

Command Modern Air / Naval Operations

Read me File – 23 May 2015

Version 1.08

Welcome.

Thank you for playing Command Modern Air / Naval Operations™. We are always looking for ways to improve your gaming experience. For the latest information on the game, please go to the Matrix Games web site at www.matrixgames.com.

Below you will find the latest and greatest information on Command Modern Air / Naval Operations™. Information in this document supersedes that in the official game manual.

Troubleshooting:

Ensure that your system meets the minimum system requirements. These are found in the game manual. Also, ensure that you have the latest video and sound drivers available for your system and that you have upgraded to the latest version of DirectX from Microsoft.

The vast majority of reported problems are resolved by upgrading all drivers and DirectX to the latest versions.

If you are still experiencing problems with the game, please use our Help Desk at

www.matrixgames.com/helpdesk or post in the Command Modern Air / Naval

Operations™ Support Forum at www.matrixgames.com. Please provide as much detail on your issue as you can.

To obtain optimum game performance, close all other applications before beginning a game.

Change History:

V1.08 – May 23, 2015

MAJOR NEW FEATURES:

- * New weapon type: Anti-torpedo torpedoes and related torpedo-warning systems. (The player can fire these manually but by default the AI handles them just like with anti-missile weapons)
- * New weapon type: Enhanced fragmentation warhead (aka "superfrag"). Examples: M30A2 MLRS Alternate Warhead, CBU-107 PAW.
- * New weapon type: Contact explosive - sabotage & suicide subtypes. Sabotage allows simulating e.g. Tanya blowing a radar station (obligatory Red Alert reference: check). Suicide explosive allows modelling kamikaze units (e.g. the attack on USS Cole).
- * New "ship" type: Mobile Offshore Base (aka "Battle Island"). Contrary to aircraft carriers, a MOB can also operate land-based aircraft (e.g. large transports).
- * Players can now observe the engagement arcs of a unit mount. To do so, bring up a unit's "Weapons" window and click-select the "Show Arcs" checkbox for the desired mount or any weapon on that mount. Only one mount's arc is displayed at a time (this is deliberate). The arc is displayed only as long as the weapons window is visible.
- * The manual weapon allocation window can (optionally, via a checkbox) present

to the player the "soft" restrictions (WRA/WCS/other doctrine settings) which prevent a unit from automatically using a weapon on a given target even though the "hard" restrictions (physically able etc.) are met. The player can of course override the soft restrictions and fire manually.

- * Significant speed improvement on large scenarios.
- * Uncertainty areas for long-range passive detections (SOSUS, ESM etc.) are more accurate and reliable.
- * Map tweak: A targeting vector turns yellow when the targeting unit is not cleared to engage the target (WCS etc.), and green when it is.
- * Added "Reset All Side Scores" button on Losses & Expenditures window.
- * The coast/borders line fades out as the camera zooms in on the terrain (similar to Google Earth).
- * Subs always recharge their batteries when at periscope depth or shallower. They are also smarter about not running after targets they have no chance of catching up, and vary their approach speed against viable targets more intelligently.
- * Snap-up/down limits are now taken into account for AAW guided weapons.
- * Side-firing gunships (e.g. AC-130) now maneuver properly to place their targets on their weapons' line of fire.
- * UNREP is performed at a realistic pace (1 item every 2 minutes per connecting line), and ships being replenished do not overload their first compatible weapon mount.
- * Aircraft body IR signatures are now affected by speed (mainly affects supercruising and high-supersonic aircraft like F-22, SR-71 etc.)
- * New side-level option (editable on "Edit Sides" window): Can Auto-track civilians. When enabled, the selected side automatically detects and tracks civilian/commercial units. This simulates access to publicly available traffic sources like AIS, and can be handy for piracy & law-enforcement scenarios.
- * Various tweaks to mission editor UI.
- * Numerous tweaks to damage modelling related to light-caliber, very high-ROF automatic weapons.
- * Mechanical-scan radars (with the exception of ICWI-capable sets) cannot perform volume scan while they are providing SARH illumination for missiles. So e.g. once a fighter launches a Sparrow at a target it becomes radar-blind to any other contact while it is guiding the weapon. This can severely reduce situational awareness if the fighter is not backed-up by other friendly radars. (It also makes possible co-operative "you draw missile fire and I'll flank and stab him" tactics). Phased-array or ICWI-capable radars do not have this limitation.
- * Includes updated & rebuilt versions of all official scenarios.
- * Includes a new series of import files by Mike.
- * Includes the latest versions of the DB3000 and CWDB databases.

FIXES & ADDITIONS

- 0009452: WRA Dialog Super Annoyance: Next Column Select refresh up
- 0009406: "Not" condition not retained
- 0003482: DB3K: CBU-107 Passive Attack Weapon
- 0009124: GMLRS Alternate Warhead (new warhead type)
- 0009347: DB3k: Iranian Su-22 Refurbs IOC 2015
- 0009349: CBU-107 Passive Attack Weapon (PAW)
- 0009449: Merkava Mk4 upgraded with APS (anti-ATGM)
- 0009497: DB3k: Yemen SAM Battery Configurations

- 0008018: [554] SOSUS - not good enough
- 0008953: AoUs vary over long ranges
- #9394: Crash in b 678, 100299, 100055, 100054
- #9416: SEAD Patrol: Altitude overrides set but Command ignoring them
- #9258: Edit Mag Dialog: "Add 10000-version of weapon record" button
- #9418: Possibly overdone flooding damage
- #8036: Need a sanity check for when diesel subs try to chase targets much faster than them
- #9472: Sub group crash
- #9481: Recharge Procedure Broke: Agostas go to 0 knts when it's time to switch to diesel
- FIXED: Salvos were never executed if the WCS-AAW was set to hold (regardless of actual target type)
- #9506: Side-level option: Can auto-track civilians
- #1364: Non-Illuminate-while-scan radars should not scan while illuminating
- #9027: Aircraft on AAW patrol don't engage
- #9501: Machine guns cause outsized fire and flooding
- #9495: When Ship Group leader destroyed and Group Leader changes group speed is 0kts
- 0001029: Add Yak-130 & M-346 combat trainers to DB3K
- 0003105: DB3K: Ashoura MRBM
- 0003170: DB3K: AC-208 Combat Caravan
- 0003445: DB3K: KAB-500 on Yak-130
- 0003842: DB3K: JDAM-ER
- 0003720: Japanese MCH-101
- 0003452: DB3k Update: Indonesian Submarine Updates
- 0006294: [478] Command UI goes black after a change until I refresh
- 0005009: Add An-2
- 0004969: WPFFontCache_v0400.exe keeps running after command is closed
- 0004288: 'SCUD B' VARIANT (HWASONG 5)
- 0004044: Kh-32 ASM
- 0003999: South Korean Ballistic Missiles
- 0006836: (New) Abu Dhabi class
- 0006815: DB3k Update: Add P 191 Abu Dhabi (UAE)- Modified Italian Commandante Fulgosi)
- 0006781: DB3k: Add Alenia Aermachhi M-346 Master
- 0006570: Jordan CN-235 gunship
- 0006368: DB3k Update: Add Skymaster Observation Planes
- 0007813: Mark List of Platforms
- 0007399: MC-27J
- 0007000: French Barracuda class
- 0006969: DB3k: Request for Current Mig-35
- 0007957: Add MALD to Hornets
- 0007967: DB3K: Add GBU-12F/B DMLGB to Harrier likely hornet
- 0008077: DB3k: Oman C-295 MPA (2015)
- 0008092: DB3k Update: Add KC-135RG (France 2014)
- 0008204: DB3k: Add Tannin (Israeli Dolphin 2 class submarine) IOC 2014
- 0008189: Operation Lightning Strike: Aircraft ride no navigate zone and then can't cross to return to refuel
- 0008142: SSTD system & CAT (Countermeasure Anti-Torpedo)
- 0008138: Mines Strangely detonating

