	35
Cargo Space	9

Utilizing Systems
Damage Indication System
Destruction System
Animated Parts
Random Plate Numbers

UH1H MG3 MOUNTED

Armament	
Weapon	Qty
2XMG3	2X1500

Specification	
Speed	205
Armor	35
Cargo Space	9

Utilizing Systems
Damage Indication System
Destruction System
Animated Parts
Random Plate Numbers

AH64 A FOR MULTIROLE PURPOSE MISSIONS

Armament	
Weapon	Qty
M230E1 chain gun	1200
AGM-114 Hellfire	8
M-261	38
Flares	4X7

Specification	
Speed	279
Armor	55
Cargo Space	0

Utilizing Systems
Damage Indication System
MFD/TADS/IHADSS/FLIR System
Destruction System
Counter Measure System
Animated Parts

AH64 A FOR GROUND SUPPRESSION MISSIONS

Armament	
Weapon	Qty
M230E1 chain gun	1200
M-261	76
Flares	4X7

Specification	
Speed	279
Armor	55
Cargo Space	0

Utilizing Systems
Damage Indication System
MFD/TADS/IHADSS/FLIR System
Destruction System
Counter Measure System
Animated Parts

AH64 A FOR CLOSE SUPPORT MISSIONS

Armament	
Weapon	Qty
M230E1 chain gun	1200
AGM-114 Hellfire	16
Flares	4X7

Specification	
Speed	279
Armor	55
Cargo Space	0

Utilizing Systems
Damage Indication System
MFD/TADS/IHADSS/FLIR System
Destruction System
Counter Measure System
Animated Parts

UNITS

GREEK ARMY REGULAR TROOPS

Greek Regular Army Table 1/2			
			
AA Soldier	AT Soldier	Automatic Rifleman	Crewman
			
Grenadier	UH-1H Gunner	Light AT	Mach. Gunner M60E
			
Mach. Gunner MG3	Mach.Gunner M60	Marksman	Medic
			
Miner	Officer	Pilot	Recon

Greek Regular Army Table 2/2			
			
Sabot	Sabot 2	Sabot Assault	Sniper
			
Squad Leader	Team Leader	Soldier G3A3	Soldier FN-FAL

GREEK ARMY SPECIAL FORCES ZMAK

ZMak Table 1/2			
			
AA Soldier	AT Soldier	Automatic Rifleman	Grenadier
			
Light AT	Mach.Gunner M60E	Mach.Gunner M249	Marksman
			
Medic	Miner	Recon	Sabot
			
Sabot2	Sabot Assault	Sniper	Soldier

ZMak Table 2/2		
		
Squad Leader	Team Leader	Heavy Sniper

GREEK ARMY SPECIAL FORCES ETA

ETA Table 1/2			
			
AA Soldier	AT Soldier	Automatic Rifleman	Grenadier
			
Light AT	Mach.Gunner M60	Mach.Gunner M60E	Marksman
			
Medic	Miner	Recon	Sabot
			
Sabot2	Sabot Assault	Sniper	Soldier

ETA Table 2/2	
	
Squad Leader	Team Leader

GREEK ARMY SPECIAL FORCES GREEN BERRETS

Green Berets Table 1/2			
			
AA Soldier	AT Soldier	Automatic Rifleman	Grenadier
			
Light AT	Mach.Gunner M60	Mach.Gunner M60E	Marksman
			
Medic	Miner	Recon	Sabot
			
Sabot2	Sabot Assault	Sniper	Soldier

Green Berets Table 2/2	
	
Squad Leader	Team Leader

WEAPONS

HK G3A3

Specifications	
Type	Assault Rifle
Aiming Type	Ironsight
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	800m/s
Modes	Single
	Full

HK G3A4

Specifications	
Type	Assault Rifle
Aiming Type	Ironsight
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	800m/s
Modes	Single
	Full

HK G3A4 MARKSMAN

Specifications	
Type	Assault Rifle
Aiming Type	Collimator
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	800m/s
Modes	Single
	Full

FN FAL

Specifications	
Type	Assault Rifle
Aiming Type	Ironsight
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	830m/s
Modes	Single
	Full

FN FAL PARA

Specifications	
Type	Assault Rifle
Aiming Type	Ironsight
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	830m/s
Modes	Single
	Full

FN FAL MARKSMAN

Specifications	
Type	Assault Rifle
Aiming Type	Collimator
Magazine Capacity	20
Caliber	7.62
Muzzle Velocity	830m/s
Modes	Single
	Full

HK21

Specifications	
Type	Light Machine Gun
Aiming Type	IronSight
Magazine Capacity	100
Caliber	7.62
Muzzle Velocity	800m/s
Modes	Full

M60

Specifications	
Type	Heavy Machine Gun
Aiming Type	IronSight
Magazine Capacity	200
Caliber	7.62
Muzzle Velocity	853m/s
Modes	Full

M60E

Specifications	
Type	Heavy Machine Gun
Aiming Type	IronSight
Magazine Capacity	200
Caliber	7.62
Muzzle Velocity	853m/s
Modes	Full

