

Out of the Blue

The TRANSCOM Module for Jaws of the Dragon

Evan D'Alessandro

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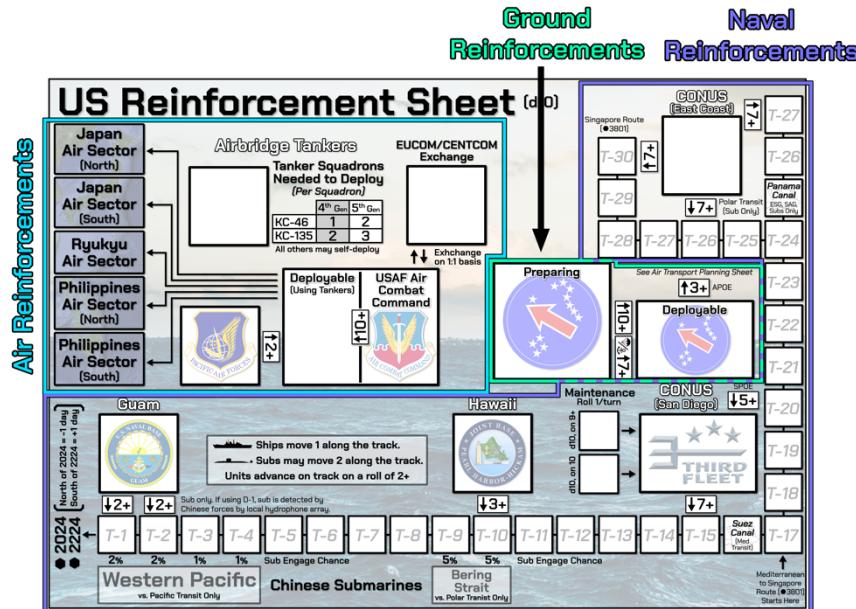
Rules for TRANSCOM



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Reinforcement Sheets

US reinforcements must flow into theater: a difficult and complex act to achieve. To do so in this game the following sheets are used to allow for Air, Ground, and Naval reinforcements.



The US Reinforcement Tracker

The Reinforcement Tracker deals with the strategic mobilization of forces in all domains, while the Air Transport Planning Sheet deals only with airlifted ground units. Once a unit has been successfully deployed, the unit will be placed on the map in the appropriate place.

Mobilization

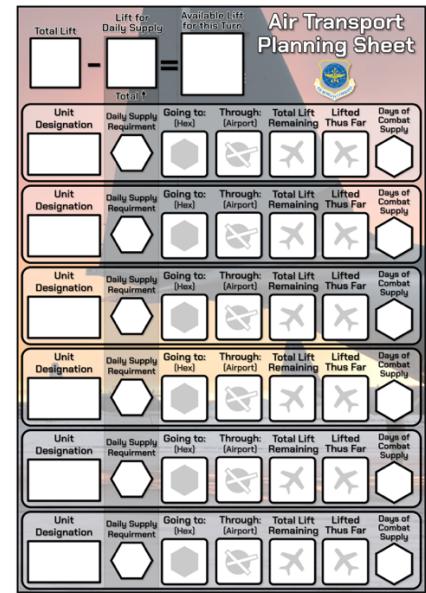
Mobilization refers to movements in the boxes of the Reinforcement Tracker. In this example an Armor BCT and Airborne BCT are mobilizing. While mobilizing, each turn, each unit may roll once to attempt to move to the next box, needing to roll equal or higher to the number in the small box to advance.

Example: Airborne BCT Movement by Air

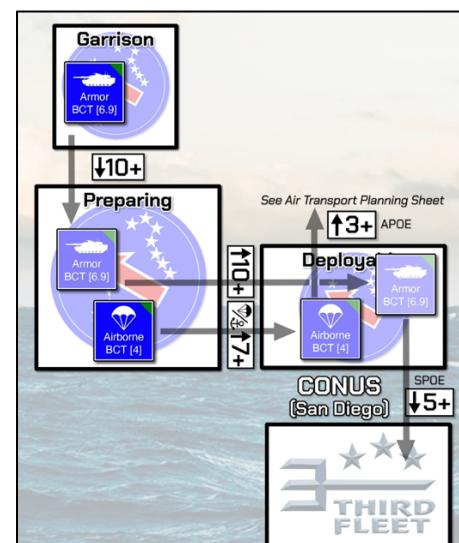
The Airborne BCT starts in Preparing, and as it is an Airborne or Marine unit, it only needs a 7 or higher (7+) to move into the Deployable box. Once it in the deployable box, If it wants to move by air, it needs a 3+ to stage at an Air Port of Embarkation (APOE), and becomes available to move on the Air Transport Planning Sheet (covered later).