- 0008383: DB3k Update: Alamo A designation should be Alamo E
- 0008273: DB3k: F-22 Speed and Alt
- 0008262: DB3k: Israeli Sub Updates
- 0008244: Spec 111's Various Soviet Fixes
- 0008211: DB3k: Add Romanian Mig-23MF (1979-2001)
- 0008434: DB3k Update: Bluefin/Knifiefish/Reliant series of underwater drones
- 0008435: DB3k: New French Torpedo F21 to IOC in 2016 on french subs
- 0008489: DB3k: Jan's US Tanker Fixes and requests
- 0008540: Brazilian Mirage 2000 Fixes
- 0008529: DB3k: Rafale's don't have helmet mounted sights
- 0008528: DB3k; Jan's Mirage 2000N Updates
- 0008506: DB3k: Mirage 2k Series Updates
- 0008542: DB3k: Jan's ASMP Missile stats
- 0008554: DB3k: Type 42.3 Update
- 0008603: DB3k; Info on new Rafale Batches
- 0008679: DB3k: AC-208 Combat Caravan Light Attack Aircraft
- 0008662: DB3k: Etendard fuel tank issue
- 0008623: Qassed-1 (GBU-78/A) EO-guided bomb
- 0008699: DB3k; Brimstone Updates for Typhoon and Tornado
- 0008697: DB3k; Jan's Tiger Helo Updates
- 0008689: DB3k: Mald J's have active data link so can be retasked etc
- 0008680: DB3k: Jan's Super Etendard Updates
- 0008701: DB3k: Add L-159A ALka
- 0008705: DB3k: Add Dassault Neuron UAV
- 0008706: DB3k: Kirov Concerns
- 0008720: Kirov MLU update
- 0008781: Set RCS of biologics to 'not detectable'
- 0008770: DB3k: Jan's Taiwan Mirage 2k fixes
- 0008729: DB3k: #2305 - SKR Admiral Grigorovich [Pr.1135.6M] Concerns
- 0008815: DB3k: Sa'ar 72-class corvette
- 0008816: DB3k: Jan's Dutch Frigate Updates
- 0008820: DB3k: Finnish Hornet Upgrades
- 0008825: DB3k: TU-22 Concerns
- 0008940: Finnish F-18C/D MLU-2 upgrade
- 0008845: MALD-J gets two-way datalink
- 0008842: DB3k: MiG-31 Arrow update
- 0008835: DB3k: Add Sparrow to F-20 TigerShark
- 0008827: Kirov Updates
- 0009028: F-22 should fly strike missions at 55k ft
- 0009014: P-3C Harpoon loadout does not carry sonobuoys
- 0008998: MiG-35 Fulcrum-F with Zhuk-AE
- 0008997: R-27T/ET has BOL & LOAL capability
- 0008967: DB3k: J-10B Updates (3300 ID): new IOC, engines and loadouts
- 0009141: HAF A-7H asymmetrical strike loadout
- 0009122: DB3k: Fix Iraqi SA-22 Greyhound stats
- 0009121: DB3k: Jan's Cn-235 Updates
- 0009093: DB3k: Add Dutch F-35
- 0009047: A-12 loadouts and other data
- 0009037: Updated info on UKSK (new Russian universal VLS)
- 0009155: Remove Super-530D from HAF M-2000EGM/BGM 2012+ loadouts
- 0009156: DB3k Update: South Korean Global Hawk IOC 2018

- 0009163: Saudi Typhoons get Meteor
- 0009167: APG-83 SABR radar for Taiwan F-16s
- 0009174: DB3k: Jan's Gazelle Fixes
- 0009196: Db3k Edit: Israeli F-35A updates
- 0009177: DB3k: Concern about 35mm Millennium not being able to shoot at missiles
- 0009176: DB3k: Jan's Greek Mirage 2000 Updates
- 0009198: DB3k: Iran vs. ISIL loadouts
- 0009238: HN Combattante IIIBs to get Harpoon by end of 2015
- 0009240: DB3k: Tomcat's MQ-9 Reaper Updates
- 0009256: DB3k; Jan's ME Mirage 2k Updates
- 0009245: CWDB: Single-rail launchers must NOT reserve targets
- 0009244: DB3k: Add Dutch Reaper MQ-9
- 0009243: DB3k; Implemente Volcano, Davide and Dart Rounds for Oto Melara Deck Guns
- 0009241: DB3k: Tomcat's Dutch F-16 Updates
- 0009265: 672 F-4J/AIM-7F target illumination
- 0009276: Jan's FREMM Concerns
- 0009277: DB3k; Triode's OODA Concerns
- 0009278: Hellfische's Volcano Deck Gun Ammo Concern
- 0009330: Knifefish UUV
- 0009329: J-20 update
- 0009305: French Lancaster DB Update
- 0009303: OODA Range Type 43 Destroyer
- 0009304: Etendard IVP no Recon Loadout
- 0009279: DB3k: Corsairs French Updates
- 0009334: DB3k: Triode SSM Warhead Concerns
- 0009335: DB3k: Add Brimstone II Loadout to British F-35
- 0009337: DB3k: Add AU F-35A
- 0009350: Su-30MKM avionics update
- 0009342: DB3k: Add Israeli RPS-42 short range radars
- 0009340: DB3k Update: Add Saudi Typhoon at to ground loadouts
- 0009338: DB3k: Add Ghannatha Patrol Boats (UAE, 2015)
- 0009363: DB3k Update: A-10C Loadout Request
- 0009358: CWDB SS-2 Missile cannot reach stated maximum range
- 0009354: LCS - ASuW configuration (Longbow Hellfire)
- 0009353: Various torpedo & ATT updates
- 0009352: RAQ-25 UCLASS
- 0009351: LaWS update
- 0009367: PBK-500U family
- 0009366: DB3k: CJ-10 named DF-10
- 0009365: DB3k: SU-35 Requests GPS Guided Bombs
- 0009364: DB3k: SU-34 Fullback Updates
- 0009377: DB3k Update: Saudi Tornado IDS Upgrades
- 0009372: DB3k: Anti torpedo system info
- 0009371: Anti-Torpedo Torpedo (ATT) systems
- 0009370: DB3k: Structure Requests
- 0009380: DB3k: Add Kasta 2E2 (Flat Face) radar
- 0009381: BRU-70/A DITER on USMC AV-8Bs
- 0009393: Add new Chinese decory and Mineral OTH radar to 52D
- 0009390: DB3k; Facility #2280 - AAA Plt/3 (23mm ZU 23-2 + SA-24 Grouse

[ZOM-1-4] x2) of Venezuela is missing the SA-24 Grouse missiles

- 0009388: F-4E Vietnam CAS "Gunslinger" loadout
- 0009387: 2x PL-2s on DPRK J-5s
- 0009383: DB3k: YU-10 Torpedo
- 0009394: Crash in b 678, 100299, 100055, 100054
- 0009396: DB3k: Add Pontoon Bridge
- 0009400: DB3k: Egypt gets S300VM
- 0009403: DB3k: Watchkeeper is missing 360 degree radar
- 0009408: DB3k: Turkish RF-4E's out of service this year
- 0009434: DB3k: Add Hellfire to Aussie MH-60R
- 0009432: DB3k: Zumwalt Updates: Add 30mm Ammo to magazine
- 0009422: Queen Elizabeth CVs will use ski-jump, not catapults
- 0009417: Fleet-class CUSV
- 0009414: MU-90 torpedo IOCs on French Navy NH-90
- 0009435: DB3k: Add Indonesian CN-235
- 0009437: DB3k: SDB Warhead Concerns
- 0009465: Argentine Vicentio De Mayo cant carry Super E
- 0002919: DB3K: RVV-BD, RVV-MD & RVV-SD missiles
- 0003812: Add missing Civilian units
- 0004448: Generic items to add to the DB
- 0006055: DB3k Update; Add Japanese MH-53E Sea Dragon (S-80M-1)
- 0006673: DB3k: Mark's civilian aircraft
- 0007086: DB3k: Add Bombardier Dash 8 Q-300
- 0007228: DB3k: China first S-400 Export Customer
- 0008421: [Cold War Database] Argentine airbases Inst File
- 0008377: DB3k: Add Boeing 777-200LR Commercial Aircraft
- 0008341: DB3k: Helo Sensors
- 0007433: DB3k; Add CH-53K (King Stallion) USMC 2019
- 0008485: DB3k; Updated KH-58 ARM for Pak FA
- 0009054: DB3k. Concerns on #2162-SAM Plt(SA-15e Gauntlet[9k330 Tor-M2KM]) in database)
- 0009055: DB3k Update: Concerns on #2185-SAM Bn(SA-26[42S6 Morfey])
- 0009193: DB3k Update- Triode's Mig-29K Updates
- 0009194: DB3k: Triode's Su-30MKI and Su-30SM #3210 - Su-30MKI Mk2 Flanker G,#3819 - Su-30SM Flanker G Updates
- 0009467: DB3k: All Aircraft in the Yemeni AF just went out of service:)
- 0009466: DB3k: Out of Service Adjustment LHA 1 Tarawa (2012-2015)
- 0009425: DB3k Update: 91N6 radar (S-400)
- 0009405: More commercial AC types
- 0009478: DB3k: JY-8A Radar Fix
- 0009475: DB3k Fix: P-1000 Mounts have 8 P-1000's instead of 2
- 0009474: DB3k: #2733 Slava Moskva armed with older P-500 instead of P-1000
- 0009480: DB3k: Add Pakistani Z-10 (2016)
- 0009479: DB3k: MQ-8C Loadout

Fixed: #8985: (B642) Depth Charges too powerful?