MG3

Specifications	
Type	Heavy Machine Gun
Aiming Type	IronSight
Magazine Capacity	100
Caliber	7.62
Muzzle Velocity	930m/s
Modes	Full

M72 LAW

Specifications	
Type	Light Anti Tank
Aiming Type	IronSight
Magazine Capacity	1
Caliber	N/A
Muzzle Velocity	N/A
Modes	N/A

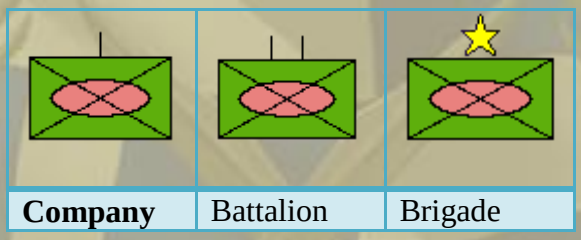
MARKERS

In Mission Editor by selecting the "Marker" selection (F5 key) a whole new set of markers will appear. The following describes the markers based on their category.

INFANTRY

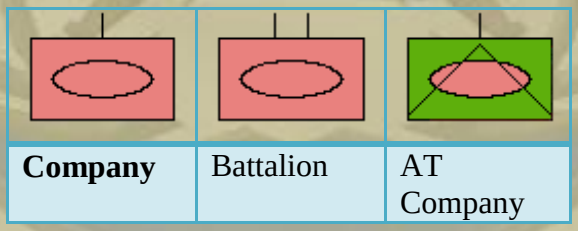
Company	Battalion	Brigade

MECHANIZED INFANTRY



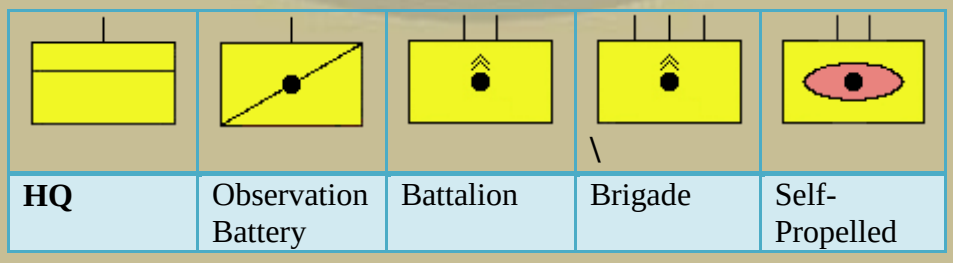
Company	Battalion	Brigade

ARMORED/ANTITANK



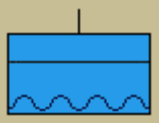
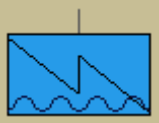
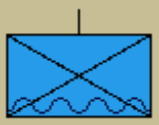
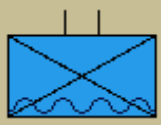
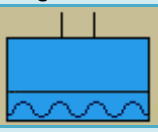
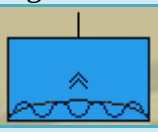
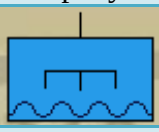
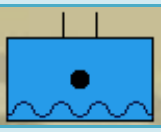
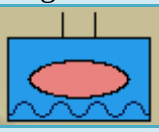
Company	Battalion	AT Company

ARTILLERY

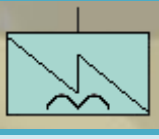
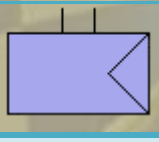
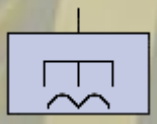


HQ	Observation Battery	Battalion	Brigade	Self-Propelled

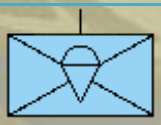
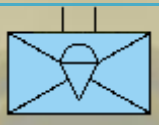
MARINES

				
HQ	Signal	Company	Battalion	Brigade
				
Support	Light AA	Engineer	Artillery	Armored

AIRBORNE

			
HQ	Signal	Support	Light AA
			
Engineer	Artillery	Engineer	

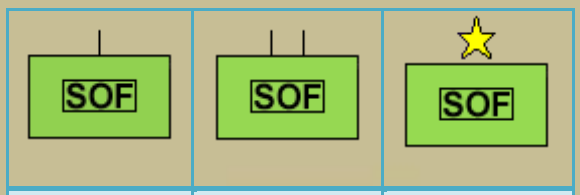
PARATROOPERS

		
Company	Battalion	Brigade

SIGNALS/COMMUNICATIONS

	
Company	Battalion

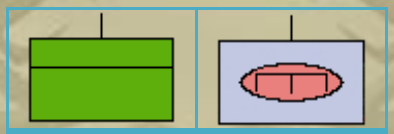
COMMANDO SF

		
Company	Battalion	Brigade
		
Regiment	ETA	ZMAK

ARMY AVIATION

				
HQ	Battalion	Brigade	Attack Helis	Support

OTHER

	
HQ	Engineer

HWM ENHANCING SYSTEMS

The enhancing systems are scripted based functionalities bind together with a user action or ArmA functionality. In general those systems are trying to add more functionality and flexibility to the original game in order the result to be close to Real Life.