Example: Armor BCT Movement to Port

The Armor BCT starts in garrison, and needs a 10+ to move into preparing. As it is not an Airborne or Marine unit, it needs another 10+ to move into deployable. After moving into deployable, it needs to a 5+ to move into the 3rd Fleet box and become deployable on the Sea Movement Tracker (which has its own 7+ requirement to move onto the Sea Movement Tracker, not shown in this example).



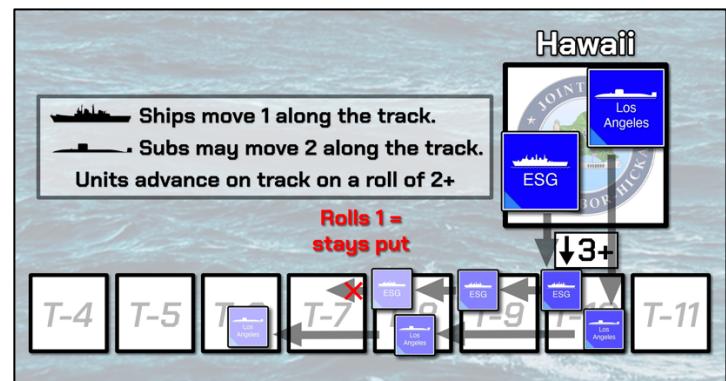
The Air Transport Planning Sheet



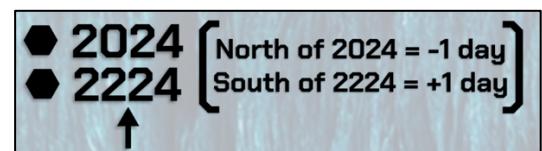
Mobilization, using ground units as an example

Movement (Sea)¹

In sea movement, ships (and ground units moving from the US by ship) must first mobilize onto the tracker, then they advance along the tracker each turn on a roll of 2+ (on a d10). Submarines may move 1 or 2 spaces as they wish. In this example, to mobilize out of Hawaii, both the ESG and the Los Angeles must roll 3+. Once they have done so, the Los Angeles may advance down the track at a rate of 2, while the ESG can only advance 1. If the ESG or Los Angeles when trying to advance roll a 1, they may not advance that turn.



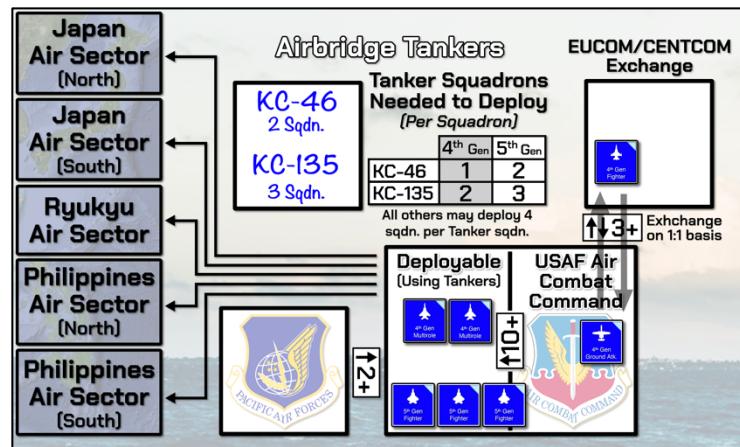
Once a unit moves off T-1, they arrive in any hex between 2024 and 2224. If they wish to arrive north of 2024, they arrive a turn earlier, or if they wish to arrive south, it takes an additional day (move them forward or backwards on the track as required).



