

Functions A-Z

The function library adds a range of additional functions for use in scripts. These are not scripting commands, but rather sub-routines created with existing script commands ([VBS Function Library](#)).

The VBS function library supercedes the old VBS1 Functions, although it is possible to re-load those functions for backwards compatibility with VBS1 scripts (see the [VBS1 Functions](#) article for more info).

In some limited builds of VBS (such as VBS2 Lite) some scripting functions may not be available. A popup error appears when using a function that is not available.

The following code shows a typical call syntax:

```
_returnValue = [parameters] call functionName;
```

Note: A testing method, to check for the presence of a function, is documented in [Check Function Availability](#).

See also: [Commands A-Z](#)

Usage

Before V3.4

- The function library can only be utilized in SQF scripts (a script that is loaded using [preprocessFile](#) or [execVM](#)).
- **Note:** It cannot be used in init lines, triggers, waypoints, the Debug Console, or SQS scripts.
- The following line must be added to the top of every script in which a call to a library function is performed:

```
#include "\vbs2\headers\function_library.hpp"
```
- Function names are **case-sensitive**.
Incorrect use of cases results in no value being returned, and no errors being displayed (for example, `fn_vbs_relPos` works, while `fn_vbs_RelPos` does not)

Since V3.4

- Functions can be called from any location that script commands can be executed from (init lines, triggers, waypoints, the Debug Console, or SQS scripts).
- No `#include` call is needed.
- Function names are not case-sensitive.

- [fn_setMirrorDisplay](#)
- [fn_tow_canHitch](#)
- [fn_tow_canTow](#)
- [fn_tow_getAvailableTowPoints](#)
- [fn_tow_getRopeTowConnections](#)
- [fn_tow_setPointLocked](#)
- [fn_tow_startHitch](#)
- [fn_tow_startRopeTow](#)
- [fn_tow_startTow](#)
- [fn_tow_stopHitch](#)
- [fn_tow_stopRopeTow](#)
- [fn_tow_stopTow](#)
- [fn_tow_towChild](#)
- [fn_tow_towParent](#)
- [fn_vbs_aar_recordStart](#)
- [fn_vbs_aboveGround](#)
- [fn_vbs_absSpeed](#)
- [fn_vbs_addActionEx](#)
- [fn_vbs_addonExists](#)
- [fn_vbs_addSysEventHandler](#)
- [fn_vbs_addSystemItem](#)
- [fn_vbs_addWaypointOME](#)
- [fn_vbs_alignTurret](#)
- [fn_vbs_allowDamage](#)
- [fn_vbs_allUnitsInCoC](#)
- [fn_vbs_angleDiff](#)
- [fn_vbs_animateIWA](#)
- [fn_vbs_animation_active](#)
- [fn_vbs_animation_status](#)
- [fn_vbs_areEqual](#)
- [fn_vbs_arithmeticMean](#)
- [fn_vbs_arrayAdd](#)
- [fn_vbs_arrayCompare](#)
- [fn_vbs_arrayFindDeep](#)
- [fn_vbs_arrayInsert](#)
- [fn_vbs_arrayInsertOrdered](#)
- [fn_vbs_arrayInterpolate](#)
- [fn_vbs_arrayPop](#)
- [fn_vbs_arrayPopStack](#)
- [fn_vbs_arrayPush](#)
- [fn_vbs_arrayPushStack](#)
- [fn_vbs_arraySetDeep](#)
- [fn_vbs_arrayShift](#)
- [fn_vbs_arrayShiftStack](#)
- [fn_vbs_arrayUnShift](#)
- [fn_vbs_arrayUnShiftStack](#)
- [fn_vbs_artilleryStrike](#)
- [fn_vbs_aw_addWound](#)
- [fn_vbs_aw_compareWounds](#)
- [fn_vbs_aw_getBleedingWounds](#)
- [fn_vbs_aw_getBodyPartID](#)
- [fn_vbs_aw_getSeverityID](#)
- [fn_vbs_aw_getTreatmentID](#)
- [fn_vbs_aw_getWoundBleeding](#)
- [fn_vbs_aw_getWoundEffectsClass](#)
- [fn_vbs_aw_getWoundID](#)
- [fn_vbs_aw_getWoundPainLevel](#)
- [fn_vbs_aw_getWounds](#)
- [fn_vbs_aw_getWoundTreatments](#)
- [fn_vbs_aw_hasWound](#)
- [fn_vbs_aw_removeWounds](#)
- [fn_vbs_aw_unitAddBleeding](#)
- [fn_vbs_aw_unitGetBleedingAmount](#)
- [fn_vbs_aw_unitRemoveBleeding](#)
- [fn_vbs_aw_woundToString](#)
- [fn_vbs_aw_woundWasTreated](#)
- [fn_vbs_boatRadar](#)
- [fn_vbs_cachedEval](#)
- [fn_vbs_cacheDiag](#)