The following table represents the systems developed so far.

SYSTEM
Destruction System
MFD/TADS/IHADSS/FLIR
Flares / Countermeasures
Damage Indicators System
Animated Parts
Camo Net
Smoke Screen
Random Plate Numbers
Walk able Vehicle Geometry

DESTRUCTION SYSTEM

Destruction System is a combination of the destruction effect, destructed parts blown away and texture swapping We created a totally new effect for our vehicles. Once a vehicle is hit, dust is produced from the impact. After that, black smoke and fire consumes the vehicle. At the same time some vehicle parts are blown into the air (unique for each vehicle).Blown parts have their own geometry, fire geometry and their own destruction, which means that are totally lethal if they hit any unit. Also a black smoke tail follows some destroyed parts randomly. The direction is even random, so you never know where exactly is each part going to go. For the vehicle itself we use standard BIS texture swapping (not scripted). The above are creating an amazing atmosphere and are lag free.

The Whole system though the same in the base idea has expanded to include unique characteristics for every vehicle. Therefore the destruction system for AH64 or UH1H behaves differently than gd240 and m113a1.

HWM AH-64A - MFD/TADS/FLIR/IHADSS

The HWM AH64's variations are featuring a whole new system. This system has been designed in order to give the HWM AH64's the best realism possible within ArmA's limitations. The system consists of various components.

The key central component that binds it all together is the MFD interface. The various capabilities that the system provides are: TADS capability, FLIR capability, NVS and PNVS for CPG and Pilot, IHADSS support, basic VDU support, laser designator, flares and countermeasures.

The following sections will describe each capability.

1. MFD

The MFD (multi-function display) can be activated to appear on the left of the screen via the user Actions menu item called **MFD** or toggled via the Look key (Left-Alt key) both for CPG (Copilot/Gunner) and Pilot. The MFD can be navigated using number keys for fast selection or using PageUp and PageDown followed by Enter key to select.

2. MFD HELP MENUS

All configured shortcut keys can be viewed in the various MFD **Help Menus** (MFD selections 9-0-1/2/3/4). The configurations are specific to your ArmA control keys set up. This manual will assume the default key set up is used. Most shortcuts are mapped to actions rather than keys, which allows you to map these options to joystick buttons easier.

3. DTV (CPG/PILOT)

The TADS (Target Acquisition Designation System) provides the CPG with day and night target acquisition by means of a direct view optical (DVO) telescope, a day television (DTV), and a forward looking infrared (FLIR) sensor system.

Player can switch on the TADS either by navigating through the MFD or by using the "V" key for fast selection (MFD selections 6-1).

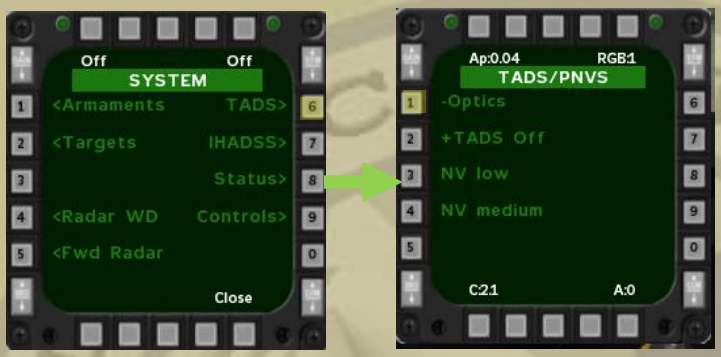
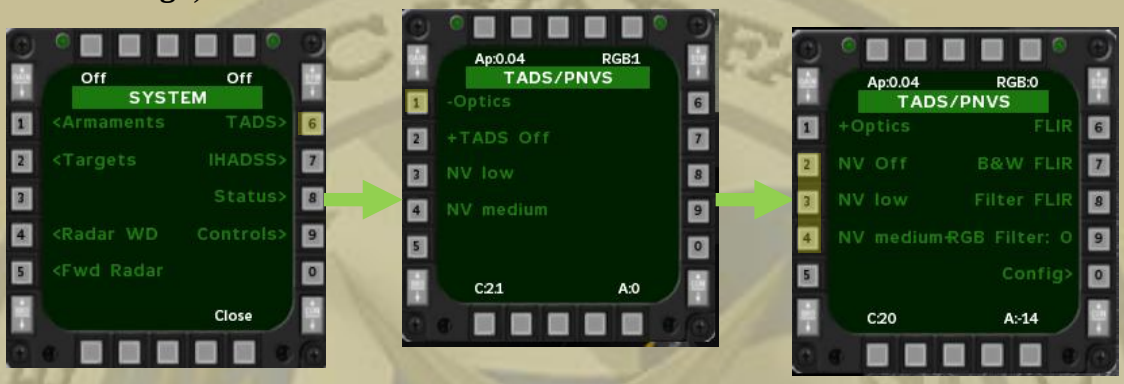


Image 1. TADS turned on (CPG)

4. PNVS (CPG/PILOT)

The PNVS (Pilots Night Vision System) is used by the pilot for externally aided vision at night or during adverse weather. The PNVS consists of a stabilized FLIR contained in a rotating turret mounted above the TADS. Normal operation calls for the pilot to have priority control of the PNVS turret; however, in the event the pilot becomes incapacitated, the CPG may take control of the PNVS.

