

# Black Lagoon Altis Life

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## Part I

### About this manual

This manual will explain some features of Black Lagoon Altis Life, based on Altis Life V. 3.1.2 by Tonic. There are game relevant features, everybody will see immediately and some more script specific features, which will need some explanation.

## Part II

### The 'big' features

#### 1 Housing System

We wrote our own housing system, giving players the ability to buy a house, using the house signs, he can find in many cities. The player just have to use the house sign to show up the house menu, giving access to buying/selling the house, giving another play keys or unimpounding his car.

## 1.1 Using the housing system

There are 3 accessible elements per house: The house sign, a bed and a shelf. The functions of the house menu are described above. By accessing the bed or sleeping bag, the player will heal up to 80%, accessing the shelf opens the house inventory.

Policemen also can search the house for illegal items by using the shelf.

## 1.2 Adding furniture

The inventory space of a house defaults to 100, but can be extended by using furniture objects, which can be bought in 'Möbelhaus'. If the player uses a furniture object, the algorithm will look for the nearest house, belonging to the player in a specific range (30m) and will add some inventory space to the house. See `fn_houseUseFurniture.sqf` for configuration.

## 1.3 Donator houses

A house will unlock donator abilities, such as unimpounding helicopters if the 'donator' entry in the database is set to 1 and if the player is a donator.

## 1.4 How does it work?

This house system heavily depends on database access and will always call a database function if somebody accesses the house with given houseID. See figure 1 for a graphical representation of this process.

