

# ALiVE

ADVANCED LIGHT INFANTRY VIRTUAL ENVIRONMENT

ALiVE is the next generation dynamic persistent campaign for ArmA3. Developed by the Multi Session Operations team, the easy to use modular mission framework provides everything that players and mission makers need to set up and run realistic military operations in almost any scenario up to Company level, including command, combat support, service support and logistics.

AI Commanders automatically plan and direct missions for all AI forces across the Area of Operations, identifying strategic objectives and reacting to changes in the tactical situation. The revolutionary Virtual Profile System can support thousands of units operating simultaneously across the map with minimal impact on performance. The result is a realistic and constantly changing battlefield which truly brings ArmA3 ALiVE.



## Gameplay

ALiVE is a dynamic campaign mission framework. The editor placed modules are designed to be intuitive but highly flexible, empowering mission makers to create a huge range of different scenarios by simply placing a few modules and markers. The AI Commanders have an overall mission and a prioritised list of objectives that they work through autonomously. Players can choose to tag along with the AI and join the fight, tackle their own objectives or just sit back and watch it all unfold.

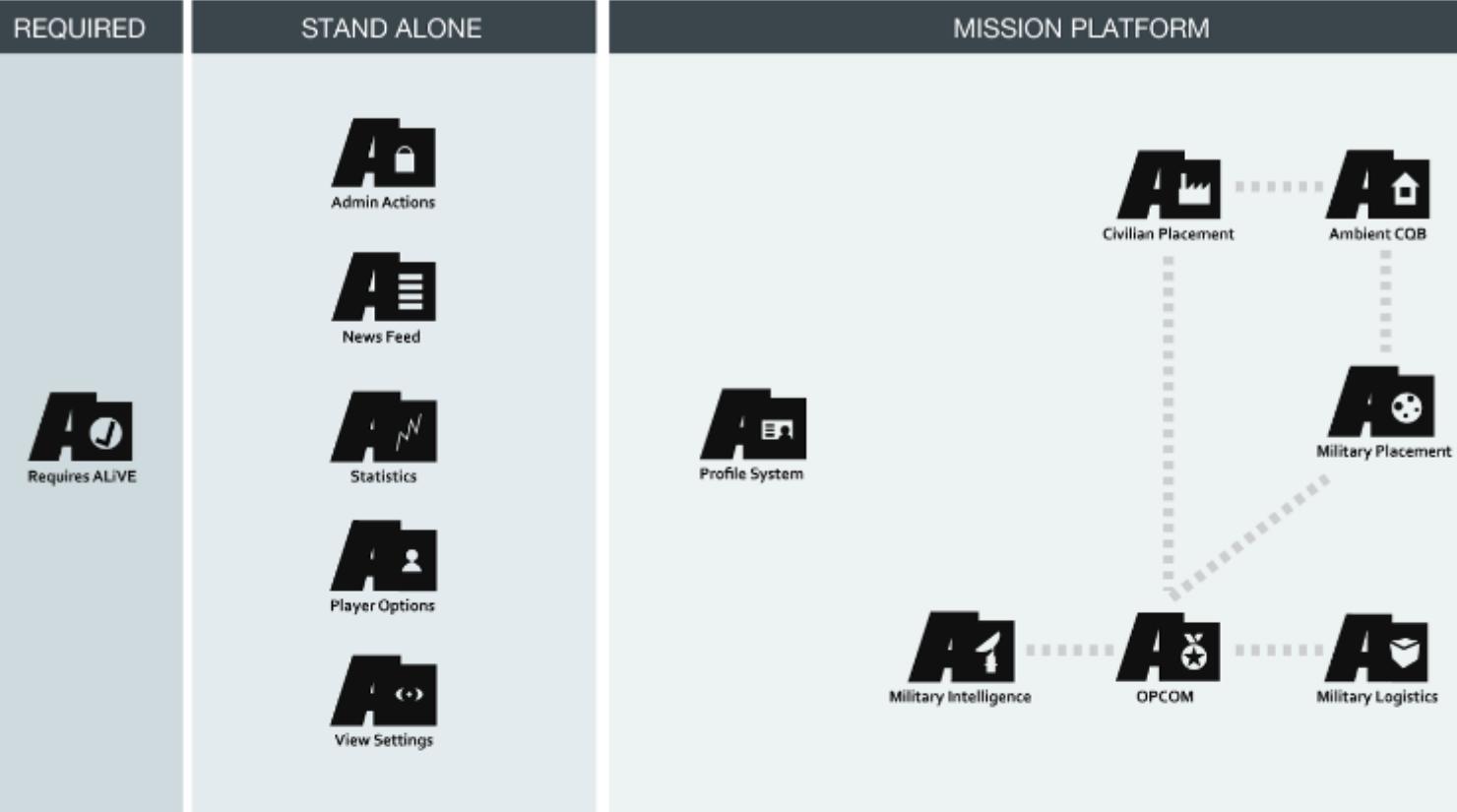
Mission makers may wish to experiment by synchronizing different modules to each other, or using standalone ALiVE modules as a backdrop for dynamic missions and campaigns, enhancing scenarios created with traditional editing techniques. ALiVE significantly reduces the effort required to make a complex mission by adding ambience, support and persistence at the drop of a module.