Player can switch on the PNVS by navigating through the MFD (MFD selections 6-1-2/3/4 or shortcut "B" or Binoculars key). There are 2 predefined PNVS modes (**NV Low**/**NV High**) for normal use.



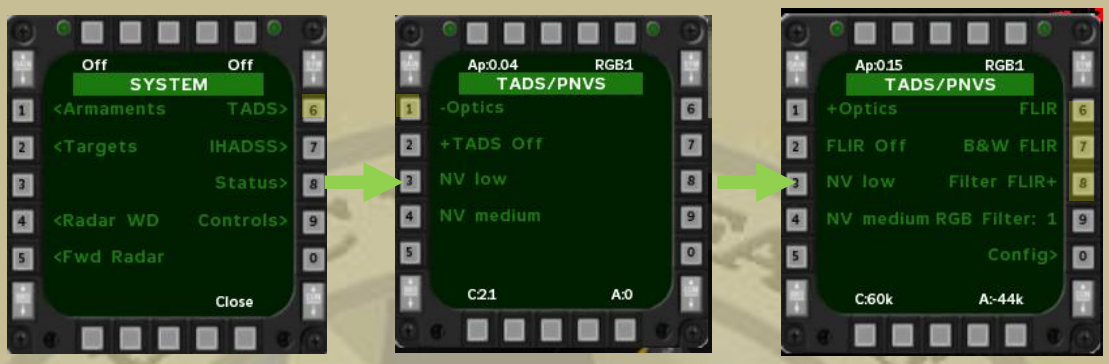
Samples of the two NV modes:

Image 2. NV Low

Image 3. NV Medium

5. FLIR (CPG/PILOT)

The TADS provides the CPG with day and night target acquisition by means of a direct view optical (DVO) telescope, a day television (DTV), and a forward looking infrared (FLIR) sensor system.



Player can switch on the FLIR by navigating through the MFD (MFD selections 6-1-6/7/8). There are 3 primary FLIR modes (**FLIR /B&W/Filter**). FLIR (Normal) is a low contrast monochrome mode. B&W is a high contrast black and white mode. Filter is a low contrast color overlaid mode. The color can be toggled via the **RGB Filter** option (MFD selection 9).

Samples of the three primary FLIR modes:

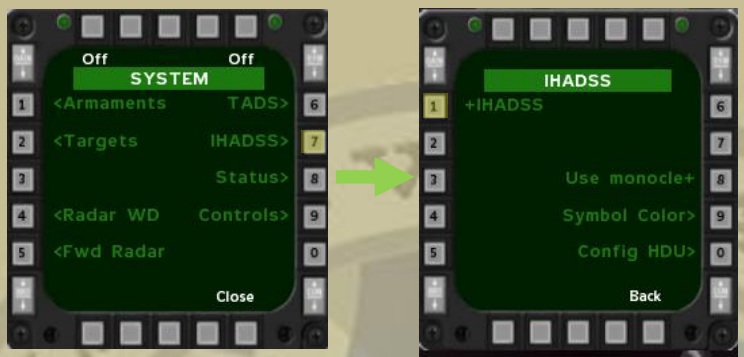
Image 4. FLIR Monochrome

Image 5. FLIR B&W

Image 6. FLIR Filtered

6. IHADSS (CPG/PILOT)

Player can switch on IHADSS (Integrated Helmet And Display Sight Subsystem) symbol generator by navigating through the MFD (MFD selections 7-1 or shortcut "K" or Compass key).



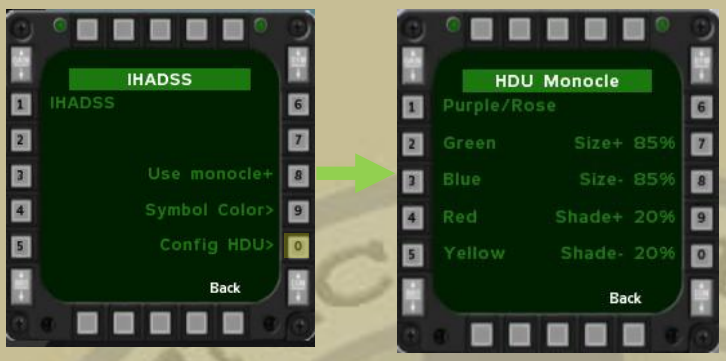
IHADSS MONOCLE

By default turning on the IHADSS system, the monocle is utilised. The user has the ability of hiding it by toggling the **Use Monocle** option (MFD selections 7-8).

Image 7. Pilot IHADSS on with HDU monocle (without optics)

IHADSS CONFIGURATION

The IHADSS symbol color can be configured by selecting the **Symbol Color** option (selection 9 in MFD) while the IHADSS is ON.



Similarly, the IHADSS monocle shade color and (size) adjustment can be configured by selecting the **Config HDU** option (selection 0 in MFD).