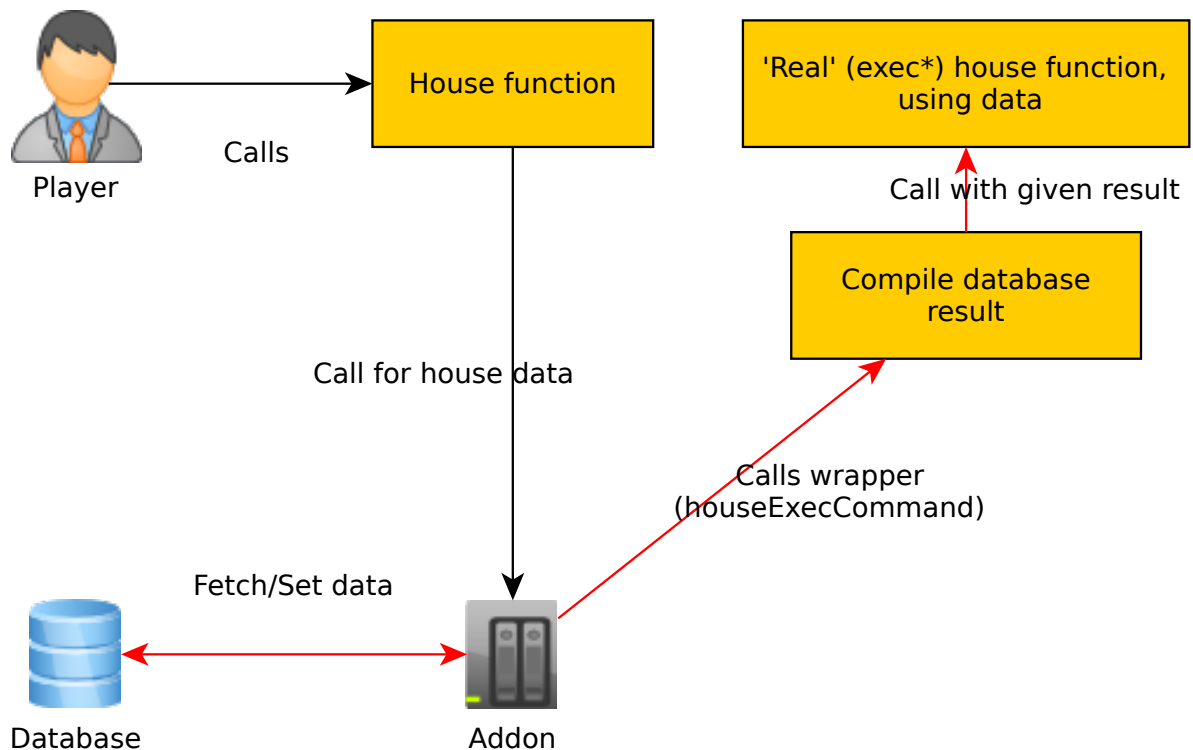


Figure 1: House data pipeline

### 1.4.1 Spawning

To support housing, some changes in vanilla spawning routines were made. As shown in figure 1, house data have to be called to offer players spawning houses. So, the spawn menu will be "redirected" to addon, which calls the spawn menu when a player want to spawn. If you want to remove the housing system, you have to remove the spawning menu behavior. Search for '`[[player], "HOUSE_fnc_requestSpawnMenu", false, false] spawn life_fnc_MP;`' lines and replace them by original implementation, also changes in spawn menu methods (`../core/dialog/functions`) should be made!

## 1.5 Adding new houses

If you want to add a new house, you should look for a database entry in "homes" where the price is "1111...1" or add another row. Put in every necessary values, such as spawn points, house name and price.

The next step is to use the editor and add all necessary objects to the house. See table 1 for objects. Look for other houses on the map and copy the initialization code to your new objects. You have to change the house name (such as "house\_01") to the house name of your new house!

Object type	Necessary	Notes
Object	Yes	House sign
Object	No	Bed
Object	No	Shelf
Marker	Yes	Player spawn marker
Marker	Yes	Car/helicopter spawn marker

Table 1: House objects

## 2 Market System

### 2.1 Self adaption and random events

The market system will raise `fn_marketChange.sqf` every 15min (called by `server.fsm`) to do a randomized market change. There are random events, such as "New Chinese medicine: turtles", resulting in a higher price for turtle resource or a algorithm. If no random event is selected, the market system will change the market prices a little bit to the default value.

$P_{old}$  ... old market price

$P_{new}$  ... new market price

$P_{default}$  ... default market price

$random(x)$  ... returns random value  $0 \leq y < x$

$$P_{new} = P_{old} + \lfloor (P_{default} - P_{old}) \cdot random(0.4) \rfloor$$

### 2.2 Resource dependency

Each market resource (`marketconfiguration.sqf`) has a set of dependent resources. The price of a depended resource will change if the price of the resource was changed. This is done by calling the buy or sell functions with a special parameter. For example, if the player sells a goldr item, the market system will "buy" a diamondc item  $\Rightarrow$  the diamondc price will increase.

## 2.3 Adding or removing resources from market system

Adding or removing resources from market system is easy: Just add the resource to marketconfiguration.sqf or remove the corresponding line. See table 2 for configuration schema.