## Quick Start

- ❖ In the multiplayer mission editor, place at least one playable unit.
- ❖ In Modules (F7) ALiVE Systems, place the **Requires ALiVE** module.
- ❖ Under ALiVE Systems, place the **Profile System** module.
- ❖ Under ALiVE Military, add the **Military Placement** (Mil\_MP) module.
- ❖ Place an **OPCOM** module and select the side and Type.
- ❖ Synchronize (F5) **OPCOM** with Military Placement module.
- ❖ Place optional Support modules, save the mission and play!



# ALiVE Module System



## ALiVE Systems

### Requires ALiVE

The **Requires ALiVE** module must be placed in the mission editor. This contains the basic functionality for ALiVE.

### News Feed

Provides the latest news from ALiVE.

### Disable Statistics

Place this module if you wish to **disable** the recording of stats during your MP game (**Stats not available in RC1**).

### View Settings

Place this module to allow clients to set individual View Distance and Grass detail preferences.

### Crew Info

Place this module to allow to display vehicle crew info when inside a vehicle.

### Admin Actions

Provides admin only actions including:

- ❖ Enable/Disable Teleport
- ❖ Ghost Mode
- ❖ Display units on map
- ❖ Enable/Disable Manual Save

### AI Skill

Provides a feature to define AI Skill - recruit, regular, expert and elite. Note: this may conflict with other third party addons that affect AI Skill.

### Garbage Collector

Removes dead or destroyed units and vehicles when players are not in visual range.

### Weather

Provides dynamic and synchronised weather for multiplayer games.

# ALiVE Fundamentals



## How It Works

ALiVE is complex but not complicated. Each module is standalone but they can be synchronised to each other to create different scenarios. The modules work independently but will use data derived from another module if it is synchronised. This layered approach provides a high degree of flexibility and allows you to build custom scenarios quickly.

Everything starts with the Placement modules. These modules fulfill two important functions: they identify a list of military and civilian objectives or areas of importance across the map and secondly, they place the AI groups. There are several module parameters for customising the type of objectives and also the shape and size of the AI forces. Refer to the Military and Civilian Placement Module pages for further details on these.

If an Operational Commander (OPCOM) is placed, it will take command of all available AI forces of its faction. However, OPCOM needs to know where its objectives are and this is simply done by Synchronising it to one of more Placements Modules.

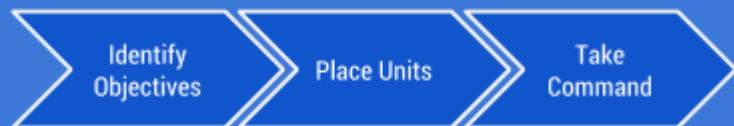
Note that OPCOM does not exclusively take command of the units defined in the Placement modules, it is only using them to get a list of objectives. OPCOM will take command of all units of its faction across the map.

So for example you could place an OPFOR Military Placement module to occupy an area of the map, but sync a BLUFOR OPCOM to it so it knows to attack those objectives.

Another example: place a Civilian Placement module with no Unit Placement so it is only providing a list of objectives. Then place a BLUFOR Military Placement Module in a small zone nearby with and set it to a Platoon of Light Infantry. Sync a BLUFOR OPCOM in Invasion mode to both Placement modules and watch as the Infantry are ordered to attack the civilian objectives.

Using different combinations of modules it is possible to quickly create a huge range of scenarios, from massive tank battles to intense urban counter insurgency. The best way is to experiment!

Read on for further details of each module and see the demo missions for some examples of common scenarios.



ALiVE identifies a list of objectives, places groups of units and then takes command.



Civilian Objectives include towns and critical infrastructure such as power stations and factories.



Military Objectives include barracks, airfields and other military establishments.



OPCOM takes command of all units of its faction but needs to know which objectives to attack or defend.



Logistics maintains the combat effectiveness of units on the front line.

# ALiVE Systems

Not Yet Implemented or  
Limited Functionality in  
Initial Public Release

## A Player Persistence

Provides player persistence on reconnect and between server restarts. By default, player state is stored on the server every 5 minutes. This protects players from random disconnects and allows players to continue where they left off. Player state is automatically stored on the server (in memory) when a player disconnects.