IHADSS SYMBOLOGY AND INDICATORS

The set of symbols shown on the various displays will differ for the pilot and CPG, plus it will differ for optics versus monocle view, providing 4 main layouts.

Image 8. Pilot IHADSS Symbology

IHADSS/TADS SYMBOLOGY DEFINITIONS

A	Selected Sensor mode	M	Cueing Dots (C)
B	Airspeed digital display	N	Missile Constraints
C	Altitude digital display	O	Velocity Vector (P)
D	Rate of Climb	P	Acceleration Cue (P)
E	Altitude & ROC Scale	Q	Horizon Line (P)
F	Altitude Tape	R	TADS FOV Gates
G	Sensor Field of Regard	S	Range
H	Field of View	T	Range Source
I	Cued LOS Dot	U	Tracking Camera Info (P)
J	Skid/Slip Lubber Lines & Ball	V	Tracking Cursors (P)
K	Weapon Status	W	Warning Messages
L	LOS Reticule		

Key: P=Pilot only, C=CPG only

Image 9. CPG IHADSS Symbology

IHADSS WARNINGS

The IHADSS also includes visual and audible warning alerts for incoming missiles, stall & potential ground collision. The visual warnings appear as text warning messages near the centre of the HUD.

7. PILOT PNVS TRACKING CAMERA

The pilot's PNVS camera can only be rotated, elevated and zoomed using keyboard keys, but not the mouse. To assist this, several automatic tracking modes exist.

PNVS TRACKING MODES

The pilot's camera has some extended tracking capabilities, which are available while the camera is active. These options are controlled via shortcut keys normally, but are also on the MFD on the **Camera Tracking** menu (MFD selections 6-1-5).

There are 4 tracking modes available:

- **Manual**: relative view with no tracking (activated whenever the camera is moved manually, which turns off any other mode)
- **Fixed position**: locks on to ground position (shortcut is 'P' or Players key)
- **Target IAT** (image autotracker): locks on to assigned target (shortcut is 'T' or TeamSwitch key)
- **CPG**: displays the CPG TADS view (shortcut is 'C' or Stand key)

PNVS LASER TARGET DESIGNATOR

While the pilot has the camera activated, the **laser target designator** also becomes available (shortcut is 'L' key or Lights key or toggled via MFD Armaments menu). When switched on, the pilot's HUD will show a cursor to indicate this. It will switch itself off if the CPG Tracking mode is used or when the camera is deactivated. This laser designated target can be targeted by the CPG.

PNVS TRACKING CURSORS

Each tracking mode will have a different cursor icon in the centre of the screen. Manual mode has no cursor, the fixed position cursor has rounded corners, the target cursor has square corners, the CPG cursor has inward square corners and the laser designator mode cursor includes a X cross.

8. ARMAMENTS

The **Armaments** menu (MFD selection 1) displays the available weapons along with their corresponding ammo or missile count. A weapon can be activated via the corresponding button shortcut key (0-9).

The **laser designator** can only be activated by the pilot and only while in camera optics mode.

The **flares countermeasures** can also be activated via the shortcut 'R' key (or ReloadWeapon key). They are approximately 70% effective against incoming missiles for around 5 seconds. A.I. pilots are able to use flares as well.

9. TARGET SELECTION

The **Targets** menu (MFD selection 2) displays the top 10 threats in order of severity. Usually attack choppers first, anti-air vehicles and turrets, followed by armor and light vehicles. Any target from the list can be assigned to the CPG using the respective button shortcut key (0-9). Upon assigning a target, the Radar Warning Display will then appear.

10. RADAR DISPLAYS

There are 2 radar displays available:

A 360 degree **Radar Warning Display** (RWD)

A **Forward Radar** display, with a 90 degree arc.

These are activated via the MFD using selection 4 & 5 respectively. The top 10 threats are labeled and can be assigned to the CPG using the respective button shortcut key (0-9). Unidentified targets cannot be assigned. Both enemy and ally vehicles can be detected and are displayed as triangle icons.

The assigned target is indicated by a diamond icon with a bearing line to its relative position. The target's attributes are shown in each corner:

- its altitude in top-left corner,
- the distance in top-right corner,
- the vehicle type in the bottom-left corner and
- the relative angle from the helicopters heading.

11. STATUS

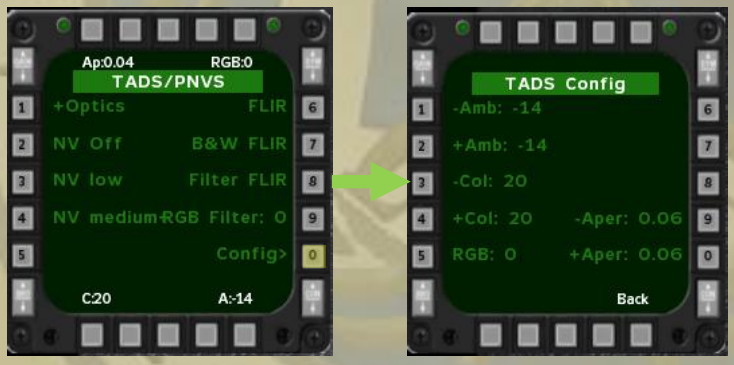
The **Status** menu (MFD selection 8) displays the damage status of the main systems of the helicopter as either "ok" or "damaged".