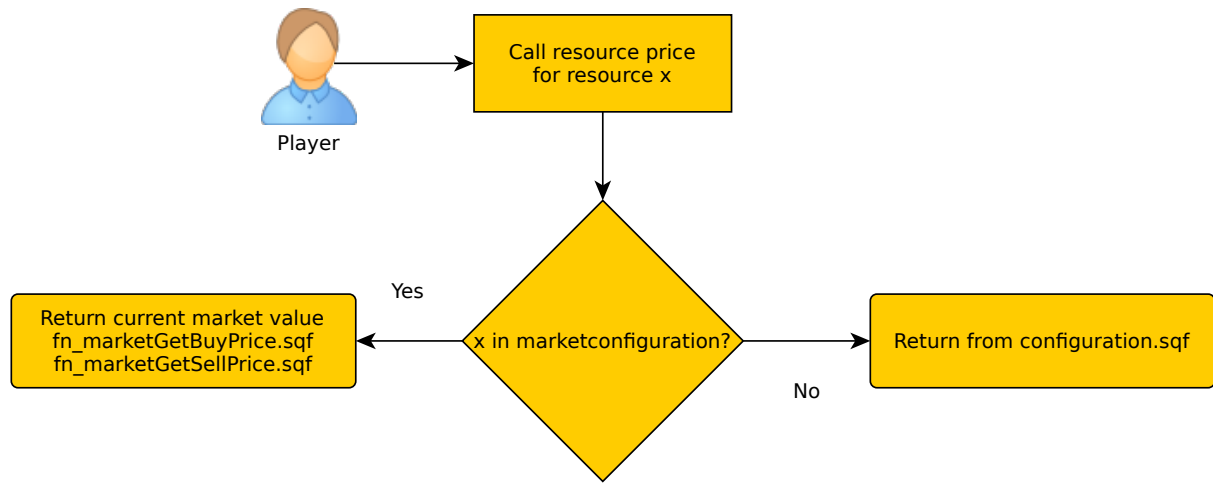


Figure 2: Item price algorithm

Type	Name	Notes
STRING	item shortname	
INT	default price	
INT	min price	
INT	max price	
ARRAY	market dependencies	See 2.2

Table 2: Market configuration schema

## 3 Group/Permission System

The group system (PERMS) offers a ability for players to set groups and permissions without the need of editing the database manually. For example, the police chief can set ranks of players in game. Just open the inventory and choose “GRUPPEN” to open the group menu. Select the group and player and set the rank to a valid rank.

Note: Cops will have to relog after the rank was set.

Note: coplevel entry has greater priority than PERMS, so you have to set it to zero!

Note: “EVENT” group has no effect - It’s just a group for admins to organize events. You may remove it without any problems.

### 3.1 DynPerms

PERMS are statically defined by script. For dynamic groups, there are DynPerms, set by database entries, allowing scripters (you) to add a user made group function. DynPerms are loaded on login or if a player receives a PERM set with a unknown group.

Note: If you added a group on runtime, you’ll have to relog to see this group

The information, you’ll have to enter into the database are equal to permsconfiguration.sqf entries.

## 3.2 Adding new Groups with Perms/Dynperms

You can add new groups in permsconfiguration.sqf. See table 3 for configuration array schema.

Type	Name	Notes
STRING	permid	Unique perm id
STRING	permname	
INT	maxlevel	Max. rank of this perm
ARRAY	ruleconfig	See below
ARRAY	member_cond	Player have to be in specific group, if not, permSetLevel will deny setting perm. Will not be checked later! (Change it!)
STRING	logo	Logo *.paa, 256x256
ARRAY	level_names	Level names for each rank, including rank 0

Table 3: Perms/Dynperms configuration schema

### 3.2.1 Ruleset

The ruleset sets the permissions for each rank (including rank 0).

Note: There are no implications like *LEADER*  $\Rightarrow$  *RANKUP*! If you add LEADER, you should always add RANKUP, RANKDOWN, VIEW

Note: If you like implications, you may implement them yourself.

### 3.2.2 Scripting functions

To check permissions or member level, you may to call PERMS functions (see table 4).

Name	Parameters	Returns
life_fnc_permLevel	[PERMID]	Level of perm PERMID of current player
life_fnc_permLevel	[PERMID,PERMS]	Level of perm PERMID of given PERMS array e.g. [[“cop”,5],[“adac”,0]] is valid PERMS array
life_fnc_permRule	[PERMID,RULE]	Returns if player has rule RULE in his current level of PERMID
life_fnc_permRule	[PERMID,RULE,LEVEL]	Returns if a level of PERMID has rule RULE in its configuration
life_fnc_permRuleG	[RULE]	Returns if player has rule in any group.

Table 4: PERMS/DYNPERMS functions

### 3.2.3 Caution!

Double check if the last entry (PermLevelNames) matches with the given ranks. If you have 3 ranks, it should be sth. like [“No Member”, “Member”, “Super Member”, “Extreme Member”].

Note!!!: This includes rank 0 (no member!!!)

## 4 Mechanics/ADAC

The mechanics (called ADAC) are a faction in PERMS, being able to

- Fully repair vehicles
- Impounding vehicles
- Recoloring vehicles

## 4.1 ADAC items

A ADAC member will always have to use items, which will be consumed to make their job. They won't get paid by the server (like cops) and have to calculate their own prices and make offers to other players. See table 5 for ADAC items.

Players may call an ADAC by using a entry in cellphone.

