

NEXT GENERATION COMBAT SYSTEMS BETA 1

The Dynamic Battlespace Concept for Homeworld 2

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Background:

NGCS represents the first public-release effort in producing a near-truescale space combat environment for Homeworld 2, with a fully dynamic AI and flight modeling system that allows for lifelike engagements and battle resolution with minimal requirement for human micromanagement.

Weapon systems in NGCS are likewise, based on scientific reality and their performance in the battlespace are entirely intuitive to grasp.

NGCS provides an authentic combat simulator environment for the sci-fi wargamer interested in a detailed, complex and automated presentation of squadron to taskgroup level space combat. It is additionally suitable for adaptation into virtually all existing Homeworld 2 mods or total conversions.

Mod Structure:

- NGCS's automation in gameplay is based on the experimental late-generation PDS battlespace.
- Missile warfare routines and guided weapons performance are derived from the Cold War to present-day naval battlespace.
- The AI reactionary systems are based on the Dynamic Fighters/Capships effort by Alex Drake; with AI combat maneuvering systems and flight/piloting models likewise based on PDS.
- "Mobile combat" routines, with ships actively evading weapons fire in fierce high speed combat, are inspired by the *Gundam SEED* anime TV series.
- The near-truescale battlespace is based on that done by ThorinDP (unreleased PDS 10x) for purposes of experimentation.

Release Notes:

Installation:

Unzip into your Homeworld 2 folder, all files will go into the right locations.

Add the parameter `-overridebigfile` to your desktop Homeworld 2 shortcut by right clicking, selecting properties and entering the parameter Target field as shown below (for Windows):

```
"C:\Program Files\Homeworld2\NGCS\Bin\Release\Homeworld2.exe" -overrideBigFile
```

A .big file compilation from you would be appreciated.

This first release demonstrates the baseline concepts of NGCS highlighted above.

All SP and Tutorial Campaign missions at this time, along with skirmish modes are unaltered after installation of NGCS.

To test NGCS, select the Skirmish vs CPU game mode from the main menu then open the “NGCS Beta” gametype. The map selection you will see on the left corresponds to a “Red Flag” style series of fleet exercises.

To see how different NGCS is from just about anything seen in a RTS game to date, select the “EX-Sqn. (CLG) 200 vs 7th DAG” map and proceed to engage the enemy. Fleet selection, ship coloration, etc will not affect the conduct of the engagement.

First Blood – CLG Sqn. vs DAG Mission Notes

On mission start, the command cruiser *Arethusa* in your small hunter-killer group has detected the opposition force dead ahead at a range of about 65km in the in-game scale. Large railguns and capital class anti-starship missiles may engage at this range and your main punch in this mission are the pair of bombardment cruisers armed with four “Sledgehammer Mk.2” heavy missile launchers each.

It’s a pair of light and maneuverable but big-teethed light cruisers versus old and sluggish but heavily armed and armoured heavy cruisers – who will win?

Have the *Plains of Illyria* CLG squadron engage the enemy direct action (heavy) cruiser group (DAG) of *Arbiter Mk.4Cs*, while the *Arethusa* and accompanying frigate squadron protects the CLG squadron from enemy frigate attack. Allow the bombardment cruisers some chance for successful opportunity fire by retargeting them on frigates conducting close attacks on them – a few Sledgehammers “down the throat” will get rid of them fast in a pyre of thermonuclear fire.

Although you are outnumbered and outgunned, the *Plains of Illyria* and *Arethusa* cruisers have the advantage of superior agility along with more advanced offensive and defensive capabilities than the DAG’s cruisers. Using superior agility, you can engage and disengage at will but take care not to come under sustained fire from multiple Arbiters.

While the ships’ primary weapons dictate their main role in battle, note the importance of secondary weapons as well. The CLGs’ light attack missiles, broadside and “dual-purpose” railguns and close in directed energy weaponry provide them with all round defense against light attackers and additionally support their close in attack capability, countering the inherent sluggishness of its heavy missile launchers in a dynamic battlespace.

The CLCG on the other hand, has a primary armament of three 335mm railguns from the *Arbiter* class, along with a large amount of light attack and standard missile launchers for a more reserved role in combat. Her offensive and defensive electronics support to a taskgroup is more important than

firepower, but the *Arethusa* is no sloth when it comes to providing fire support from standoff range.

Note how the CLG's 140mm Shrike Mk.7 RGs (dorsal and lower bow medium ballistic weapon mounts) are replaced with faster firing 110mm Vindicator Mk.4 RGs on the CLCG to provide for increased close in weapons capability while the larger Shrike fires heavier thus more potent slugs at a slower rate, making it a better weapon against large, well defended targets.

Ship loadouts play a very important role in NGCS – compare how two hulls with different configurations handle uniquely between *Arethusa* and the *Plains of Illyria* squadron.