12.CONTROLS

The **Controls** menu (MFD selection 9) provides access to common helicopter actions including: open/close pilot/CPG door, toggle auto-hover, engage engine, toggle manual fire, toggle main lights, plus access the Help System which shows configured shortcut keys.

13.FLIR/NV CONFIG

In single player mode only, the **TADS/PNVS** menu will include a **Config** menu which is otherwise hidden, enabling the user to adjust some visual attributes of the display mode. In order to calibrate the image the user must first turn ON either the PNVS or FLIR display mode. The 4 main attributes used are: ambient light, colored light, aperture & RBG Filter mode. Note: Extreme values will produce undesired effect results, therefore this is for experimental purposes only. The increment rate is automatically scaled for larger values.



FLARES COUNTERMEASURES

The AH-64A is equipped with a flares kit on the tail region for missile countermeasures. These can be deployed via the shortcut ‘R’ key (or ReloadWeapon key) or via the MFD Armaments menu. The flares are approximately 70% effective against incoming missiles for around 5 seconds. A.I. piloted helicopters are also able to use flares.

Flares are Magazine related, Ah64 must have sufficient number of magazines in order to be able to deploy flares. The script is also making the logistics in order to find how many flares have been laft, in the event of empty, flares don’t execute.

DAMAGE INDICATORS SYSTEM

The damage warning indicators system is a system that represents the warning indicators on a vehicle. The system is a combination of animated parts and the malfunction or effect that the damage can cause. This system is designed specifically for each vehicle that supports it. Currently only the AH64A (all versions) and the UH1H (all versions) support it. The system extends ArmA's normal damage effects. The system operates only when the vehicle has its engines on, since a system like that requires electrical power.

AH64A

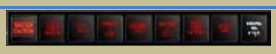
In AH64A the pilot and gunner each have a common central (master) warning indicator console plus each has their own full detailed console.

Main warnings console identical for pilot and gunner

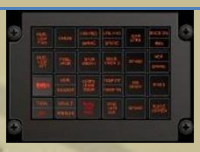
Gunner's warning console located on the right side.

Pilot's warnings console located on the right side.

The following table represents the different warning panels, the vehicle section which has taken damage and the effects.
Note that in extremely hot situations a combination of all these warning can occur.

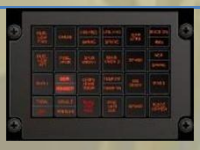
Tail Rotor Damage		
Both	Pilot	Gunner
		
In the event of tail rotor damage the events may vary depending on the amount of damage.		
Damage >0.55 **Damage of this amount will produce random results**		
Possibility 1:	Rotor starts spinning in the wrong -axis on and producing smoke, Beep sound	
Possibility 2:	Rotor starts spinning in the wrong +axis on and producing smoke, Beep sound	
Possibility 3:	No visual effect	
Damage >0.90 **Damage of this amount will produce random results**	Rotor destructs into small pieces.	

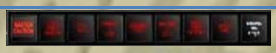
Main Rotor Damage		
Both	Pilot	Gunner
		
In the event of main rotor damage the events may vary depending on the amount of damage.		
Damage >0.8 **Damage of this amount will produce random results**		
Possibility 1:	Rotor starts spinning in the wrong -axis on and producing smoke, Beep sound	
Possibility 2:	Rotor starts spinning in the wrong +axis on and producing smoke, Beep sound	
Possibility 3:	No visual effect	

Engine Damage		
Both	Pilot	Gunner
The event of engine damage is kind of tricky to catch, since ArmA provides a limited number of hit points in case of the engines randomly one of 2 or both of them is picked		
Engine 1		
		
Engine 2		
		
Damage >0.75 **Damage of this amount will produce random results**		
Possibility 1:	producing smoke, Beep sound	
Possibility 2:	producing smoke, Beep sound	
Possibility 3:	No effect	

Missiles Damage		
Both	Pilot	Gunner
		
Beep sound		

TADS Damage		
Both	Pilot	Gunner
		
Beep sound		

M230 Damage		
Both	Pilot	Gunner
		
Beep sound		

Generic Damage		
Generic damage can occur randomly under hot situations, usually has only visual effect. Only one off the following two schemes is randomly selected.		
Both	Pilot	Gunner
		
		
Beep sound		

UH1H

The father of the Warnings System was made for the UH1H. Therefore the UH1H system is simpler and less sophisticated for the warnings. In this first version, damage effects and warnings indicators are not bound together. As a result of this, a damage amount greater than 0.5 limits UH1H speed and produces smoke.

When the UH1H receives multiple damage types, a combination of the following warning indicators can activate.

Main Rotor Damage	
Both	
	Master Caution in Central Main Console will light together with the Red Light.

Tail Rotor Damage

Both

Master Caution in Central Main Console will light together with the Red Light.

Engine Damage

Both

Master Caution in Central Main Console will light together with the Red Light.

Tail Wing (Elevator) Damage

Both

Master Caution in Central Main Console will light together with the Red Light.