Item (German)	Item (English)	Use
ADAC-Werkzeugkasten	ADAC repair kit	-
Abschleppseil	Tow	Will be consumed if a vehicle is impounded
Farbeimer	Paint	Will be consumed if a vehicle is recolored

Table 5: ADAC/mechanics items

Note: ADAC items are defined in `uitemsconfig.sqf`

## 4.2 Recoloring vehicles

An ADAC may recolor vehicles by accessing vehicle interaction menu and choosing the recolor icon. To prevent an ADAC member to recolor vehicles to police or donator colors, we introduced "Tokens". If somebody wants to recolor his police car, he first have to buy a "Polizei Token" (Police token) and give it to the mechanic. If the mechanic opens the recolor menu, the item will be consumed, but he can choose the colors, unlocked by the token.

## 4.3 ADAC vehicle skins

There are ADAC vehicle skins included into this server script, which can ONLY be accessed at ADAC vehicle shop - Also an ADAC member can't access default colors in the ADAC vehicle shop - only ADAC colors.

# 5 Money laundering

If a player sells drugs or other illegal items, he will get "Illegales Geld" (Illegal money). This illegal money can be laundered by "Geldwäscher" NPC. The player will have to give his illegal money to the launderer and will return his money after about 15min.

Note: The launderer will take x% from the given money. If the player gives more money, he will get more money, later. See `fn_launderCalculateMoney.sqf` for details.

Note: Laundered money is saved in database - The player won't loose money on server restart.

Note: Launder time is set in `fn_launder.sqf`, set it to  $x \cdot 5min$ .

## Part III

# Minor features

## 6 Helicopter Weapons

There are two helicopter weapons for cops to force other helicopters to land. The weapons and their ammo can be bought in "Virtual Cop Shop". BD-MKI will set fuel to 5% and BD-MKII will destroy the target.

## 6.1 Usage

1. Buy weapons and ammo
2. Put them into trunk
3. Scroll mouse wheel
4. Fire

## 6.2 Disadvantages

To keep balance, these weapons have some restrictions:

- The can only be used against helicopters
- The target helicopters have to be under the aiming helicopter (or at same level)

Note: Only cops can buy them, but everybody can use them!

## 7 Packing/unpacking items

Players can box/unbox items of ARMA III inventory into Altis Life inventory items. To achieve this, the player have to buy a box, open the inventory and click “EINPACKEN” (pack).

Note: There may be some ARMA III items, not classified as vitem, so the player cannot pack them into boxes. See section 16 for vitem scripting functions.

## 8 Holster/’Put hands up’ function

If a player presses Shift+H, almost all ARMA III items (even the map) will be gone. If the player presses Shift+H again, he will get everything back. Also the player can put up his hands by pressing Ctrl+Shift+H, also resulting in holstering all items.

We implemented a new holster script, using already existing gear saving methods, resulting in a quite stable way to holster items (and shock players, because they think their items are gone).

Note: Cops may synchronize while items are holstered, because holster saving array is compatible to cop gear array. Civilians may lose some items.

## 9 Restraining

We made some changes to restrain function:

- Rebels can restrain (even cops)
- Everybody can unrestrain a restrained person
- The player will need handcuffs (Handschellen) to restrain a person. They will be consumed by this action.

## 10 Trunk save

The trunk of a vehicle will be saved, but all illegal items will be cleared away when the vehicle is spawned. This is done for balancing reasons.

## Part IV

# Administrative features

## 11 New admin menu

The new admin menu is not finished and lacks of some functionality. Some features (Teleport, Kick, Ban) aren't working.

Note: The "Market" button resets market prices to default.

## 12 DBBan - Database Ban

Because you can ban players only if they're online, there's a "banned" column in players database. Set it to 1 to block player's session loading if he joins. You also may set banned to "1" while the player is online: The next time, the player synchronizes data (Synchronize, used ATM, ...), he will be banned.

## 13 Anticheat-Playtime

The server counts the playtime of each player to make it easier to find cheaters. Playtime is in seconds.

## 14 Anticheat-MOT (Money over time)

Anticheat MOT counts all earned money of a player and calculates the money, he earned in 10min. The result is written into database.