Fixed: In heavy scenarios, the autosave countdown would not get subtracted often enough

Fixed #9267: Warn players when adding a/c to mission that tgt is out of range

FIXED #9567: Enemy group-contact being dropped continuously

Fixed Tomcat's strike planner issues re: naturals

Fixed #9541: Air launched torpedo OODA loop problem
Fixed #9261: Mission editor not adding correct number of aircraft if rules are set
SV-22 Osprey dipping sonar altitude fix
Added: #9570: Edit Magazine Dialog: Add 10000 should actually add 10000
Fixed: #9571: ASW MPA still twirling over a target way to much
Added: #8257: Scoring Report: Would like a list of the scoring events on it
Fixed: When ordering a ship group to UNREP from a provider _outside the group_, the group's lead would not manouver to hook up to UNREP
Fixed: If an UNREP ship had an explicit patrol station, it would not manouver to hook up with the group lead
Added: Sanity checks for UNREP hookup (e.g. no head-on connection) and for break-off (if the receiver strays off for any reason, cut the lines)
Fixed: Sonobuoy depth hotkeys reversed on in-game hotkey list
Fixed: #9502: Torpedo should be diving to match target depth
Fixed #9500: Crash in unit status dialog
Fixed: Torpedoes attack below max depth
Fixed: Manually dropping a contact shows twice in message log
Added: #9580: Speed impact on IR detectability
Fixed #9641: Yu-10 torps do not hit
Sabotage HE charge not being subtracted from mount
Fixed: SS-29 won't fire
Fixed: Minimum target altitude error
Updated: Explicitly say 'Zulu' in mission activation time window
Added: Message when aircraft land and not enough weapons are available
Fixed #9462: Sub periscope/ESM not detecting stuff when surfaced
Fixed: EMCON doctrine crashes in Air Ops window
Display 'Hypothetical' text in db viewer
Fixed: Shift-click on clustered units
Fixed: a/c with non-runway capable weapons take off
Fixed: Engage opportunity target error
Fixed: Mast height error
Fixed: Rocket fire weirdness (one round from each mount)
ScenEdit_SetScore is now case-insensitive on the side name
Fixed: #9616: Lower arcs don't seem to work correctly when adding sen[...]
Minor null-ref exception fix + don't target identified whales!
Fixed: #9581: Mine warfare issues
Fixed: Minesweepers giving mines a very wide berth
Added: #9569: AAW weapons snap-up/snap-down limits
Fixed #9514: Extremely fast reload
DB3k: Rudd's HQ-2 Site Update
DB3k; Rudd's HQ-7 Site Add
DB3k: Rudd's HQ-12 Update
DB3k Update: Contradictory Day-Night Issue in loadout. Likely text issue
DB3k: Finish Hornet Updates
DB3k: Alka updates
GMD GBI update - multiple deployed KV versions
DB3k: Italian FREMM Updates
DB3k: Austrian Eurofighter fixes
DB3k: Add Searcher 2 UAV (Russia) 2014
J-11D
J-16 update

DB3k: Random Civilian Aircraft Adds part 30
DB3k Update: C-130J have 2 engines listed instead of 4
Swedish MPA
US Navy and AF small transport requests
Netherlands Air Force transports
VC-25 Air Force One
Add Irish PC-9M Pilatus
DB3k: Indonesia Add AS-565 Panther ASW Helicopters (2017)
DB3k: Canada: Airbus CC-150 Polaris
DB3k Update: Polish MMR Radar (associated with Kobra)
DB3k Update: Polish ZUR-23-2-KG
Indonesia Apache AH-64 Longbow
Indonesia: Updated F-16s
DB3k; Indonesian Forceshield/Startstreak Shorad systems
DB3k: Add Cape Class Cutter (US Coast Guard)
DB3k Update: Add Cape Class Patrol Boat (AU)
Cape-class patrol boat (Australia)
DB wish list: Australian and Indonesian aircraft & ships for scenario
DB3k Update: Kobra Air defense system (2009)
DB3k: Error with F-14D Loadouts
DB3k: F/A-18 D ATARS Loadout
DB3k: Russian T-50 Update
DB3k Update Irish Coast Guard S92
Add Irish AW 139 Helicopters
UCM-T130 Loki Torpedo Decoy (ID 287) issue
Singaporean ship 68 Formidable (ID 1482) has her main gun programmed as rear-facing, while in reality it is mounted forward.
DB3k: Astute/Audacious Upgrades
DB3k: UK Bought Tomahawk Block IV for SSN's possibly Type 26 Frigates
[B678] KA-3B Skywarrior not recognized as tanker
DB3k: Open Parking Legal Targets for ICBMs
Issues with Stand Up
Unit Order Crash Log
Submarines not visually spotting nearby helicopters when surfaced
ASW boat fires torpedoes in all directions
Imports: Saving edits made to mags, mounts, sensors and weapons
SOSUS Implementation
[708] Weapon launches but does not strike
[707] Torpedos don't hit, just circle sub.
Ground unit will not attack with C4 (1.07 b678)
Feature Request: Screenshot hotkey and folder
Tempo/Readiness Slider that could influence ready times
Only let player select satellites that were Operational
User would like Jamming Targets Marked
DB3k: KH-15 on TU-22M3
DB3k: Japan Buys UGM-84L Harpoon 2 for Subs
DB3k: 10 Merlins to be given retired Sea King Search Water Radars until "crowsnest" Merlin comes into service
DB3k Update; Merlin AEW
DB3k: Rudd's HQ-9 Site Updates
DB3k: Talios designation pod to replace Democles in 2018

DB3k: Add US ANG F-101B interceptor
[DB3k Update] B-52G SIOP Loadout update (combined SRAM-ALCM-B28/83)
B-52H CRL upgrade
DB3k: B-52 Bomb Bay Updates
CF-101B Voodoo until 1984
DB3k: KA-3B doesn't refuel anything
DB3000 0004064 VC-25A Counter measure possible additions
DB3k: Add refueling to C-32B
Weapon alloc must tell user about WRA target evaluation (incl target type)
Remove Seafox ROV loadouts from scenarios
DB3k: US Perry's Out of Service by Sept 2015
AA-5 Ash not hitting a barn door
DB3k: Add UK Exocet Ground Launchers
DB3k: Victor K.2 Falkland's Mod (1 aircraft)
db3k: mc-130 and daisy cutter profile porked
DB3k: Yak-44 Adjustments (Hypothetical)
DB3k: Add Battle Island hypothetical unit
DB3K: Ship-Sub out of service dates
DB3k: Various Aircraft Retirement dates with sources
DB3k: AC-130H Out of service date 2015
DB3k Update: RC-12x
C-5 Galaxy have no troops or paras loudouts.
DB3K: RC-7B ARL
DB3K: C-12 CAESAR jammer aircraft
DB3k: Griffin Missile troubles
DB3k: KH-35U Range Issue?
Add 'Hypothetical' flag to databases
Game Launch time Significantly Longer
Select Side Dialog-> Change the button to say "Enter Scenario" instead of Select Side
[B678.3] Gunships have trouble engaging
DB3k: AC-130 never fires on target
Side-firing AC (e.g. AC-130) must maneuver to place primary target at beam
Surface groups not stopping at last waypoint
MOB confined to carrier-only units
Long reloading times when changing "Reload Priority"
ADM-20B Quail not enough fuel
SA-22 Pantsir-S1 maximum target speed
Fixed: #9728: No fire damage results from missile attack
Fixed: Apache missile cannot attack runway-grade taxiway
Fixed: Manually targeted contacts become primary targets when they shouldn't
Fixed: Null reference in special weapon destruction case
Added: #5047: Add Weapon Record subwindow in Mag/Mount status window
should also show ROF for the weapon record
Fixed: Helicopter showing wrong AGL when hover and diving
Unit-image crash fix
Fixed: #9528: Cluster munitions don't affect parked aircraft
Fixed: Added 10 second buffer to 'NeedToExtend' so units won't deadlock over target (submarine)
Improvement: Aircraft back off to weapon's minimum range when overshooting
F 40 Sirius [Type 121 Leander Batch 2, Exocet] -- United Kingdom (Royal Navy),

1976 Weapon fit error
US battleships appear as carriers
DB3k Request:: Hypothetical A-6F
DB3k: Paket-NK systems needs to be corrected. It has 2 separate torps
Type 093B/093G SSGN
DB3k Update; Add Hypothetical F-16XL
DB3k: Add new South Korean Amphib Cheonwangbong
DB3k: Add Hypothetical CGN 42 (VLS Modernized Virginia)
DB3k: Add Hypothetical Unit: Sea Lance
DB3k: Add Italian Army ICH-47F IOC 2014
DB3k- Add Puma HC2 (IOC 2015)
DB3k: Add various UK Chinooks
Y-9G (Standoff-ECM carrier)
Y-9XZ (PsyOps Aircraft)
Y-9JB (Y-9 ELINT)
DB3k: Remove Hangar from Reliance Class Cutters
DB3k: Add larger Bulk Carriers
DB3k: Updates to Philippine Patrol Ships
DB3k Update: ELINT + Jamming System 1L267 "Moskva-1"
DB3k Update: 2394 - Vehicle (Avtobaza [Kvant IL222] Mobile Jammer+ELINT)
China AEW&C radars update
DB3k: Indian Sea King MK.42C's (0000384 - Sea King MK42C [HAS.2] Update
DB3k: Indian DBID 0001543 - Do-228-101 Update
DB3k: Add small boat davits for Type 052C and 052D
DB3k: Endurance-class LST's (DBID 0002631 and 0001044) need hangars
DB3k Update: Add KA-60 (Russia)
Martlet ASM
DB3k: DPRK Najin Update
Add Thales LMM (Missile)
DB3k: ECM/ESM sets for modern Indian Combatants (Talwar etc)
DB3k; Add KA-60
DB3k: Indian Delhis, Talwars to get German Atlas (ACTAS) Towed arrays in 2016
AGL vs AMSL altitude on helos
A-12 Avenger II and hypothetical navalized F-117 need Link 16
DB3k: CKFinite's concerns about AN/APG-81 and AN/APG-77 arcs
DB3k: Missile upgrades to older Iranian vessels
[494] Submarine stuck in engaged offensive after Manual TLAM Shoot
DB3k Update: Next Radar for F-15E will be APG-82(V)1
DB3k: Add Maverick D loadout to Indonesian Hawk 209
DB3k; Update the generic helo mad to accomidate rockets
F-16CM/DM designation
CWDB- DB Viewer. Stats on Lightning seem off
Kh-29MP & Kh-29D missiles
ASW Aircraft unable to line up on target
DB3k: US Seahawk, Sea Knight retirement schedule
DB3k/CWDB Gariel I missile correction
DB3k: Spellcheck and naming conventions
DB3l: Swedish SSM altitude Updates
[696] Submarines surface when engaging surfaced submarines.
Aircraft unable to engage when given about the worst possible parameters to do so :)