Electronics Damage

Both

Master Caution in Central Main Console will light together with the Red Light.

Generic Damage

Both

Master Caution in Central Main Console will light together with the Red Light.

ANIMATED PARTS

The term animated parts is referring to the animation that is triggered on a vehicle by a user action (even by A.I.), or automatically under a special condition. Animated parts can be doors, ramps etc. This interaction isn't implemented directly by ArmA therefore it's a scripted enhancement.

The following table will present each vehicle and the animated parts that it supports, and the command for this animation part that can be used in the editor, in order to have the vehicle in a specific state, if that is desired.

Vehicle	Vehicle Section	Command open	Command close
GD240 	Driver Door	X animate ["rd_door", 1]	X animate ["rd_door", 0]
	CoDriver Door	X animate ["ld_door", 1]	X animate ["ld_door", 0]
	Back Cargo Door	X animate ["bc_door", 1]	X animate ["bc_door", 0]
	Back Cargo Wheel	X animate ["bc_wheel", 1]	X animate ["bc_wheel", 0]
	Windshield	X animate ["pampriz", 1]	X animate ["pampriz", 0]
M113A1 	Optic	X animate ["optic", 1]	X animate ["optic", 0]
	Cargo Hatch	X animate ["cargo_hatch", 1]	X animate ["cargo_hatch", 0]
	Ramp	X animate ["ramp", 1]	X animate ["ramp", 0]
UH-1H (All Versions) 	Pilot Door	X animate ["rp_door", 1]	X animate ["rp_door", 0]
	CoPilot Door	X animate ["lp_door", 1]	X animate ["lp_door", 0]
AH64A(All Versions) 	Pilot Door	X animate ["rp_door", 1]	X animate ["rp_door", 0]
	CoPilot Door	X animate ["lp_door", 1]	X animate ["lp_door", 0]

NOTE: The “X” in the table represents the vehicle object variable or name from the field “Name” in mission editor. The command can be put in the initialization field of vehicle, in a waypoint or trigger.

CAMO NET

A special case of animated part is “camo net”. Camo net visually provides camouflage by means of a net stretched on the tank

The camo net deployment option is enabled only in Commander Position and vehicle isn’t moving. Any movement renders the option unavailable, and you need to stop the tank in order to remove it again. Please bear in mind that in future releases, other nets will be available, to be able to retain low visibility according to the environment, thus providing the option of a good firing position

Vehicle	Vahicle Section	Command open	Command close
Leopard1A4Gr 	Camo net	X animate ["net",1]	X animate ["net",0]
		X animate ["net_weap",1]	X animate ["net_weap",0]
		X animate ["net_top",1]	X animate ["net_top",0]

SMOKE SCREEN

Another enhancement of our tank is the Smoke Screen. To be able to deploy smoke you need to be in gunner's position. The leopard by default has 2 slots of a 7XPack smoke shell. Smokes are also deployed according to turrets direction and this is exactly the reason why this feature is so realistic. Furthermore this smoke isn't just like a simple smoke shell; it has been created with particles, a very difficult task to achieve indeed. Being in a beta stage of course, there is lots of room for improvement, and we will update this and every other feature as our journey leads us to many great discoveries about the possibilities of this great game.

Currently the Leopard1A4Gr supports that feature. But in future releases there will be added more vehicles.

RANDOM PLATE NUMBERS

Random plate numbers is a system that creates random plate numbers/markings for vehicles. In the current version only the UH1H is utilizing it. Although somebody may think that this is an other "animated parts" version, in technical ArmA's terms it's not. The reason is that the random plates are utilizing the setobject texture command (which isn't MP compatible) and not animation.

The tail marking numbers are different in this image.

M113 ROADWAY/GEOMETRY/FIRE GEOMETRY

With Roadway LOD, player has the ability of walking into the M113A1 up to a point. A quite useful feature since now there is the ability of using the M113A1 (while stopped) as a fighting point, giving the player more protection.

Fire Geometry complexity gives the ability of the animating parts to have real effect, since Geometry and Fire Geometry is animated too. This means that players cannot be hit by a bullet while the ramp is up, but when the ramp is down any bullet can penetrate from the open space, the same is for cargo hatch. At the same time, the player cannot enter the M113A1 while the ramp is up neither can he turn out from the cargo hatch while it's closed.

Keep note that the ability of entering the M113A1 is usable only when the M113A1 is stopped, once you enter and the M113A1 begins to move Geometry of Player and M113A1 are collide causing the player to get thrown out of the M113A1. Possibility of active Cargo is still pending, but you can consider this as a first step. Also the addition of Roadway was quite difficult, since Vehicles aren't designed to have roadway LODs, we experienced some ugly hopping and we solve that in a great degree, but still more testing is needed, to be sure that this bug has gone. (this problem was introduced in ArmA since it wasn't there in OFP)