- fn_vbs_cacheInit
- fn_vbs_camSetFixedShot
- fn_vbs_cargo_drop
- fn_vbs_cargo_status
- fn_vbs_chemlight
- fn_vbs_classIntroInVersion
- fn_vbs_closeAirSupport
- fn_vbs_colorByName
- fn_vbs_complex_animation
- fn_vbs_conditionalSelect
- fn_vbs_confirmationDialog
- fn_vbs_controlLink
- fn_vbs_convoy
- fn_vbs_coordinatesDialog
- fn_vbs_createComplexIED
- fn_vbs_createIED
- fn_vbs_createLocalSystem
- fn_vbs_createSystem
- fn_vbs_createVehicle
- fn_vbs_crossProduct
- fn_vbs_cutDecimals
- fn_vbs_damageHitpart
- fn_vbs_dateToDTG
- fn_vbs_dateToString
- fn_vbs_dayofWeek
- fn_vbs_dialog_update
- fn_vbs_dirTo
- fn_vbs_dirToVector
- fn_vbs_displacedSnowDepth
- fn_vbs_distance2D
- fn_vbs_distance2Dsqr
- fn_vbs_doMoveEx
- fn_vbs_dotProduct
- fn_vbs_dropPos
- fn_vbs_DROPS
- fn_vbs_dsb_land_155_global_vars
- fn_vbs_editor_getDisplay
- fn_vbs_editor_getMap
- fn_vbs_engineering_getBuildState
- fn_vbs_engineering_logWork
- fn_vbs_equipAllowedWeapon
- fn_vbs_expandSciNotation
- fn_vbs_fileBrowser
- fn_vbs_fillCrewPositions
- fn_vbs_filterString
- fn_vbs_findCargoPos
- fn_vbs_findEdge
- fn_vbs_findEmptyLocation
- fn_vbs_fireSupport
- fn_vbs_fireSysEventHandler
- fn_vbs_flipArray
- fn_vbs_fn_initStowBarrel
- fn_vbs_formatSeconds
- fn_vbs_freeIndex
- fn_vbs_geometricMean
- fn_vbs_GetArg
- fn_vbs_getBBVolume
- fn_vbs_getCameraDir
- fn_vbs_getCargo
- fn_vbs_getConfigValue
- fn_vbs_getContentModules
- fn_vbs_getControlIDC
- fn_vbs_getCrewAction
- fn_vbs_getCrewPos
- fn_vbs_getDefaultSystem
- fn_vbs_getHail
- fn_vbs_getHitpointName
- fn_vbs_getInheritedCfg
- fn_vbs_getLineDist
- fn_vbs_getLockTarget
- fn_vbs_getMagazines
- fn_vbs_getModes
- fn_vbs_getMuzzles
- fn_vbs_getPitchBank
- fn_vbs_getProxyMagazines
- fn_vbs_getSimulationProxies
- fn_vbs_getSystemItemCode

- fn_vbs_getSystemItemCodePa
ram
- fn_vbs_getSystemItemName
- fn_vbs_getSystemItemParent
- fn_vbs_getSystemItemShortcut
- fn_vbs_getSystemItemShowC
ondition
- fn_vbs_getSystemItemTooltip
- fn_vbs_getSystemItemType
- fn_vbs_getSystems
- fn_vbs_getTurret
- fn_vbs_getTurretCfg
- fn_vbs_getUAVModuleLinks
- fn_vbs_getUnitPos
- fn_vbs_getVehiclePos
- fn_vbs_getVisibility
- fn_vbs_getWeaponAndObject
Cargo
- fn_vbs_greatestNum
- fn_vbs_groupCargo
- fn_vbs_highPrecisionAdd
- fn_vbs_improvedHint
- fn_vbs_inAngleSector
- fn_vbs_indicateValueTrend
- fn_vbs_infobubble
- fn_vbs_injury_blindness
- fn_vbs_injury_deafness
- fn_vbs_injury_dizziness
- fn_vbs_injury_knockout
- fn_vbs_injury_thump
- fn_vbs_insertWaypoint
- fn_vbs_isCollisionIWA
- fn_vbs_isGroupEmpty
- fn_vbs_isInFrontOf
- fn_vbs_isKindOf
- fn_vbs_isPreview
- fn_vbs_isSystemItemActive
- fn_vbs_isSystemItemEnabled
- fn_vbs_isSystemItemLocal
- fn_vbs_isTurretLocked
- fn_vbs_isUnmannedVehicle
- fn_vbs_isVisible
- fn_vbs_joinString
- fn_vbs_lastName
- fn_vbs_lbInsert
- fn_vbs_linePlaneIntersect
- fn_vbs_listPlayers
- fn_vbs_listTurrets
- fn_vbs_loadVehicle
- fn_vbs_loadVehicleToVehicleH
old
- fn_vbs_lockTurretDir
- fn_vbs_lowestNum
- fn_vbs_magnitude
- fn_vbs_magnitudeSqr
- fn_vbs_matrixMultiply
- fn_vbs_moveln
- fn_vbs_nearestNum
- fn_vbs_nearestRoad
- fn_vbs_objectCargo_add
- fn_vbs_objectCargo_get
- fn_vbs_objectCargo_remove
- fn_vbs_observation
- fn_vbs_onPlayerVehicleChange
- fn_vbs_openSystemsMenu
- fn_vbs_orbitCamera
- fn_vbs_placeOnSurface
- fn_vbs_positionObjectRelToOb
ject
- fn_vbs_posToCoordString
- fn_vbs_putUnitsInVehicle
- fn_vbs_randomIndex
- fn_vbs_randomInt
- fn_vbs_randomNum
- fn_vbs_randomPos
- fn_vbs_relativeDirTo
- fn_vbs_relativeModelPos
- fn_vbs_relPos
- fn_vbs_removeActionEx