Required Modules	Synced
Requires ALiVE	N
Player Persistence	N

**Usage:** Place the **Player Persistence** module in the editor and select the preferred settings from the drop down boxes. Mission makers can configure options in the editor module and in addition, server admins can enable/disable settings in game as required. Players can manually save their state or reset to a previous state using the self interaction menu.

**Allow Player Reset** allows players to manually revert to their start state or last manual saved state. Player start states are saved approximately 2 mins after they first connect.

**Allow Manual Save** enables players to manually save their current state.

**Allow Different Class** allows players to reconnect using a different class type. If not allowed, players will be automatically kicked if they attempt to rejoin as a different class from their previous session.

The module can be configured to **store** full state or partial state. Options include **Loadout**, **Ammo Count** (requires Loadout), **Health**, **Position** and **Score**.

To support player persistence between mission restarts, the **Store to DB** setting must be enabled.

Add a **Unique Key** to the module for database purposes. This is the key that will be used for this particular mission instance. Ensure the key is unique to your group by adding your groups "TAG".

Finally, you may optionally set an interval period for **auto saving** to the external database. The default value of 0 will ensure that the DB is stored to when a mission is exited. Any other value will save every x seconds.

Database usage password for Arma3Live.com will be requested from the ALiVE mod team.



Player state is completely restored when you reconnect



Player Persistence module options in the editor

```

{
  "_id": "Iupolovtest-76581197902137206",
  "_rev": "1-1",
  "lastLogoutTime": "19.08.2018 13:08:00",
  "position": "27863137582137206",
  "team": "MILITARY",
  "speaker": "Male1CMB",
  "name": "Iupolovtest",
  "pitch": 1.01129,
  "team": "Iupolovtest_MILITARY",
  "volume": "M_lowest_0.1_0.2",
  "rating": 1570,
  "rank": "SERGEANT",
  "group": "MILITARY group",
  "leader": "Iupolovtest",
  "position": [
    27863137582137206,
    10071.0,
    1.01140555
  ],
  "dir": 01.4721,
  "team": "MILITARY",
  "leader": "SERGEANT",
  "volume": "M_lowest_0.1_0.2",
  "rank": "SERGEANT",
  "group": "MILITARY group",
  "leader": "Iupolovtest"
}

```

Player data is stored to a web based database run by the ALiVE Mod team so you don't have to deal with setup/admin yourself.

# ALiVE Systems



## Statistics

ALiVE automatically records in game statistics, as they happen, to the ALiVE website. Player stats and mission events are recorded to help groups and players track their performance. This functionality can be disabled by placing the **Disable Statistics** module.

Required Modules	Synced
Requires ALiVE	N

**Usage:** Place the **Requires ALiVE** module and statistics will be automatically enabled. To disable statistics place the **Disable Stats** module in the editor or use the ALiVE Admin Command menu in game.

Statistics ensures mission data and player stats are reported to the external ArmA3 Mission Board at [www.arm3live.com](http://www.arm3live.com). Statistics will automatically send data to the database as events occur in game.

This includes player kills, deaths, use of vehicles, injuries, contacts with enemy units, heals, completion of objectives and much more.

The functionality only works on Dedicated Server MP games with 2 or more players.

You need to register as a Server Admin on [arm3live.com](http://arm3live.com) to get a username and password to post stats to the web service. The username and password should be entered into the ALiVE.cfg file on your server.

**Not Implemented in Initial Public Release**

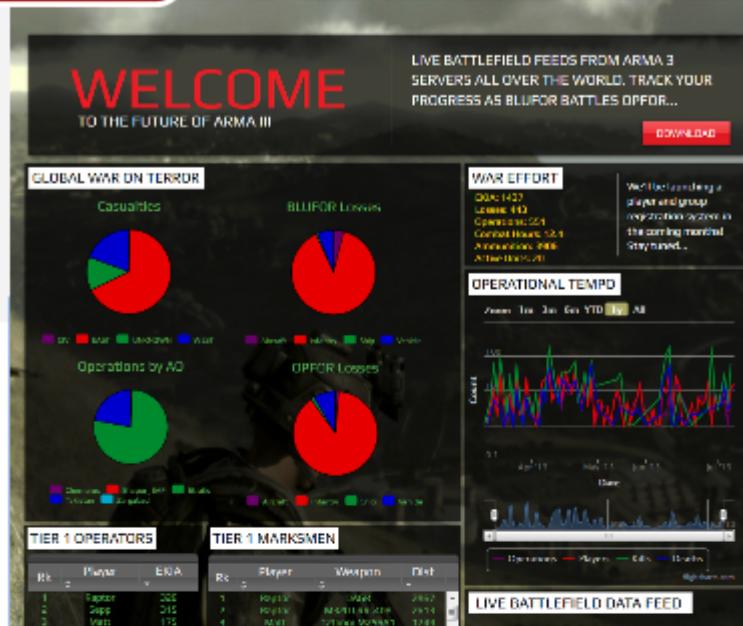
The ALiVE.cfg file is located at:

`[SYSTEMROOT]:\Users\[USERNAME]\AppData\Local\ALiVE`

It is recommended that you prefix all your mission names with a unique identifier so they're easy to spot in the stats list!