TABLE OF CLASS NAMES

CLASS NAME	WEAPON	MAGAZINE
VEHICLES		
HWM_Leopard1A4		
	L7A3	40Rnd_105mmHEAT
	L7A3	15Rnd_105mmAPDS
	MG3_coax	5000XMG3_762
	MG3_veh	MG3_762V
		6XHWMSmoke
HWM_M113A1		
	M2_mounted	100Xm2_127x99
HWM_GD240		
	MG3_veh	MG3_762V
MG3Bunker		
	MG3_veh	MG3_762V
AIR		
HWM_UH1H		
	HWM_M60D_Proxy	HWM_M60_762
	HWM_M60D2_Proxy	HWM_M60_762
HWM_UH1H_Mg3		
	MG3H	500XMG3_762
	MG3H_1	500XMG3_762
HWM_ah64A_supr		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_M271_Pods	HWM_76Rnd_FFAR
		8XHWM_M1_Chaff
HWM_ah64A_ground		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_16Rnd_Hellfire
		8XHWM_M1_Chaff
HWM_ah64A		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_8Rnd_Hellfire
	HWM_M271_Pods	HWM_38Rnd_FFAR
		8XHWM_M1_Chaff
WEAPONS		
	HWM_M60	HWM_M60_762
	HWM_M60E	HWM_M60_762
	HWM_HK21	HWM_HK21_762
	HWM_HKG3A3	HWM_HKG3Mag
	HWM_HKG3A4_Marksman	HWM_HKG3Mag
	HWM_HKG3A4	HWM_HKG3Mag
	HWM_FN_FAL	HWM_FalMag
	HWM_FNFAL_Marksman	HWM_FalMag
	HWM_FN_FAL_Para	HWM_FalMag
	HWM_Law	HWM_Law
	HWM_MG3	MG3_762

SIDE BLUFOR US

CLASS NAME	WEAPON	MAGAZINE
VEHICLES		
HWM_US_UH1H		
	HWM_M60D_Proxy	HWM_M60_762
	HWM_M60D2_Proxy	HWM_M60_762
HWM_US_ah64A_supr		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_M271_Pods	HWM_76Rnd_FFAR
		8XHWM_M1_Chaff
HWM_US_ah64A_ground		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_16Rnd_Hellfire
		8XHWM_M1_Chaff
HWM_US_ah64A		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_8Rnd_Hellfire
	HWM_M271_Pods	HWM_38Rnd_FFAR
		8XHWM_M1_Chaff

SIDE INDEPENDENT RACS

CLASS NAME	WEAPON	MAGAZINE
HWM_GD240_Racs		
	MG3_veh	MG3_762V
HWM_Racs_UH1H_Mg3		
	MG3H	500XMG3_762
	MG3H_1	500XMG3_762
HWM_Racs_ah64A_supr		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_M271_Pods	HWM_76Rnd_FFAR
		8XHWM_M1_Chaff
HWM_Racs_ah64A_ground		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_16Rnd_Hellfire
		8XHWM_M1_Chaff
HWM_Racs_ah64A		
	HWM_M230	HWM_1200Rnd_30MM_AH64
	HWM_HellfireLauncher	HWM_8Rnd_Hellfire
	HWM_M271_Pods	HWM_38Rnd_FFAR
		8XHWM_M1_Chaff

CHANGE LOGS SUM

Here you will find the changes made to previous addons released by HWM. All changelogs will bear the date of the release of the changes, to be used as reference in our bug track system.

CHANGELOG JANUARY 2008

BUG FIXES from Version 1.0
-Leopard1A4 now has correct ammo switching from APDS to HEAT rounds, with appropriate reloading time.
-Corrected the slight transparent texture on HKG3 series weapons.
-The deployable MG3 now isn't empty when placed as static.
-Fixed lights in both M113A1 and Leopard 1A4 now they are close to vehicles and on center.
-Fixed rate of fire in MG3
-Added flash both in M113A1 and Leopard in Cargo/Commander and Driver LODS
-Added View Geometry LOD in M113A1 and Leopard1A4

ENHANCEMENTS from Version 1.0
-Leopard 1A4 now uses the new MG3 (low poly version) designed for UH-1H, and the appropriate proxy type.
-Added new sound for the MG3

CHANGELOG JUNE 2008

BUG FIXES from Version 2.0
-UH-1H now has a flaps animation giving better flight control on vertical dives.
-UH-1H rotors now are spinning at the correct direction
-UH-1H reworked config.
-UH-1H Racs version tail marking texture now is correct.
-Leopard1A4 now APDS and HEAT rounds have different behavior and unique realistic characteristics.
-Leopard1A4 apply camo net is now MP compatible

ENHANCEMENTS from Version 2.0
-H&K G3 series weapons reworked from scratch.
-All weapons now have a unique magazine model.
-Update characteristics for all addons to comply under patch 1.14
(unique recoils, upgraded armor for all vehicles)

CHANGELOG FEBRUARY 2009

ENHANCEMENTS from Version 3.0
-New Sounds for every addon
-XEH Compatibilty for Air Vehicles (AH64A/UH1H)

KNOWN ISSUES

-When trying to use the armory scene feature of the UH-1H, game freezes and causes PC to crash. We're working on that...
-Cargo system experimental. Not Multiplayer compatible.

DISCLAIMER

The HWM is by no means a professional venture, and cannot be held responsible for ANY problem that might be caused in your PC. As with all private ventures, by using this mod you agree that you do so at your own risk.