Helicopter too high and too close to use 20mm and Hellfire
Fixed #9546: Submarines surface when engaging surfaced submarines
FIXED: Grouped Mission Aircraft Do Not Release Weapons on first pass
Fixed #6427: Showing Targeting Vectors Issue for groups when showing ghosted units
Fixed: Deleted units still listed on airbase/OOB
Fixed: ICBM stuck in OODA loop
Fixed: Mission Aircraft Do Not Release Weapon

Database Additions:

* NOTE! Hypothetical US aircraft such as the planned-but-cancelled advanced versions of the F-14 Tomcat, F-23, F-24 (navalized F-22), A-12 Avenger II, navalized F-117, etc, have been given additional 'modern' entries with late 2000s, 2010s and 2020s weaponry so that they can be compared side-by-side with F/A-18E/F Super Hornet, F-35 Lightning II, F-22 Raptor, etc.

Aircraft:

A/F-117X Sea Hawk -- United States (Navy), 2002, HYPOTHETICAL, 1994 proposed A/F-X cancellation compensation
A/F-117X Sea Hawk -- United States (Navy), 2003, HYPOTHETICAL
A/F-117X Sea Hawk -- United States (Navy), 2005, HYPOTHETICAL
A/F-117X Sea Hawk -- United States (Navy), 2008, HYPOTHETICAL
A/F-117X Sea Hawk -- United States (Navy), 2014, HYPOTHETICAL
A/F-117X Sea Hawk -- United States (Navy), 2016, HYPOTHETICAL
A/F-117X Sea Hawk -- United States (Navy), 2020, HYPOTHETICAL
A-10C Thunderbolt II -- United States (Air Force), 2015
A-12A Avenger II -- United States (Navy), 2003, HYPOTHETICAL
A-12A Avenger II -- United States (Navy), 2005, HYPOTHETICAL
A-12A Avenger II -- United States (Navy), 2008, HYPOTHETICAL
A-12A Avenger II -- United States (Navy), 2014, HYPOTHETICAL
A-12A Avenger II -- United States (Navy), 2016, HYPOTHETICAL
A-12A Avenger II -- United States (Navy), 2020, HYPOTHETICAL
A-6F Intruder II -- United States (Navy), 1995, Cancelled A-6E replacement, 150x planned
A-6F Intruder II -- United States (Navy), 1999
A-6F Intruder II -- United States (Navy), 2002
A-6F Intruder II -- United States (Navy), 2003
A-6F Intruder II -- United States (Navy), 2005-2007
AC-235 Pocket Gunship -- Jordan (Air Force), 2015, 2x
AC-295 Pocket Gunship -- Jordan (Air Force), 2016, 1x
Aero Commander 500B -- Civilian (Civilian), 1966
Aero Commander 500S [Shrike Commander] -- Civilian (Civilian), 1969
AH-64E Apache [Longbow] -- Indonesia (Army), 2018, 8x
Airbus A.350-1000 -- Commercial (Commercial), 2019
Airbus A.350-800 -- Commercial (Commercial), 2017
Airbus A.350-900 -- Commercial (Commercial), 2015
Airbus A.380-800 -- Commercial (Commercial), 2008
An-140 -- Commercial (Commercial), 2001
An-140 [IrAn-140] -- Commercial (Commercial), 2011
An-148-100A -- Commercial (Commercial), 2011
An-26 Curl A -- Civilian (Civilian)

An-2T Colt -- Civilian (Civilian), 1948
An-72A Coaler C -- Civilian (Civilian)
AS.550 Fennec -- Indonesia (Army), 2016, 6x, Battlefield Surveillance?
AS.555 Fennec -- Indonesia (Army), 2016, 6x, Attack?
AS.555SN Fennec -- Malaysia (Navy), 2004, 6x
AS.565MBe Panther -- Indonesia (Navy), 2018, 11x, ship + shore
AV-8B Harrier II+ [Night Attack] -- United States (Marine Corps), 2015
AW.101 Merlin [CH-101] -- Japan (Navy), 2017, Antarctic research
AW.101 Merlin AMCM [MCH-101] -- Japan (Navy), 2017, MH-53E Replacement
AW.139 -- Ireland (Air Force), 2007
B-52H Stratofortress -- United States (Air Force), 2017, CRL Phase 1.1
B-52H Stratofortress -- United States (Air Force), 2020, CRL Phase 1.2
Bell 412EP Basic [NB-412EP] -- Indonesia (Navy), 7x
Boeing 707-347C [CC-137 Tanker] -- Canada (Air Force), 1973-1997, 2x
Boeing 707-347C [CC-137 VIP] -- Canada (Air Force), 1974, 1x
Boeing 707-347C [CC-137] -- Canada (Air Force), 1973-1995, 2x
Boeing 717-200 -- Commercial (Commercial), 2000, Ex-MD-95
Boeing 737-400 -- Commercial (Commercial), 1989, Classic
Boeing 737-500 -- Commercial (Commercial), 1990, Classic
Boeing 737-600 -- Commercial (Commercial), 1999, Next Generation
Boeing 737-700 -- Commercial (Commercial), 1998, Next Generation
Boeing 737-800 -- Commercial (Commercial), 1998, Next Generation
Boeing 737-900 -- Commercial (Commercial), 2001, Next Generation
Boeing 737-900ER -- Commercial (Commercial), 2007, Next Generation
Boeing 777 Freighter -- Commercial (Commercial), 2009
Boeing 777-200 -- Commercial (Commercial), 1995
Boeing 777-200ER -- Commercial (Commercial), 1997
Boeing 777-200LR -- Commercial (Commercial), 1998
Boeing 777-300 -- Commercial (Commercial), 1998
Boeing 777-300ER -- Commercial (Commercial), 1998
Boeing 787-10 Dreamliner -- Commercial (Commercial), 2018
Boeing 787-8 Dreamliner -- Commercial (Commercial), 2012
Boeing 787-9 Dreamliner -- Commercial (Commercial), 2015
Bombardier CRJ100 -- Commercial (Commercial), 1993
Bombardier CRJ1000 -- Commercial (Commercial), 2011
Bombardier CRJ1000ER -- Commercial (Commercial), 1996
Bombardier CRJ100ER -- Commercial (Commercial), 1993
Bombardier CRJ200 -- Commercial (Commercial), 1996
Bombardier CRJ200ER -- Commercial (Commercial), 1996
Bombardier CRJ200LR -- Commercial (Commercial), 1996
Bombardier CRJ700 -- Commercial (Commercial), 2002
Bombardier CRJ700ER -- Commercial (Commercial)
Bombardier CRJ900 -- Commercial (Commercial), 2004
Bombardier CRJ900ER -- Commercial (Commercial)
Bombardier CRJ900LR -- Commercial (Commercial)
C-130H Hercules -- Netherlands (Air Force), 2011
C-130H-30 Hercules -- Netherlands (Air Force), 1995, 2x
C-135FR Stratotanker [KC-135FR] -- France (Air Force), 1994
C-22B [Boeing 727-35] -- United States (Air Force), 4x
C-295MPA -- Oman (Air Force), 2015, 3x
C-32A [Boeing 757-200ER] -- United States (Air Force), 1998