**Not Yet Implemented or Limited Functionality in Initial Public Release**

Data Feed    Home    Personnel    Operations    Download    About Us    Contact    Help



Arma3live.com tracks your progress and player stats



Every shot, injury, kill and event is captured in real time by ALiVE Statistics and broadcast to our live feed.



Information such as flying time, number of para jumps and combat dives are recorded

# ALiVE Systems



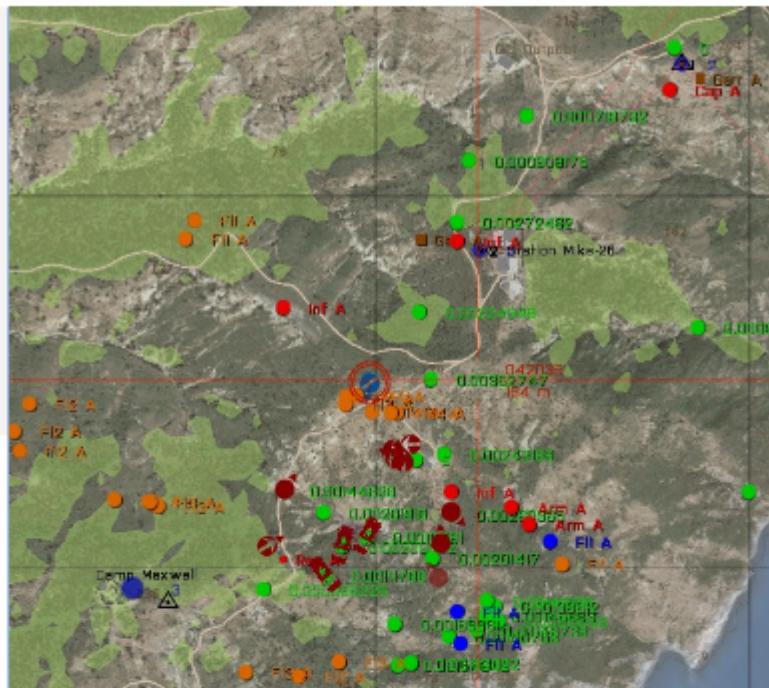
## Profile System

The revolutionary ALiVE Profile System processes a complete set of data about every AI unit allowing them to be despawned from the game world yet still interact with other ALiVE modules. This allows the 'virtual battle' to continue in the background without taking up valuable server resources. Units will reappear in the game world as soon as a player comes within visual range.

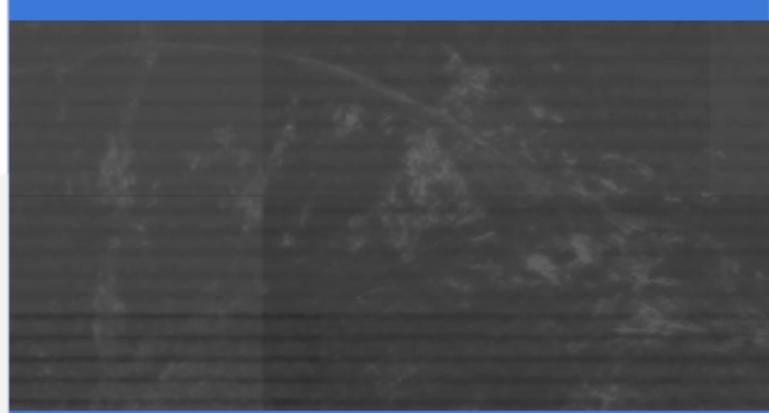
*Usage:* Place the Profile System in the editor and set the desired visual spawn range. Note that high spawn ranges in excess of 3KM may have an impact on performance.

You can limit the number of profiles that get spawned into the game world by setting the limiter value on the module. The default value is 30. Setting the limiter higher than this may have an impact on performance.

Units and Groups can be explicitly Excluded or Included from Profiles by Synchronising (F5) to the Profiles Module. The behaviour of the module can be configured in the drop down menus.



Profiled AI groups continue to operate in the virtual battlespace when no players are in range.



AI groups spawn into the visual battle space when a player is in range and will seamlessly continue on mission.