Crew quality also decides whether a certain unit is suitable for different types of missions, as illustrated in example by the following table:

Mission Suitability Chart (Rating Scale Poor to Excellent) Joint Task Force 21 Lavi class Strike Frigate (StFF) Squadrons				
Name	Close Attack	Standoff Strike	Anti-Strike Interdiction	Remarks
Sqn. 65 "Thunderchiefs"	Average Unit performed satisfactorily in capital attack and anti-frigate exercises.	Average Unit likewise performed satisfactorily in missile attacks against a simulated capital ship formation.	Average Unit was able to coordinate with patrol command ship to successfully intercept an enemy strike mission.	Regular Hiigaran Navy unit, little combat experience, generally reliable when well supported. Standard ship loadout and may undertake all mission types well.
3rd Special Operations Wing (3SOW)	Excellent 3SOW pilots are known for their steadiness under fire and performed many surgical strike missions against anti-fighter frigates during the Invasion.	Poor 3SOW Lavis are armed with only one CAM launcher and employ them as close attack devices.	Excellent Squadron exhibited stellar performance during combat patrol and defensive counter-fighter exercises. Their APIC-centric loadout and aggressiveness make all the difference.	Crack SpecOps group, extensive experience in lightning strike attacks, highly aggressive Loadout optimised for close attack with 5x 1 GW APIC
Karelian Volunteer Defense Force (KVDF) detachment	Below Average Pilots break under fire or lack training in combat flight techniques. However KVDF pilots are often aggressive and will try to employ their secondary close in armaments where given the chance, performing well in strafing attacks when facing little or no opposition.	Good KDVF Lavis are outfitted for a missile boat role, with 5x CAM300 launchers. Directed well by a forward controller, they are well suited to deploy saturation salvos against key capital ships in an enemy formation.	Below Average Pilots break under fire or lack training in combat flight techniques. However, when employed as a defensive reserve, they are often able to successfully engage enemy strike assets already occupied with friendly capital ships. They should be steered well clear of anti-fighter frigates.	Karelian Sector volunteer force attached to JTF21 for training. Loadout optimised for standoff attack due to low crew experience. Fairly aggressive, they perform well on the offensive but lack coordination under fire.

Glossary

CLCG – Ship classification, means “Cruiser, Light, Command, Guided Weapons”

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DAG – Direct Action Group, close assault unit

Down the throat – A term from the World Wars, illustrates a submarine firing torpedoes at a destroyer charging directly towards it

Dynamic Fighters/Capships – Gameplay enhancement projects by Alex Drake, refer to Angels Fall First total conversion

EX – Short for exercise

NGCS – Next Generation Combat Systems

PDS – Point Defense Systems, HW2 total conversion

RG – Railgun, electromagnetic linear accelerator based ballistic weapon, also called massdriver

Sqn. – Short for squadron

JOINT TASK FORCE 21 [JTF 21] ORDER OF BATTLE

FLAGSHIP



CLCG-6 ARETHUSA
LIIRHRA BLK 18 x1

BOMBARDMENT CRUISER GROUP



Sqn. 200
Plains of Illyria
LIIRHRA BLK 17G x4

DIRECT ACTION CRUISER GROUP



7th DAG
ARBITER Mk.4C x4

ESCORT/ATTACK FRIGATE WING



Sqn. 71 [FF]
Foxhounds
Sqn. 252 [FF]
Razorbacks
BLOODHOUND 2E8 x16

STRIKE FRIGATE WING



3rd SOW
Sqn. 85 [StFF]
Thunderchiefs
KVDF Det. 9
LAVI x36

Sqn. 102 [FFE]
Guardians
BLOODHOUND 2E9 x8

SHIP DATA SHEET

CLCG-6 ARETHUSA



Type: Command Cruiser (CLCG)
Class: LiirHra Block 18 "Laxamana"
Assigned Role: Flagship, JTF 21

Ship model by Solaufein, Yasotay and James O' Donnell
Texturing by ThomasTheCat
Weapons and systems design by Kenny*TelQuessir*Koh
Operational evaluation by PDS Community

Armaments:

Primary

6x 335mm "Arbiter 3" railguns (RG335) in two triple turrets
2x 3.6 Gigawatt enhanced pulse ion cannons (EPIC) on fixed bow mounts
12x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (12 rnd salvo)

Secondary and Close In Weapon Systems

2x 1.8 Gigawatt EPIC in twin bow turret
12x 1 Gigawatt EPIC in six twin fast-tracking turrets
4x "Vindicator 4" RG100 in two twin fast-tracking turrets
6x "Defender 2" RG45 in six hull-mounted gimbals
4x 80 Megawatt plasma cannons in quad dorsal turret
10x "Standard Missile 2" rapid fire interceptor missile launchers

Combat Support Systems:

LiirHra Block 18 command cruisers are equipped with extensive electronics capability, including a wide selection of jammers and signals intelligence devices. This, along with their exceptional sensors, communications, and deep-space navigation systems make them valuable assets in the Allied Navy.