- fn_vbs_removeIndex
- fn_vbs_removeSysEventHandler
- fn_vbs_removeSystemItem
- fn_vbs_repairHitpart
- fn_vbs_replaceString
- fn_vbs_resizeControls
- fn_vbs_rotatePoint
- fn_vbs_rotateVector2D
- fn_vbs_rotateVector3D
- fn_vbs_rotationMatrix
- fn_vbs_selectedWeaponType
- fn_vbs_selectRandom
- fn_vbs_selectRelative
- fn_vbs_setComplement
- fn_vbs_setDefaultSystem
- fn_vbs_setEach
- fn_vbs_setGunPosition
- fn_vbs_setHail
- fn_vbs_setIntersection
- fn_vbs_setPitchBank
- fn_vbs_setSystemItemActive
- fn_vbs_setSystemItemCode
- fn_vbs_setSystemItemCodeParam
- fn_vbs_setSystemItemEnabled
- fn_vbs_setSystemItemName
- fn_vbs_setSystemItemShortcut
- fn_vbs_setSystemItemShowCondition
- fn_vbs_setSystemItemTooltip
- fn_vbs_setUnion
- fn_vbs_setUnitNBCLevel
- fn_vbs_SetupCargoAreaForVehicle
- fn_vbs_sgn
- fn_vbs_showMouseCursor
- fn_vbs_sideFromIndex
- fn_vbs_sideFromString
- fn_vbs_sideToIndex
- fn_vbs_snow
- fn_vbs_sortArray
- fn_vbs_sortStrings
- fn_vbs_spawnFormation
- fn_vbs_speak
- fn_vbs_splitString
- fn_vbs_stowBarrel
- fn_vbs_StrIndex
- fn_vbs_StrInStr
- fn_vbs_stripExtension
- fn_vbs_StrLeft
- fn_vbs_StrMid
- fn_vbs_StrRight
- fn_vbs_subSelect
- fn_vbs_swapVars
- fn_vbs_systemItemExists
- fn_vbs_sysText
- fn_vbs_timeDifference
- fn_vbs_timeToString
- fn_vbs_towing
- fn_vbs_trimString
- fn_vbs_underlyingSurface
- fn_vbs_unitCanEject
- fn_vbs_unitIsSwimming
- fn_vbs_unitObserve
- fn_vbs_unitShowBandage
- fn_vbs_unitVector
- fn_vbs_unloadVehicleFromVehicleHold
- fn_vbs_validateCode
- fn_vbs_validateCoords
- fn_vbs_validateGPSCoord
- fn_vbs_validateNumber
- fn_vbs_vectorAdd
- fn_vbs_vectorAngle
- fn_vbs_vectorDiff
- fn_vbs_vectorDistance
- fn_vbs_vectorDistanceSqr
- fn_vbs_vectorFromXTToY

- fn_vbs_vectorMultiply
- fn_vbs_vectorToDir
- fn_vbs_vehicleECM
- fn_vbs_visual_arrowH
- fn_vbs_visual_arrowV
- fn_vbs_watchValues
- fn_vbs_weapon_on_back
- fn_vbs_weapon_on_back_condition
- fn_vbs_wrapAngle
- fn_vbsCon_civ_setTrafficDebug
- fn_vbsCon_pauseConvoy
- fn_vbsCon_resumeConvoy
- Gateway_ApplySettings
- Gateway_CenterMotionDevice
- Gateway_ChangeSetting
- Gateway_Enabled
- Gateway_EnableMotionTracking
- Gateway_GetExternalProperty
- Gateway_GetGUIPort
- Gateway_GetSetting
- Gateway_SendCommand
- Gateway_SendString
- Gateway_SetExternalProperty
- Gateway_ShowGUI
- Gateway_ShowRemoteGUI
- Gateway_ViewAttachGroup
- Gateway_ViewClearGroup
- Gateway_ViewGet
- Gateway_ViewModify
- Gateway_ViewRemove
- Gateway_ViewSetSensor
- IG_OnSetCameraInside
- overload_enableOverloadPrevention
- overload_getCurrentSettingLevel
- overload_getDesiredFPS
- overload_Reset
- overload_setCurrentSettingLevel
- overload_setDesiredFPS