## Mission Editor Notes

The profile system currently only supports the following waypoint types for virtualisation:

- ❖ Move
- ❖ Cycle

Triggers and other complex editor tools do not function in the virtual battle space.

# ALiVE Military



## Military Placement

The Military Placement module creates a prioritised list of military objectives across the map. Units occupy buildings or military installations and will remain in place until an associated OPCOM issues missions and tasks depending on the chosen scenario. Force compositions are based approximately on real world battle group doctrines.

Required Modules	Synced
Profile System	N

*Usage:* place the Military Placement module in the editor, select the desired Size, Weighting and Faction from the drop down. Custom factions can be entered in the text box (separated by a comma). These will overwrite the default factions in the drop down.

Size and Composition Weighting choices will influence the overall force composition. Mil\_MP will attempt to emulate realistic combined arms battle groups using equipment and vehicles available to that faction.

To restrict objectives to a user-defined Tactical Area Of Responsibility, place a named area marker covering the chosen area and add it to the appropriate TAOR box in the module params. A good convention is to use the format TAOR\_Faction\_xx (e.g. TAOR\_BLUE\_1).

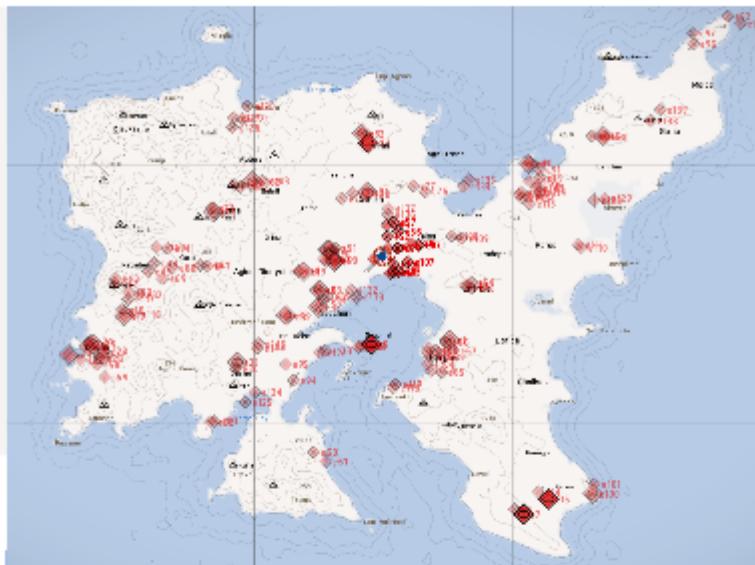
Blacklisted areas will be ignored and can be defined using area markers with the name specified in the module params, for example BL\_Faction\_xx (e.g. BL\_R\_2). If TAOR and BL area markers overlap, Blacklist always takes precedence. Multiple areas can be listed separated by commas e.g. TAOR1, TAOR 2, TAORxx. Do not use square brackets [ ] or inverted commas.

Objective Filters provide options to restrict objective clusters by size or relative importance, so for example it is possible to identify only large military bases and airfields as objectives, excluding smaller bunkers and watchtowers.

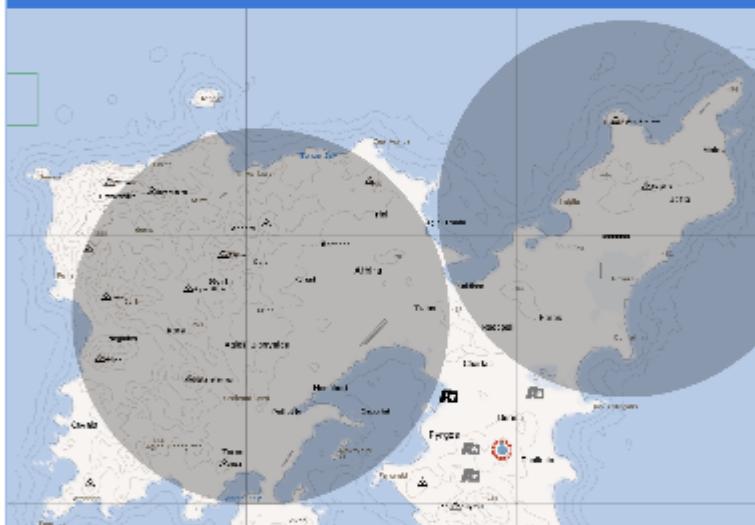
The Faction Strategy drop down defines the initial state of faction units.

**Occupy:** units will be placed at objectives throughout the TAOR and will attempt to occupy and defend military installations.