SHIP DATA SHEET**LirHra Block 17G CLG**

Type: Guided Weapons Cruiser (CLCG)

Role: Bombardment Cruiser

Ship model by Solaufein, Yasotay and James O' Donnell

Texturing by ThomasTheCat

Weapons and systems design by Kenny*TelQuessir*Koh

Operational evaluation by PDS Community

Armaments:**Primary**

4x 7 Megaton "Sledgehammer 2" nuclear torpedo launchers in two twin turrets (4 rnd salvo)

4x 335mm "Arbiter 3" railguns (RG335) in four hull-mounted gimbals

2x 3.6 Gigawatt enhanced pulse ion cannons (EPIC) on fixed bow mounts

12x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (12 rnd salvo)

Secondary and Close In Weapon Systems

2x 1.8 Gigawatt EPIC in twin bow turret

12x 1 Gigawatt EPIC in six twin fast-tracking turrets

4x "Shrike 7" RG140 in two twin fast-tracking turrets

6x "Defender 2" RG45 in six hull-mounted gimbals

4x 80 Megawatt plasma cannons in quad dorsal turret

6x "Standard Missile 2" rapid fire interceptor missile launchers

Combat Support Systems:

Standard electronics capability.

HIIGARAN NAVY / ROYAL NALTHORAN NAVY / FEDERATION OF CUSH NAVY
SHIP DATA SHEET
Arbiter Mk.4C CFG



Type: Fleet Cruiser, Guided Weapons (CFG)
Role: Assault Ship

Ship model by Relic Entertainment
Weapons and systems design by
Kenny*TelQuessir*Koh and Dondelium
Operational evaluation by PDS Community

Armaments:

Primary

15x 335mm "Arbiter 3" railguns (RG335) in five triple turrets
8x 150mm hypervelocity rocket (HVR150) launchers in four broadside turrets
5x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (50 round salvo)

Secondary and Close In Weapon Systems

2x 1 Gigawatt enhanced pulse ion cannons (EPIC) in two twin fast-tracking turrets
4x "Shrike 7" 140mm railguns (RG140) in two twin fast-tracking turrets
4x "Vindicator 4" RG100 in two twin fast-tracking turrets
4x "Standard Missile 2" rapid fire interceptor missile launchers

Combat Support Systems:

None. Arbiter cruisers are built around their primary weapon systems and their onboard sensors are usually left on passive mode while taking navigation and targeting data from the taskforce's tactical net.

SHIP DATA SHEET

Bloodhound Mk.2E8



Type: Escort/Attack Frigate (FF)

Ship model by Relic Entertainment
Weapons and systems design by
Kenny*TelQuessir*Koh and Daniel Hawking
Operational evaluation by PDS Community

Armaments:

Primary

4x "Shrike 7" 140mm railguns (RG140) in two twin fast-tracking turrets

1x 3.6 Gigawatt enhanced pulse ion cannons (EPIC) on fixed bow mount

4x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (4 rnd salvo)

Secondary and Close In Weapon Systems

6x 1.8 Gigawatt EPIC in three twin turrets

2x "Defender 2" RG45 in two hull-mounted gimbals

2x "Standard Missile 2" rapid fire interceptor missile launchers

Combat Support Systems:

Standard electronics capability.

SHIP DATA SHEET

Bloodhound Mk.2E9



Type: Escort Frigate (FF)

Armaments:

Primary

10x "Vindicator 4" 100mm railguns (RG100) in five twin fast-tracking turrets

6x "Standard Missile 2" rapid fire interceptor missile launchers

Combat Support Systems:

Standard electronics capability.

Ship model by Relic Entertainment
Weapons and systems design by
Kenny*TelQuessir*Koh and Daniel Hawking
Operational evaluation by PDS Community

SHIP DATA SHEET**Lavi Mk.1**

Type: Strike Frigate (StFF)

Ship model by BigFish, Texturing and Importing by EIMambo
 Weapons and systems design by Kenny*TelQuessir*Koh
 Operational evaluation by PDS Community

Armaments:

Close Assault Loadout

5x 1 Gigawatt enhanced pulse ion cannon (EPIC) in five fixed weapon pods
 1x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launcher (1 rnd salvo)
 1x "Standard Missile 2" rapid fire interceptor missile launcher
 10x 80 Megawatt plasma cannon in two quad turrets and two fixed weapon pods
 2x "Defender 2" 45mm railgun (RG45) in two fixed weapon pods

Standard Loadout

4x 1 Gigawatt enhanced pulse ion cannon (EPIC) in five fixed weapon pods
 2x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (2 rnd salvo)
 1x "Standard Missile 2" rapid fire interceptor missile launcher
 10x 80 Megawatt plasma cannon in two quad turrets and two fixed weapon pods
 2x "Defender 2" 45mm railgun (RG45) in two fixed weapon pods

Standoff Attack Loadout

2x 1 Gigawatt enhanced pulse ion cannon (EPIC) in five fixed weapon pods
 4x 300 kiloton lightweight nuclear Capital Attack Missile (CAM300) launchers (4 rnd salvo)
 1x "Standard Missile 2" rapid fire interceptor missile launcher
 10x 80 Megawatt plasma cannon in two quad turrets and two fixed weapon pods
 2x "Defender 2" 45mm railgun (RG45) in two fixed weapon pods