C-32B [Boeing 757-200ER+] -- United States (Air Force)
C-40A Clipper [Boeing 737-700C] -- United States (Navy), 2001
C-40B Clipper [Boeing 737-700C] -- United States (Air Force), 2003
C-40C Clipper [Boeing 737-700C] -- United States (Air Force), 2003
C-47A Dakota [DC-3] -- Commercial (Commercial), 1946
C-9A Nightingale [DC-9-30] -- United States (Air Force), 1968-2005
C-9B Skytrain II [DC-9-30] -- United States (Navy), 1973-2014
C-9B Skytrain II [DC-9-32CF] -- Kuwait (Air Force), 1977
C-9C [DC-9-30] -- United States (Air Force), 1977, 3x, Ex-VC-9C
CC-150 Polaris [Airbus A.310-300] -- Canada (Air Force), 1998, 4x, later 2x
CC-150 Polaris VIP [Airbus A.310-300] -- Canada (Air Force), 1998, 1x
Cessna 208A Caravan -- Civilian (Civilian), 1985
Cessna 208A-675 Caravan -- Civilian (Civilian), 1998
Cessna 208B Grand Caravan -- Civilian (Civilian), 1991
Cessna 337 Super Skymaster -- Civilian (Civilian), 1966
Cessna AC-208B Combat Caravan -- Iraq (Air Force), 2011, 3x
Cessna AC-208B Combat Caravan -- Lebanon (Air Force), 2010, 1x + 1x
CH-47D Chinook -- Netherlands (Army), 1996
CH-47D Chinook HC.2a -- United Kingdom (Army), 1997-2014, 6x
CH-47D Chinook HC.4 -- United Kingdom (Army), 2012, Ex-HC.2/2a
CH-47D Chinook HC.5 -- United Kingdom (Army), 2012, Ex-HC.3, CH-47SD
CH-47F Chinook -- Italy (Army), 2015
CH-47F Chinook -- Netherlands (Army), 2014, 6x
CH-47F Chinook HC.6 -- United Kingdom (Army), 2015
CH-53K King Stallion -- United States (Marine Corps), 2019
CN-235-200 -- France (Air Force), 1991, 20x, 1x lost
CN-235-220 -- Indonesia (Air Force), 2009, MPA
CN-235-220M [Patmar] -- Indonesia (Air Force), 2009, MPA
CN-235-300 -- France (Air Force), 2012, 8x
Dash 8-300 -- Commercial (Commercial), 1990
Dash 8-300 MPRA -- Sweden (Coast Guard), 2008
Dash 8-400 -- Commercial (Commercial), 2000
DC-10-10 -- Commercial (Commercial), 1972
DC-10-30 -- Commercial (Commercial), 1973
DC-10-30CF -- Commercial (Commercial), 1974
DC-10-40 -- Commercial (Commercial), 1974
DC-9 Series 10 -- Commercial (Commercial), 1966
DC-9 Series 20 [Model 21] -- Commercial (Commercial), 1969, 10x,
Scandinavian Airlines
DC-9 Series 30 [Model 31/32] -- Commercial (Commercial), 1967
DC-9 Series 40 -- Commercial (Commercial), 1968, Scandinavian Airlines
DC-9 Series 50 [Model 51] -- Commercial (Commercial), 1976
DHC-7-102 Dash-7 -- Commercial (Commercial), 1978, Passenger
DHC-7-103 Dash-7 -- Commercial (Commercial), 1978, Combi
DHC-7-150 Dash-7 -- Commercial (Commercial), 1980, Passenger
Do 228-101 -- India (Navy), 1989, No radar
Do 228-101 -- India (Navy), 2007, Upgrade, EL/M-2022
EB-52 Stratofortress -- United States (Air Force), 1975
EC.665 Tigre HADE [HA-28] -- Spain (Army), 2016, 18x
EC.665 Tigre HAP [HA-28] -- Spain (Army), 2012-2016, 6x, Tiger, Intermediate
version

EC.725 Caracal -- Indonesia (Air Force), 2015, 6x, CSAR
EF-101B Voodoo [CF-101E] -- Canada (Air Force)-1986
EF2000 Eurofighter Typhoon -- Saudi Arabia (Air Force), 2015
EF2000 Eurofighter Typhoon Two-Seater -- Saudi Arabia (Air Force), 2015
EMB-120 Brasilia -- Civilian (Civilian), 1986
EMB-120ER Brasilia Advanced -- Civilian (Civilian), 1993
Embraer E-170 [ERJ170-100] -- Commercial (Commercial), 2004
Embraer E-175 [ERJ170-200] -- Commercial (Commercial), 2006
Embraer E-175-E2 -- Commercial (Commercial), 2021
Embraer E-190 [ERJ190-100] -- Commercial (Commercial), 2007
Embraer E-190-E2 -- Commercial (Commercial), 2019
Embraer E-195 [ERJ190-200] -- Commercial (Commercial), 2007
Embraer E-195-E2 -- Commercial (Commercial), 2020
Embraer KC-390 -- Brazil (Air Force), 2018
EO-5B ARL-C COMINT [RC-7A, DHC-7 Dash-7] -- United States (Army), 1993,
2x
EO-5C ARL-M [RC-7B, DHC-7 Dash-7] -- United States (Army), 1997, South
Korea
F.100 [Tay 620] -- Commercial (Commercial), 1988
F.100 [Tay 650] -- Commercial (Commercial), 1989
F.27-200 Friendship -- Commercial (Commercial), 1959
F.27-400 Friendship -- Commercial (Commercial)
F.28-4000 Fellowship -- Commercial (Commercial), 1977
F.50 -- Commercial (Commercial), 1988
F/A-18A Hornet -- Australia (Air Force), 2017
F/A-18B Hornet -- Australia (Air Force), 2012
F/A-18B Hornet -- Australia (Air Force), 2017
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2000, 3x pr
Squadron
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2002, 3x pr
Squadron
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2003, 3x pr
Squadron, Litening ER
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2005, 3x pr
Squadron, Litening ER
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2006, 3x pr
Squadron, Litening AT
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2008, 3x pr
Squadron, Litening AT
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2014, 3x pr
Squadron, Litening AT
F/A-18D Hornet [ATARS Recon] -- United States (Marine Corps), 2016, 3x pr
Squadron, Litening AT, AIM-120D
F-101B Voodoo -- United States (Air National Guard), 1971-1982
F-101B Voodoo [CF-101B] -- Canada (Air Force), 1965-1984
F-101F Voodoo -- United States (Air National Guard), 1971-1982
F-101F Voodoo [CF-101F] -- Canada (Air Force), 1962-1986
F-117X Sea Hawk -- United States (Navy), 2002, HYPOTHETICAL, 1993 Carrier-
Borne LO Concept
F-117X Sea Hawk -- United States (Navy), 2003, HYPOTHETICAL
F-117X Sea Hawk -- United States (Navy), 2005, HYPOTHETICAL

F-117X Sea Hawk -- United States (Navy), 2014, HYPOTHETICAL
F-117X Sea Hawk -- United States (Navy), 2016, HYPOTHETICAL
F-117X Sea Hawk -- United States (Navy), 2020, HYPOTHETICAL
F-14D Tomcat [AAAM, GD/W] -- United States (Navy), 2003, HYPOTHETICAL,
AIM-152A AAAM, General Dynamics/Westinghouse
F-14D Tomcat [AAAM, GD/W] -- United States (Navy), 2005, HYPOTHETICAL,
AIM-9X
F-14D Tomcat [AAAM, GD/W] -- United States (Navy), 2008, HYPOTHETICAL,
AIM-120C-7
F-14D Tomcat [AAAM, GD/W] -- United States (Navy), 2014, HYPOTHETICAL
F-14D Tomcat [AAAM, GD/W] -- United States (Navy), 2016, HYPOTHETICAL,
AIM-152B, AIM-120D
F-14D Tomcat [AAAM, H/R] -- United States (Navy), 2003, HYPOTHETICAL,
AIM-152A AAAM, Hughes/Raytheon
F-14D Tomcat [AAAM, H/R] -- United States (Navy), 2005, HYPOTHETICAL,
AIM-9X
F-14D Tomcat [AAAM, H/R] -- United States (Navy), 2008, HYPOTHETICAL,
AIM-120C-7
F-14D Tomcat [AAAM, H/R] -- United States (Navy), 2014, HYPOTHETICAL
F-14D Tomcat [AAAM, H/R] -- United States (Navy), 2016, HYPOTHETICAL,
AIM-152B, AIM-120D
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2003,
HYPOTHETICAL, Most Advanced F-14 Derivative, Proposed F/A-18E/F
alternative, AIM-152A AAAM, Hughes/Raytheon
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2005,
HYPOTHETICAL
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2008,
HYPOTHETICAL
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2014,
HYPOTHETICAL
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2016,
HYPOTHETICAL
F-14E Advanced Super Tomcat-21 [AST-21] -- United States (Navy), 2020,
HYPOTHETICAL
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2003, HYPOTHETICAL,
Proposed NATF alternative, AIM-152A AAAM, Hughes/Raytheon
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2005, HYPOTHETICAL
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2008, HYPOTHETICAL
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2014, HYPOTHETICAL
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2016, HYPOTHETICAL
F-14E Super Tomcat-21 [ST-21] -- United States (Navy), 2020, HYPOTHETICAL
F-14E Tomcat Quickstrike -- United States (Navy), 2003, HYPOTHETICAL,
Modest Low-Cost Upgrade, Proposed A-12A cancellation compensation, AIM-
152A AAAM, Hughes/Raytheon
F-14E Tomcat Quickstrike -- United States (Navy), 2005, HYPOTHETICAL
F-14E Tomcat Quickstrike -- United States (Navy), 2008, HYPOTHETICAL
F-14E Tomcat Quickstrike -- United States (Navy), 2014, HYPOTHETICAL
F-14E Tomcat Quickstrike -- United States (Navy), 2016, HYPOTHETICAL
F-14E Tomcat Quickstrike -- United States (Navy), 2020, HYPOTHETICAL
F-15I Eagle [Raam] -- Israel (Air Force), 2011
F-16A Blk 20 Falcon -- Taiwan (Air Force), 2017, AN/APG-83