The End of the Sea Movement Tracker

Movement (Air Units)²

Air units must mobilize into the deployable box, and then must be deployed into the air sectors by using tankers. The number of tanker squadrons required to deploy the given types of aircraft squadrons are shown in the “Tanker squadrons Needed to Deploy” section. Thus, we can see in this example that the 2 available KC-46 squadrons could deploy one 4th Gen squadron each, or both could be used to deploy one of the 5th gen squadrons.



Exchanges – There are a number of squadrons that can be “shuffled” by exchanging Air Combat Command Squadrons for currently deployed squadrons in EUCOM/CENTCOM. To exchange you must roll a 3+ per squadron you wish to exchange, and then may exchange 1 squadron for one squadron.

Sea Movement (Ground Units)

Ground units may move by sea as discussed above by mobilizing into the 3rd Fleet box and then moving along the sea movement tracker like other naval units. Units may be escorted by moving them with a naval unit.

A maximum of 2 ground units may be moved in this manner at a time.³

Air Movement (Ground Units and Supplies)

Movement of ground units and supplies by air is calculated using the Air Transport Planning Sheet. This is filled in to keep track of the units you are or have deployed, how much airlift is sustaining those units and how much is still available, and the amount of combat supply they have.

Total Lift		Lift for Daily Supply		Available Lift for this Turn		Air Transport Planning Sheet	
Heavy Lift	7	5	Total ↑	2	Heavy Lift		
Unit Designation	Daily Supply Requirement	Going to: (Hex)	Through: (Airport)	Total Lift Required	Lifted Thus Far	Days of Combat Supply	
1 st Brig/82nd Airborne Div	5	0721	MCAS Iwakuni	62	15	0	
Unit Designation	Daily Supply Requirement	Going to: (Hex)	Through: (Airport)	Total Lift Required	Lifted Thus Far	Days of Combat Supply	
THADD Battery	0	-	Kadena AB	1 (HLP)	1	3	
Unit Designation	Daily Supply Requirement	Going to: (Hex)	Through: (Airport)	Total Lift Required	Lifted Thus Far	Days of Combat Supply	
Unit Designation	Daily Supply Requirement	Going to: (Hex)	Through: (Airport)	Total Lift Required	Lifted Thus Far	Days of Combat Supply	
Unit Designation	Daily Supply Requirement	Going to: (Hex)	Through: (Airport)	Total Lift Required	Lifted Thus Far	Days of Combat Supply	

Example Air Transport Planning Sheet

Note that only Heavy Lift Points (HLP) are currently available, but that the daily supply could be shifted to regular Lift Points to free up HLP if they were to become available. The THADD battery does not deploy onto the Operations Map so it has no hex number.

Air Ports of Debarkation/Embarkation (APOD/APOE)

A unit is air landed at an Open APOD, e.g. one of the airports on the map. To open an APOD to use it, on a d8, you must roll higher than the current number of open APOD's.⁴ A number of lift points of troops may be landed at an open APOD equal to 3 times the remaining space at the airport (e.g. space not occupied by squadrons). Each APOD can have at most two units landing through it at a time.

Unit Designation – The name of the unit.

Daily Supply Requirement

– How much supply the unit requires per day (in lift points). See the table below in “Calculating Airlift” for numbers.

Going to – The hex the unit will arrive in (if required).

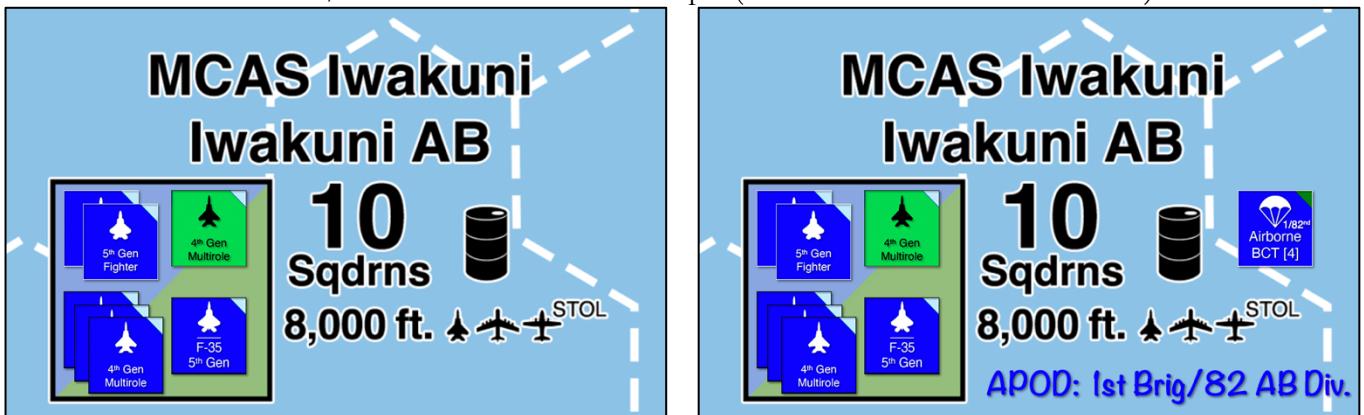
Through – The airport the unit is landing at.