Note: Will not ban players

Note: Thresholds may be too high

Bug: Sometimes, the database entry is "Nil?", because the message, returned by Anticheat-MOT is nil.

## Part V

# Scripting features

## 15 Unified Items (uitems)

Unified Items are items, included by a easy to use and central function to add new items. The shortname will always begin with "uitem\_\*", long name will always be "life\_uinv\_\*" where \* is the uitem name. See table 6 for fn\_uitemconfig.sqlf configuration schema.



Type	Name	Notes
STRING	uitem name	
STRING	real name	
INT	weight	
BOOL	illegal?	Will be added to illegal item list if true. Will be cleared from trunk if vehicle is unimpounded.
INT	buyprice	Set to -1 if you want to disable buy; Adds entry to buy_array
INT	sellprice	Set to -1 if you want to disable buy; Adds entry to sell_array
INT	illegal value	For searching house/vehicle
BOOL	policeitem	Police items are illegal for civilians, but won't be cleared away when the vehicle is spawned.

Table 6: uitems configuration schema

## 16 Virtual Items (vitems)

Virtual items are wrapper objects for ARMA III items. You may add more items if you want your players be able to pack this item into a box. See table 7 for configuration schema.

Note: Translation of comment “VIEL SPASS, MAX!!!! :D Danke Arschloch xD”: “[Me:] Have fun, Max!!! [Max/Footjobber:] Thanks, asshole !!!”.

Type	Name	Notes
STRING	classname	
STRING	vitemname	Unique item id. Will be added as item vitem_*
STRING	shown name	You should add sth. like “* (boxed)” to the item name
INT	weight	
BOOL	illegal	Will be added to illegal item list
INT	buyprice	See 6
INT	sellprice	See 6
INT	illegal value	See 6

Table 7: Vitem configuration schema

## 17 Centralized vehicle configuration

The centralized vehicle configuration allows adding new vehicles (fn\_vehiclesCentralized.sqf) and colors (fn\_vehicleColorsCentralized.sqf) very easily. See tables 8 and 9 for configuration schemas.

Type	Name	Notes
STRING	classname	
INT	trunk weight	
INT	default buyprice	If the buy price of a vehicle cannot be returned (because the number is too high), vehicleBuy and vehicleBuySave will use this price, instead. Set vehicleList price to -1 if the price should be this default price.
INT	sell price	
INT	garage unpark price	Set it to -1 to calculate $P_{unimpound} = 0.05 \cdot P_{buyprice}^{(default)}$
BOOL	is illegal	Not used.
INT	illegal value	Not used.

Table 8: Centralized vehicles configuration schema

Type	Name	Notes
STRING	classname	
ARRAY	conditions	Conditions can be $cond \in \{civ, cop, reb, adac, donator\}$ and will be connected by OR: Only one of the given conditions will grant access. (Can be made better using PERMS!!!)
STRING	color name	
ARRAY	color textures	Unlike Tonic's implementation. The array indices matches with texture indices.
INT	paint buckets	Amount of paint buckets, needed for recoloring to this color

Table 9: Centralized vehicle colors configuration schema

## Part VI

# Troubleshooting

### Cannot join server (“3 Verbindungsversuche überschritten”)

Check if you installed all necessary files (imported SQL files, Databases.txt) and if there are two or more \*.pbo files in a folder. The server will load both and crash.

### Shop xy is empty/damaged/...

This shop may be damaged, because we moved and added some shops. Try to find the error.

### Where's function xy? I want to remove/add uv!

I recommend to download Cygwin, a Linux console for windows and WinMerge, a comparator tool. Using these tools, you should make some “detective” work and search for words, associated by a specific function or command. For example if you want to change welcome notification, search “Willkommen”, because it's very likely that “Willkommen” is very specific for welcome notification.

#### Using Cygwin

1. Start Cygwin
2. `cd <Script Folder>`
3. `grep -rin ./ -e “Text to search”`
4. Will return all files (even in subfolders) and lines, where text is found

### I'm too lazy. Can YOU install it for me? I'm paying 50€!!!

No.

### But ....

No.

### I ....

No.