F-16AM Falcon MLU -- Jordan (Air Force), 2011
F-16BM Falcon MLU -- Jordan (Air Force), 2011
F-16C Blk 52 Falcon -- Indonesia (Air Force), 2015, Upgr Blk 25
F-16D Blk 52 Falcon -- Indonesia (Air Force), 2015, Upgr Blk 25
F-16I Falcon [Sufa] -- Israel (Air Force), 2011
F-16XL Falcon -- United States (Air Force), 1990, Enhanced Tactical Fighter (ETF) competition, lost to F-15E Strike Eagle
F-16XL Falcon -- United States (Air Force), 1992
F-16XL Falcon -- United States (Air Force), 1995
F-16XL Falcon -- United States (Air Force), 1999
F-16XL Falcon -- United States (Air Force), 2001
F-23A Black Widow II -- United States (Air Force), 2016, YF-23
F-24A Hellcat II [NATF, Lockheed Proposal] -- United States (Navy), 2006
F-24A Hellcat II [NATF, Lockheed Proposal] -- United States (Navy), 2016
F-35A Lightning II -- Australia (Air Force), 2022
F-35A Lightning II -- Canada (Air Force), 2021
F-35A Lightning II -- Japan (Air Force), 2020
F-35A Lightning II -- Netherlands (Air Force), 2020
F-35A Lightning II -- South Korea (Air Force), 2020
F-4E Phantom II -- Iran (Air Force), 2015
F-5A Fresco [MiG-17PF Copy] -- North Korea (Air Force), 2000, Export J-5A, PL-2b
Hawk 109 -- Indonesia (Air Force), 1996, 8x
Hawk 209 -- Indonesia (Air Force), 1996, 32x
Il-76MD Candid B -- Commercial (Commercial)
Il-76TD Candid B -- Commercial (Commercial)
J-11D Flanker B [Su-27SK Copy] -- China (Air Force), 2018, Whack Engines
J-16 Flying Shark [Su-30MK2 Copy] -- China (Air Force), 2018, PLANAF
Ka-60 [Kasatka] -- Russia [1992-] (Army), 2014, Few details, not operational?
Ka-62 -- Commercial (Commercial), 2015
KC-135E Stratotanker -- Chile (Air Force), 2010
KC-135R Stratotanker -- France (Air Force), 1998-2014, 3x
KC-135RG Stratotanker -- France (Air Force), 2014, 3x
L-159A Alca -- Czech Republic [1993-] (Air Force), 2001
L-159T1 Alca -- Czech Republic [1993-] (Air Force), 2009
Learjet 35A -- Civilian (Civilian), 1976
Learjet 36A -- Civilian (Civilian), 1977
M.346 Master -- Israel (Air Force), 2015
M.346 Master -- Singapore (Air Force), 2013
M.346 Master [T-346A] -- Italy (Air Force), 2016
MC-27J Praetorian [G.222] Pocket Gunship -- Italy (Air Force), 2017, 3x
MD-10-30F -- Commercial (Commercial), DC-10-30 Upgr
MD-11 -- Commercial (Commercial), 1991, DC-10 Mod
MD-11F -- Commercial (Commercial), 1991, DC-10 Mod
MD-81 [DC-9-81] -- Commercial (Commercial), 1980
MD-82 [DC-9-82] -- Commercial (Commercial), 1982
MD-83 [DC-9-83] -- Commercial (Commercial), 1985
MD-87 [DC-9-87] -- Commercial (Commercial), 1987
MD-88 [DC-9-88] -- Commercial (Commercial), 1988
MD-90-30 -- Commercial (Commercial), 1995
Merlin ASaC.1 [Interim] -- United Kingdom (Royal Navy), 2018-2020

Merlin ASaC.2 [Crowsnest] -- United Kingdom (Royal Navy), 2020
MH-53E Sea Dragon [S-80M-1] -- Japan (Navy), 1989-2014
Mi-17V5 Hip H -- Indonesia (Army), 2009
MiG-23MF Flogger B -- Romania (Air Force), 1979-2001
MiG-29KUB Fulcrum D -- India (Air Force), 2014
MiG-29KUB Fulcrum D -- Russia [1992-] (Navy), 2015
MiG-31BM Foxhound -- Russia [1992-] (Air Force), 2016, Few, AA-13
MiG-35 Fulcrum F -- Russia [1992-] (Navy), 2020
MiG-35D Fulcrum F -- Russia [1992-] (Navy), 2020
Mirage 2000D R1 -- France (Air Force), 1996, Belouga retired
Mirage 2000D R1 -- France (Air Force), 1997
Mirage 2000D R2.1 -- France (Air Force), 2016, ASTAC Pod
Mirage 2000EG-S3 -- Greece (Air Force), 2013, R.530D retired
Mirage 2000N K2 -- France (Air Force), 1989
Mirage 2000N K3 -- France (Air Force), 2010-2018, ASMP-A Mod
MQ-8C Fire-X UAV [Bell 407 Mod] -- United States (Navy), 2018
MQ-9B Reaper UAV -- United States (Air Force), 2008
MQ-9B Reaper UAV -- United States (Air Force), 2018
MQ-9B Reaper UAV [ASIP-2C] -- United States (Air Force), 2008
MV-22B Osprey -- United States (Marine Corps), 2018, Tanker mod
nEUROn UCAV -- France (Air Force), 2019
NH90 NFH [Caiman Marine] -- France (Navy), 2013, No torpedoes
O-1A Bird Dog -- Norway (Army), 1961-1991, 17x + 10x, Field Artillery
O-2A Super Skymaster -- South Korea (Army), 1975-2006
O-2A Super Skymaster -- United States (Army), 1967-1987
O-5A ARL-I IMINT [DHC-7 Dash-7] -- United States (Army), 1993-1999, 1x,
Crashed
OA-10C Thunderbolt II -- United States (Air Force), 2015
Pilatus PC-9M -- Ireland (Air Corps), 2005
Puma HC.2 -- United Kingdom (Royal Air Force), 2013
Rafale B -- France (Air Force), 2013, F3
Rafale C -- France (Air Force), 2013, F3
Rafale M -- France (Navy), 2001-2002, LF1
Rafale M -- France (Navy), 2007, F2, Slow introduction
Rafale M -- France (Navy), 2013, F3
RC-12X Guardrail [King Air A200CT] -- United States (Army), 2011
RQ-4B Global Hawk Blk 30 UAV -- South Korea (Air Force), 2019
S-92 -- Ireland (Coast Guard), 2012, 5x
SA.330J Puma [NAS.330J] -- Indonesia (Army), 11x
SA.532U2 Cougar Mk.II -- Netherlands (Army), 1996-2017, 17x, Ex-Super Puma
Searcher II UAV -- Russia [1992-] (Air Force), 2011, 10x
Su-22M-4K Fitter K -- Iran (Air Force), 2016, Ex-Iraqi, refurbished
Super Etendard -- France (Navy), 1982
Super Etendard -- France (Navy), 1987
Super Etendard M -- France (Navy), 1999, S3, No Dumb Bombs or Rockets
Super Etendard M -- France (Navy), 2007, S5
SV-22D Osprey -- United States (Navy), 1998, Proposed ASW variant of V-22
Osprey, S-3B Viking replacement
SV-22D Osprey -- United States (Navy), 2003, Proposed ASW variant of V-22
Osprey, S-3B Viking replacement
SV-22D Osprey -- United States (Navy), 2005, Proposed ASW variant of V-22

Osprey, S-3B Viking replacement
T-50I Golden Eagle -- Indonesia (Air Force), 2014, 16x
TF-35XD Draken -- Denmark (Air Force), 1972-1992, 6x
Tornado IDS -- Saudi Arabia (Air Force), 2013
Tornado IDS -- Saudi Arabia (Air Force), 2015
Tu-134A Crusty -- Commercial (Commercial), 1971
Tu-134B Crusty -- Commercial (Commercial), 1982
VC-137C Air Force One [Boeing 707-320B] -- Commercial (Commercial), 1963
VC-137C Air Force One [Boeing 707-320B] -- Commercial (Commercial), 1983-1998
VC-25A Air Force One [Boeing 747-200B] -- United States (Air Force), 1990, 2x
VC-25A Air Force One [Boeing 747-200B] -- United States (Air Force), 2012, 2x
Victor K.2 -- United Kingdom (Royal Air Force), 1982-1982, Falklands War Mod, 1x
Wildcat HMA.2 [AW.159] -- United Kingdom (Royal Navy), 2021, Ex-Lynx Wildcat
Y-5 Colt [An-2] -- North Korea (Air Force), 1970-2010, Apparently grounded, unknown date
Y-9G Cub [High New 11] -- China (Navy), 2015, PLANAF, OECM
Y-9XZ Cub [High New 10] -- China (Navy), 2015, PLANAF, 1x, PsyOps
Yak-130 Mitten -- Algeria (Air Force), 2015
Yak-130 Mitten -- Russia [1992-] (Air Force), 2010
Z-10 Fierce Thunderbolt -- Pakistan (Army), 2017

Ships:

531 Najin [Kola Copy] -- North Korea (Navy), 2015, SS-N-25
60X <Not Named> [Saar 72] -- Israel (Navy), 2016
807 Boa [KAL-36 Kobra] -- Indonesia (Navy), 2005
820 Viper [PC-40] -- Indonesia (Navy), 2007
95300 Cape Small [Cape Class, Type A] -- United States (Coast Guard), 1953-1991
95312 Cape Knox [Cape Class, Type B] -- United States (Coast Guard), 1955-1989
95321 Cape Cross [Cape Class, Type C] -- United States (Coast Guard), 1958-1990
ACV 01 Cape St George [Cape Class] -- Australia (Customs), 2013, 8x
ACV 01 Roebuck Bay [Bay Class] -- Australia (Customs), 2000
CGN 42 Virginia [Mk26] -- United States (Navy), 1983, No TACTAS
CGN 42 Virginia [Mk26] -- United States (Navy), 1984, ABL
CGN 42 Virginia [Mk26] -- United States (Navy), 1987, ABL
CGN 42 Virginia [Mk26] -- United States (Navy), 1989, ABL
CGN 42 Virginia [Mk26] -- United States (Navy), 1991, ABL
CGN 42 Virginia [Mk26] -- United States (Navy), 1998
CGN 42 Virginia [Mk26] -- United States (Navy), 2000-2004
CGN 42 Virginia [VLS] -- United States (Navy), 1987, TACTAS
CGN 42 Virginia [VLS] -- United States (Navy), 1989
CGN 42 Virginia [VLS] -- United States (Navy), 1991
CGN 42 Virginia [VLS] -- United States (Navy), 1994
CGN 42 Virginia [VLS] -- United States (Navy), 1996
CGN 42 Virginia [VLS] -- United States (Navy), 1998
CGN 42 Virginia [VLS] -- United States (Navy), 2000
CGN 42 Virginia [VLS] -- United States (Navy), 2002-2004

Civilian Life Boat [11m] -- Civilian (Civilian)
Civilian Life Boat [7m] -- Civilian (Civilian)
CM 51 Almirante Padilla [Type FS 1500] -- Colombia (Navy), 2015
Commercial Dry-Bulk Carrier - Capesize Size [150,000t DWT] -- Commercial (Commercial)
Commercial Dry-Bulk Carrier - Panamax Size [75,000t DWT] -- Commercial (Commercial)
Commercial Dry-Bulk Carrier - Supramax Size [55,000t DWT] -- Commercial (Commercial)
Commercial Dry-Bulk Carrier - Very Large Size [200,000t DWT] -- Commercial (Commercial)
CVN 69 Dwight D. Eisenhower [Nimitz Class] -- United States (Navy), 2015, Anti-Torpedo Torpedo
CVN 71 Theodore Roosevelt [Nimitz Class] -- United States (Navy), 2015, Anti-Torpedo Torpedo
CVN 75 Harry S Truman [Nimitz Class] -- United States (Navy), 2015, Anti-Torpedo Torpedo
CVN 77 George Bush [Nimitz Class] -- United States (Navy), 2014, Anti-Torpedo Torpedo
D 61 Delhi [Pr.15] -- India (Navy), 2017, ACTAS
DDG 113 John Finn [Arleigh Burke Flight IIA Restart] -- United States (Navy), 2017, 1x CWIS
DDG 116 Thomas Hudner [Arleigh Burke Flight IIA Technology Insertion] -- United States (Navy), 2018, 1x CWIS
DDG 122 <Not Named> [Arleigh Burke Flight III] -- United States (Navy), 2022, Exact weapons fit unknown
DDG 31 Decatur [Mod Forrest Sherman] -- United States (Navy), 1975-1982, RIM-66A SM-1MR BIK IV
F 45 Teg [Pr.1135.6 Krivak IV] -- India (Navy), 2017, ACTAS
F 930 Leopold I [Karel Doorman] -- Belgium (Navy), 2013
Fleet Class CUSV [MCM Mission Module] -- United States (Navy), 2016, Unmanned, LCS Based
Ghannatha [Gun Conversion] -- UAE (Navy), 2013, 6x
Ghannatha [Mortar Conversion] -- UAE (Navy), 2013, 6x
Ghannatha [Transport] -- UAE (Navy), 2003-2012, 12x
HS 01 Leeuwin -- Australia (Navy), 2000
LST 686 Cheon Wang Bong -- South Korea (Navy), 2015, 2x LCM
MIG-S-4700-SC Bakhtaran [Hendijan Class] -- Iran (Navy), 2015, SSM Upgrade
Mobile Offshore Base [Battle Island] -- United States (Navy), MOB Concept, 2000m runway
MPK Mukha [11451 Sokol-2] -- Soviet Union [-1991] (Naval Fleet [V-MF]), 1988-1991, 2x
P 191 Abu Dhabi [Mod Commandante Cigala Fulgosi] -- UAE (Navy), 2015
P 201 Kaivan [Cape Class, Type B] -- Iran (Navy), 1970
P 201 Kaivan [Cape Class, Type B] -- Iran (Navy), 1995
P 201 Kaivan [Cape Class, Type B] -- Iran (Navy), 2015, SSM Upgrade
P 211 Parvin [US PGM 71] -- Iran (Navy), 2015, SSM Upgrade
P 24 Kavaloudis [La Combattante IIIb] -- Greece (Navy), 2015, Harpoon upgrade
P 271 Corrientes [Cape Class, Type A] -- Mexico (Navy), 1990
P 301 Ghannatha II -- UAE (Navy), 2014, 12x
P 3569 Rotoiti [Protector Class IPV] -- New Zealand (Navy), 2009

P148 Otago [Protector Class OPV] -- New Zealand (Navy), 2010
PF 15 Gregorio del Pilar [Hamilton Class] -- Philippines (Navy), 2014, Mk38 Mod 2
PG 32 Alcatraz [Point Class] -- Venezuela (Navy), 1992
R 91 Charles De Gaulle -- France (Navy), 2019
RKR Admiral Nakhimov [Pr.1144.2M Orlan, Ex-Kalinin] -- Russia [1992-] (Navy), 2019, Refit
RKR Moskva [Pr.1164 Atlant, Ex-Slava] -- Russia [1992-] (Navy), 1995, P-1000
RKR Moskva [Pr.1164 Atlant, Ex-Slava] -- Russia [1992-] (Navy), 2014
SKR Petya II Mod [Pr.159A] -- Soviet Union [-1991] (Naval Fleet [V-MF]), 1979-1991, 1x ship, SKR-98, Ox Yoke + Ox Tail
WPB 82301 Point Caution [Point Class] -- United States (Coast Guard), 1961-1999

Submarines:

401 Cakra [Type 209-1300] -- Indonesia (Navy), 2007, Refit
Dolphin II [Type 800 Mod] -- Israel (Navy), 2016
Knifefish UUV -- United States (Navy), 2017, Modified Bluefin-21, 2x pr LCS MCM Module
PLA-685 Mike [Plavnik] -- Soviet Union [-1991] (Naval Fleet [V-MF]), 1986
S 107 Trafalgar -- United Kingdom (Royal Navy), 2018, TLAM
S 20 Astute -- United Kingdom (Royal Navy), 2018
S 6XX Barracuda [Suffren] -- France (Navy), 2018
SS 583 Harushio -- Japan (Navy), 2018, Project S126/S129
SS 590 Oyashio -- Japan (Navy), 2018, Project S130
Type 041 Yuan -- China (Navy), 2016, Type 039C, Yu-10

Facilities:

A/C Helipad (1x Very Large Helicopter) -- Generic (Generic)
AAA Bty (57mm S-60 x 6, RPK-1M1 FCR) -- Yemen (Army)
AAA Plt/3 (23mm ZU-23-2 x 2) -- Poland (Army), 3x pr Plt
AAA Plt/3 (23mm ZUR-23-2KG Jodek-G x 2 [Kobra IADS]) -- Indonesia (Air Force), 2009, 3x pr Plt + MMSR
AAA Plt/3 (23mm ZUR-23-2KG Jodek-G x 2 [Kobra IADS]) -- Poland (Army), 2015, 3x pr Plt + MMSR
AAA Plt/3 (23mm ZUR-23-2KG Jodek-G x 2) -- Poland (Army), 2004, 3x pr Plt
AAA Plt/3 (23mm ZUR-23-2S Jod x 2) -- Poland (Army), 1990, 3x pr Plt
Armored Plt (Merkava Mk.4M Windbreaker MBT [LAHAT ATGM + Trophy] x 3) -- Israel (Army), 2014
Arty Plt (HIMARS) -- United States (Army), 2018, 3x pr Bty, GMLRS Alternate Warhead
Arty Plt (MLRS) -- United States (Army), 2018, 3x pr Bty, GMLRS Alternate Warhead
Bridge (Pontoon, 60 Tons) -- Generic (Generic)
Bridge (Railroad, Single-lane) -- Generic (Generic)
Bridge (Railroad, Two-lane) -- Generic (Generic)
Civilians -- Civilian (Civilian)
Downed Pilot (Immobile) -- Generic (Generic)
Marker (Radio Beacon) -- Generic (Generic)
Marker (Target) -- Generic (Generic)
Radar (Bar Lock A [P-37]) -- Yemen (Air Force)