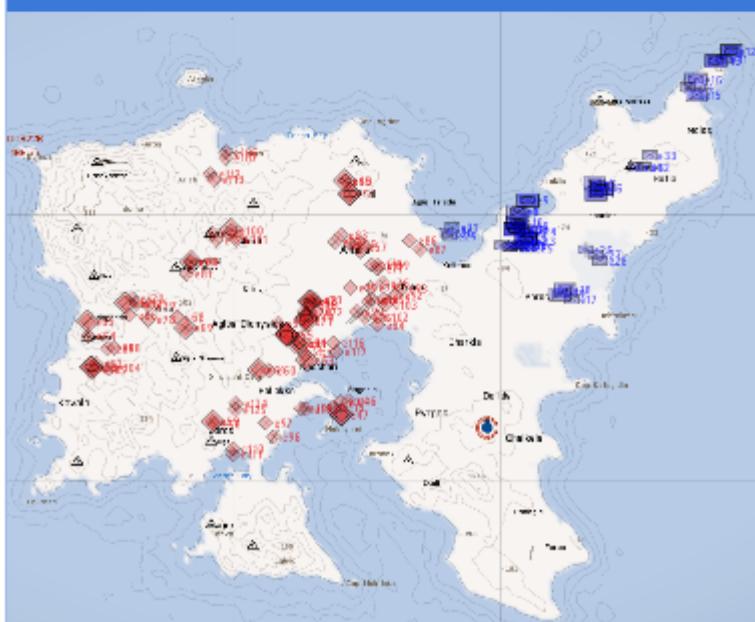
**Invasion:** units will start in the vicinity of the Mil\_MP module and will move to take objectives as ordered by a synchronised OPCOM.



Placement of a battalion size force using default settings



Military Placement modules for OPFOR and BLUFOR with TAOR markers to restrict placement area



Armoured BLUFOR vs Light Infantry OPFOR placement

# ALiVE Military

## Ao Operational Command

OPCOM prioritises a list of objectives and then plans and executes missions with available units. Op Commanders will react to the changing environment and attack, defend, withdraw or resupply depending on the current tactical situation. OPCOM continues to work with profiled groups, controlling a virtual battlefield out of visual range of players.

Required Modules	Synced
Profile System	N
Military Placement	Y

OPCOM consists of two core elements: Operational Command (OPCOM) and Tactical Command (TACOM). OPCOM takes the objectives of any synced Military or Civilian Placement modules and prioritises them depending on the user defined variables. It also regularly analyses the map, relative troop strengths and available assets required to capture and hold objectives in its area of operations. OPCOM gives missions to TACOM, which in turn executes the tactical level orders to units and reports back its state once that mission is complete.

OPCOM is a Virtual AI Commander, as it controls only profiled groups. TACOM is a low level tactical commander that deals with Visual AI groups when players are nearby. This means it is possible to transfer the status of groups and objectives seamlessly between the Visual (spawned) Layer and the Virtual (unspawned or cached) Layer. This allows huge ongoing virtual battles, from offensive operations with blazing battlefronts to insurgency deployments with a high degree of realism and minimal impact on performance.

*Usage:* Place an OPCOM module in the editor and select a faction from the dropdown. Custom factions can be entered in the “override default faction” box. Choose the Control Type in the drop down menu.

By default, OPCOM will take command of all available virtual units (profiles) for its faction. Therefore, it requires a minimum of one synced Placement Module and the Profiles module to be present.

To limit OPCOM to a set number of units, manually place some units in the editor and Synch (F5) them to the SYS PROFILES module with appropriate settings to ‘convert’ them to profiles. Make sure you select Objectives Only on the Placement Module to prevent it spawning any units!



OPCOM orders TACOM to attack a Military Objective with an assault group of between 3 and 5 teams.



Once captured, TACOM orders 2 teams to secure the objective, taking up guard positions in towers and buildings.



Any remaining groups conduct clearance patrols around the objective or are held in reserve for further taskings.

# ALiVE Military



## Ambient CQB

Based on the original Urban Ops enemy generator by Highhead, Ambient CQB automatically populates a built up area with dismounted infantry units when a player moves within range. The groups occupy buildings, patrol the streets and react to enemy presence. CQB detects the dominant AI faction in the area (ignoring players) and spawns the appropriate units accordingly.

Required Modules	Synced
Military Objectives AND / OR Civilian Objectives	Y

*Usage:* Place the CQB module and select the preferred intensity. Optionally, CQB can be synchronised (F5) to a Mil\_MP or CIV\_CO module.

For example, it is simple to quickly set up a scenario with a town populated by generic infantry by placing a Civ\_CO module with a TAOR marker covering the town and syncing a CQB module to it.

You can also just place the module without syncing it to anything and all the towns on map will be populated with enemies!



The dominant faction occupies the town and sends patrol from house to house.



CQB patrols occupy buildings and any fortifications in town. Proper building clearance is essential.

# ALiVE Military



## Military Intelligence

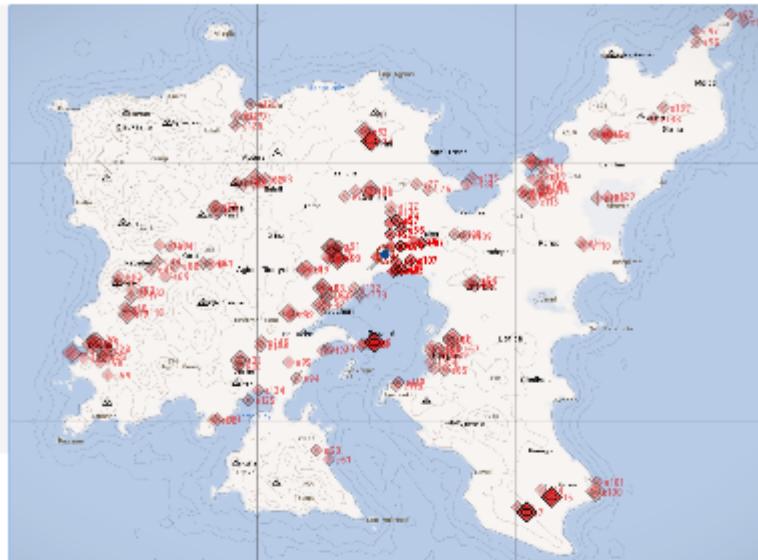
Provides a limited intelligence feed about Operational Commander activity. Enemy intel is reported to HQ periodically. The intel can also be reported to the friendly side to simulate a BLUFOR tracker or a more limited option to simulate receiving Contact Reports from units engaged with enemy forces.

Required Modules	Synced
Profile System	N
Operational Command	Y

*Usage:* place a Mil\_Int module and Synch(F5) to an OPCOM of the side you want to receive intel about. Select the level of detail and frequency of intel received in the options. It is also possible to show 'Friendly Intel' to track BLUFOR units. The options simulate either a global BLUFOR tracker showing all BLUFOR groups, or Contact Reports which will only show those units in contact with the enemy.

Intel markers use standard NATO APP6a military marking symbology. Fresh intel is marked with darker symbols which fade out over time as the intel ages.

Currently there is no means for the player to manually augment the Intel beyond manually placing regular markers on the map.



Periodic virtual reports from deployed AI groups will start to build a picture of enemy movements. Map marking uses standard NATO APP6a symbols.

# ALiVE Military



## Logistic Support

Responsible for maintaining the operational effectiveness of all units in the Theatre of Operations and delivering resupplies and Battle Casualty Replacements to the front line. Logistics Supplies and BCRs will initially be routed to the Operational Command (OPCOM) HQ before moving to join the front line units. Units closest to HQ will be prioritised for reinforcements. The availability of reinforcements is dependent on the number of objectives held by that faction.

Required Modules	Synced
Profile System	N
Operational Command	Y

*Usage:* Place a Log Spt module and select the desired Size of the Reinforcement Pool. Synch (F5) the Log Spt Module to an OPCOM module to enable it to request reinforcements and supplies.

**Not Yet Implemented or Limited Functionality in Initial Public Release**



Logistics convoys move supplies and reinforcements from the Operational Command HQ to front line units.



Both enemy and friendly logistics units alike are vulnerable to ambush. If they fail to reach their destination, OPCOM will not receive those vital reinforcements.

# ALiVE Civilian

Not Yet Implemented or  
Limited Functionality in  
Initial Public Release



## Civilian Objectives

Automatically reads the map and creates a prioritised list of civilian objectives. Locations include industrial complexes, primary resources such as mines as well as towns and cities. These locations will be used as tactical objectives by synched Operational Commanders. Civilian locations will develop a pattern of life including pedestrians and civilian vehicles.

*Usage:* Place the Civilian Objectives module in the editor. By default, Civ\_CO uses a precompiled list of objectives. These have been generated for most popular maps and included in the module.

To restrict Civ\_CO to identifying objectives within a user-defined Tactical Area Of Responsibility, place an appropriately named area marker covering the chosen area. A good convention is to use the format TAOR\_Faction\_xx (e.g. TAOR\_BLUE\_1).

Blacklisted areas will be ignored by Civ\_CO and can be defined using area markers with the name specified in the module params, for example BL\_Faction\_xx (e.g. BL\_R\_2). If TAOR and BL area markers overlap, Blacklist always takes precedence.

Objective Filters provide options to restrict Civ\_CO by size or relative importance, so for example it is possible to identify only large settlements and important infrastructure as objectives, excluding smaller villages and objectives.



'Civilian' objectives may include roadblocks and checkpoints in built up areas.