Radar (Big Bird D [91N6]) -- China (Air Force), 2017, SA-21
Radar (Big Bird D [91N6]) -- Russia [1992-] (Air Force), 2008, SA-21
Radar (Bill Board B [9S15M Obzor]) -- Egypt (Army), 2017, SA-23
Radar (China YLC-2V Mod [Type 305B]) -- China (Air Force), 2008, HQ-12
Aquisition
Radar (China YLC-6) -- China (Air Force)
Radar (China YLC-6M) -- China (Air Force), 2005, Vehicle-mounted
Radar (CONTROLMaster-200 [ForceSHIELD IADS]) -- Indonesia (Army), 2015
Radar (Flat Face A [P-15]) -- Yemen (Air Force), SA-3
Radar (Flat Face B [P-19]) -- Yemen (Air Force)
Radar (Flat Face E [P-19, Kasta 2E2 Upgrade]) -- Iraq (Army), 2014, SA-22
Radar (Flat Face E [P-19, Kasta 2E2 Upgrade]) -- Russia [1992-] (Army), 2008, SA-22
Radar (Flat Face E [P-19, Kasta 2E2 Upgrade]) -- Syria (Army), 2009, SA-22
Radar (Flat Face E [P-19, Kasta 2E2 Upgrade]) -- UAE (Army), 2008, SA-22
Radar (High Screen B [9S19M2 Imbir]) -- Egypt (Army), 2017, SA-23
Radar (Long Track [P-40]) -- Yemen (Army)
Radar (MMSR [Kobra IADS]) -- Indonesia (Air Force), 2009, Assoc w Poprad + ZUR-23-2-KG
Radar (MMSR [Kobra IADS]) -- Poland (Army), 2015, Assoc w ZUR-23-2-KG
Radar (RPS-42 TASRS [MHR]) -- Israel (Air Force)
Radar (RPS-42 TASRS [MHR]) -- South Korea (Air Force), 2015, 10x, Drone warning
Radar (Side Net HF [PRV-11]) -- Yemen (Air Force)
Radar (Spoon Rest C [P-12]) -- Yemen (Air Force), SA-2
Radar (Spoon Rest D [P-18]) -- Yemen (Army), SA-6
Radar (Thin Skin B HF [PRV-16]) -- Yemen (Air Force)
SAM Bn (HQ-9A) -- China (Surface-to-Air Missile Corps), 2002, FD-2000, 2x Lnchr, Peacetime
SAM Bn (SA-21a/b Growler [S-400 Triumph]) -- China (Air Force), 2017, 8x TEL
SAM Bn (SA-23 Gladiator [S-300VM / Antey-2500]) -- Egypt (Army), 2017, 4x Bn + High Screen B + Bill Board B
SAM Bn (SA-2f Guideline [S-75M Volkhov]) -- Yemen (Air Force)
SAM Bn (SA-3b Goa [S-125M Pechora]) -- Yemen (Air Force)
SAM Bn (SA-6a Gainful [2K12E Kvadrat]) -- Yemen (Army), 5x Bn + Long Track + Thin Skin B HF + Spoon Rest D + Flat Face B
SAM Plt (HQ-7 [FM-80, CSA-4]) -- China (Army), 1990, 4x, Fixed Site
SAM Plt (HQ-7 [FM-80, CSA-4]) -- China (Army), 1990, 8x, Fixed Site
SAM Plt (HQ-7 [FM-80, CSA-4]) -- China (Army), 2005, 8x, Fixed Site
SAM Plt (Starstreak RAPIDRanger [ForceSHIELD IADS]) -- Indonesia (Army), 2015, 1x + CONTROLMaster-200
SAM Plt/2 (Poprad [Kobra IADS]) -- Indonesia (Air Force), 2009, 2x pr Plt + MMSR
SAM Sec (Blowpipe MANPADS x 4) -- United Kingdom (Royal Marines), 1975
SAM Section (GBI [CE-II Blk 0, GMD]) -- United States (Army), 2009, 2x Bty, Ex-NMD
SAM Section (GBI [CE-II Blk 1, GMD]) -- United States (Army), 2018, 2x Bty, Ex-NMD
Spy -- Generic (Generic)
SSM Bn (Hyunmoo 1 [NHK-2] TEL) -- South Korea (Army), 1987, Limited production

SSM Bn (Hyunmoo 2A [NHK-2 PIP-A] TEL) -- South Korea (Army), 2006, Limited production
SSM Bn (Hyunmoo 2B [NHK-2 PIP-B] TEL) -- South Korea (Army), 2012, Limited production
SSM Bn (Hyunmoo 3B TEL) -- South Korea (Army), 2009, Limited production
SSM Bty (MM.38 Exocet [Excalibur]) -- United Kingdom (Royal Navy), 1985-1996, Based at Gibraltar
Structure (Forward Operating Base) -- Generic (Generic)
Structure (Military Base) -- Generic (Generic)
Vehicle (1L257 Krasuha-4 Mobile Jammer+ELINT) -- Russia [1992-] (Army), Multi-Purpose
Vehicle (1L269 Krasuha-2 Mobile Jammer+ELINT) -- Russia [1992-] (Army), Anti-AWACS
Vehicle (1L267 Moskva-1 Mobile Jammer+ELINT) -- Russia [1992-] (Army)
Vehicle (Locomotive) -- Civilian (Civilian)

Weapons:

120mm NEMO Mortar -- Patria
20mm ZPL-20 Plamen Burst [30 rnds]
AA-11 Archer [R-74M] -- Izdeliye 750
AA-11 Archer [R-74M2] -- PAK-FA, Izdeliye 760
AA-12 Adder C [R-77M] -- PAK-FA, Izdeliye 180
AIM-152B AAAM [GD/W] -- General Dynamics/Westinghouse
AIM-152B AAAM [H/R] -- Hughes/Raytheon
AIR-2A Genie [1.5kT Nuclear] -- 1957-1985
AM.39 Exocet Blk II Mod 2
AN/AQS-24A AMS Helicopter-Towed Minehunting Sonar
Anti-torpedo Torpedo [Countermeasure Anti-Torpedo] -- 2019
AS-11 Kilter [Kh-58UShK, ARM, Semi-Ballistic] -- PAK-FA
AS-22 [Kh-38MAE] -- Active Radar
AS-22 [Kh-38MKE] -- GLONASS
AS-22 [Kh-38MLE] -- Laser
AS-22 [Kh-38MTE] -- Imaging IR
AS-4 Kitchen D [Kh-32] -- Tu-22M-3M
CBU-107 PAW [3700 x Non-Explosive Penetrator Rods] -- 2003
F21 Artemis -- 2017
GBI [CE-II Blk 0, GMD] -- Ex-NMD
GBI [CE-II Blk 1, GMD] -- Ex-NMD
GBU-38(V)3/B JDAM [BLU-126/B LCDB] -- USAF
GBU-38(V)4/B JDAM [BLU-126/B LCDB] -- USN
GBU-54(V)3/B LJDAM [BLU-126/B LCDB] -- USAF
GBU-54(V)4/B LJDAM [BLU-126/B LCDB] -- USN
Generic Test Round -- Annoying stuff that fill up magazines
Hyunmoo 1 [NHK-2] -- 1987
Hyunmoo 2A [NHK-2 PIP-A] -- 2006
Hyunmoo 2B [NHK-2 PIP-B] -- 2010
Hyunmoo 3A -- South Korea, Not deployed?
Hyunmoo 3B -- South Korea, 2008
JDAM-ER [Mk82] -- 2017
M30A2 GMLRS ER [Alternative Warhead] -- 2018
Marte Mk2/N

Mistral 2 ATAM -- 2002, AAM
Nahar Navigation Pod [FLIR] -- Mirage 2000, Pylon integrated
PBK-500U SPBE-K [INS + GLONASS] -- 2012?
PBK-500U Unitary [INS + GLONASS] -- 2012?
Qassed-1 [Mk84, GBU-78/A, GBU-15-Inspired]
RGM-114L Hellfire II -- LCS Mission Module
RIM-162E ESSM Blk II -- 2021, AEGIS, Mk41
RIM-162F ESSM Blk II -- 2021, non-AEGIS, Mk41
RIM-162G ESSM Blk II -- 2021, Mk48
RIM-162H ESSM Blk II -- 2021, Mk29
SA-15e Gauntlet [9M338K]
SA-N-20b Gargoyle [48N6M] -- S-300FM
Sattar-4 LGB [Mk82, GBU-12-Inspired] -- Iran, 2015?
SM.39 Exocet Blk II
Talios LDP-NG Pod [FLIR + LRMTS, 40k ft] -- 2019, Damocles Follow-on
Terrorist Bomb [150kg] -- Suicide
Terrorist Bomb [1kT Nuclear] -- Suicide
TLS-99 Lancher Laser Designator Pod [FLIR + LRMTS, 25k ft] -- Iran
Trophy [Anti-Anti-Tank Weapon] -- Israel, 2014
Yu-10 [ADCAP MOD Copy] -- 2015