# ALiVE Support

**Not Yet Implemented or Limited Functionality in Initial Public Release**

## A<sub>b</sub> Combat Support

Provides access to a number of additional Combat Support and Combat Service Support elements for the player, including Offensive Support from Artillery and Mortars, Close Air Support from Attack Helicopters or Fast Air, and Tactical Logistic Support from Support Helicopters or Transport Aircraft. These units are controlled exclusively by the player and will not be used by OPCOM.

*Usage:* Place the CS module in the editor and then Synch (F5) a number of individual CS Elements to it. Configure each CS Element using the drop down boxes. Each CS Element modules will act as the start location for CS Units in game so take care to place them in safe and suitable locations.

CS automatically detects which side the unit belongs to and will only make it available for use by that side. You only need a single main CS module.

Fast air will require a runway to operate and the related CS Element module must be placed on or near a suitable taxiway.

Vehicles will spawn facing the same direction as the azimuth of the module.

By default, players must have a **Laser Designator** to submit CS requests. The item required is customisable in the main CS module.

Once in game, correctly equipped players can access the Combat Support console via the user interaction menu. Alternatively, any player can also gain limited control to individual support assets such as transport helicopters by 'talking to the pilot' via the Action menu once mounted.

Close Air Support units on Search & Destroy (SAD) taskings will freely engage any enemy units they detect. They will also engage any laser spot target with missiles and laser guided bombs if they have them equipped.



Combat Support includes Close Air Support, Offensive Support from Artillery and transport from Support Helicopters



The intuitive interface provides quick access and control of all Combat and Combat Service Support elements using credibly realistic procedures



# ALiVE Scenarios



**Location:** Altis

**Scenario:** TvT with AI

**Author:** Highhead, ALiVE Team

## Situation

Following a surprise invasion of Altis by CSAT forces in recent weeks, a BLUFOR Task Force has arrived in theatre with the intention of linking up with local militia and removing the hostile threat. CIVPOP has been removed to Agia Marina where they are being held under martial law.

REDFOR troops have occupied key strategic points across the Area of Operations. Strength and dispositions include at least 1 Combined Arms Motor Rifle Battalion, 1 Light Infantry Battalion and support units including possible attack helicopters, artillery and special forces. A mobile reserve in the South of the Island is poised to react any hostile threat.

BLUFOR troops are approaching from the North East to link up with the struggling guerilla factions and to assist Greek forces regaining control over the island. BLUFOR have a formidable array of equipment and support assets at a Forward Operating Base near the Salt Flats, however numbers are limited, defences are weak and resupply is difficult.

GREENFOR have retreated to a few small strongholds in the mountainous North of the island. Only a few guerillas survived the brutal Iranian assault but they are well placed to harass REDFOR rear echelons and supply lines.

## Missions & Tasks

### REDFOR

**DEFEND.** Establish a Quick Reaction Force in the South of the AO in order to assist with the defence of key strategic objectives. Be prepared to react to any hostile threat across the AO.

### BLUFOR

**ATTACK.** Advance to contact South West clearing all enemy within boundaries in order to regain control of the island. Attempt to establish comms with militia factions in the East for coordinated assaults.

### GREENFOR

**DISRUPT.** Conduct hit and run operations behind enemy lines in order to reduce enemy combat effectiveness. Attempt to establish comms with Task Force approaching from the NW for resupply of equipment and materiel.

## Coord Instructions

BLUFOR has access to Combat Support module but this must be protected carefully as it is non-replaceable.

Default spawn location for each playable faction can be changed using the Multispawn module.

# ALiVE Credits



## ALiVE Dev Team

- ❖ Wolffy.au
- ❖ Tupolov
- ❖ Highhead
- ❖ ARJay
- ❖ Gunny
- ❖ Friznit
- ❖ Raptor
- ❖ Jman
- ❖ Rye
- ❖ WobblyHeadedBob

## Special Thanks

Rydgier for HETMAN AI Commander, which is the inspiration for OPCOM.

Neokika for Support Radio which formed the basis for ALiVE Combat Support.

ScottW for Arma2NET, which provides the essential building blocks for true mission persistence.

CBA & ACE teams for setting the standard in development frameworks and the invaluable functions provided by CBA.

dev-heaven.net for providing a free and accessible development platform.

VOLCBAT, VRC, Praetorians, DET7, Kelly's Heroes and many others for your dedication to hours of testing.

## Further Information & Feedback

Feedback and bug reports for ALiVE are welcome at the dev-heaven Community Issue Tracker: <https://dev-heaven.net/projects/alive/issues>

Please note that support will be strictly limited to issues and bugs directly relating to our official ALiVE modules only. We cannot provide support for queries and issues arising from general mission editing, the Arma3 game, other mods or addons unrelated to ALiVE.

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