Total Lift Required – How many lift points the unit requires to be moved in total. If Heavy Lift Points are required mark with a “HLP”. See the table below in “Calculating Airlift” for numbers.

Lifted Thus Far – How many lift points of the unit have been delivered.

Days of Combat Supply – How many days of combat supplies have been delivered (this is distinct from the daily supply requirement). See the table below in “Calculating Airlift” for how many lift points are required to lift a day of combat supply.

With MCAS Iwakuni/Iwakuni Airbase as an example (as seen on the above airlift sheet):



There is space for up to 10 squadrons at the APOD, but there are 7 squadrons based already, so only 3 unused space. $3*3 = 9$, so up to 9 lift points can be landed at the APOD on a given turn.

When a unit is being landed at an airport, put the unit counter at the airport, and note that the APOD is being used for it by writing on the map.

Note that lift points for daily supply requirement take up space at airbases.

Calculating Airlift

Lift points are divided into two types Heavy Lift Points (HLP), and Lift Points (LP). HLP represent C-17's and C-5's able to take heavy armored vehicles.

Unit	(H)LP Required ⁵	Daily Supply Usage (in LP) ⁶	LP Required for Day of Combat Supply ⁷
US Armor BCT	156*	2	7
US Stryker BCT	105*	5	9
US Infantry BCT (Airborne)	62	5	5
Marine Littoral Regiment	47	2	2
MDTF	45	2	2
Combat Aviation Brigade	69*	1	7
Ranger Regiment	43	3	5
THADD Battery ⁸	6*	—	1
Squadron Sortie	—	—	2
2 Munitions Cards	1	—	—

*HLP only.

Also note that 1 point of airlift can (optimally) evacuate ~2,000 people per day in theater, or ~1,000 to the US, though in practice the numbers will be less (and require opening an APOD/APOE for use). Under optimal (or very dire) conditions, these numbers could (again under optimal conditions) be doubled per point of airlift.⁹

TRANSCOM Airlift¹⁰

At the start of the game you have 7 heavy airlift points to use. You may also grant crew time exemption waivers (allowing normal restriction on crew flight time and rest periods to be ignored). Doing so gives 4 more heavy airlift.¹¹

If required for other purposes, know that in theater (e.g. not for strategic deployment, but for on map use only) is a number of lift points equal to the current turn (max 15).

Activation of the Civil Reserve Air Fleet (CRAF)

Selected aircraft from U.S. airlines, contractually committed to Civil Reserve Air Fleet, support United States Department of Defense airlift requirements in emergencies when the need for airlift exceeds the capability of available military aircraft.

CRAF Stage	Extra Airlift¹²	Effect on Domestic Airlines
Stage I - Committed Expansion.	+2	Minor disruption to domestic air carriers (cargo)
Stage II - Airlift Emergency	+10	Some disruption to domestic air carriers (passengers and cargo)
Stage III - National Emergency CRAF Activation.	+8	Major disruption to domestic air carriers (passengers and cargo)

USTRANSCOM, with the approval of SECDEF or designee, may activate any stage of CRAF during national emergencies and defense-oriented situations when expanded civil augmentation of military airlift is required.

Endnotes

¹ Assuming 15 knot speed of ships and 25-35 knots for nuclear submarines. Numbers based on pushed assessment of sprint speed of US nuclear boats, and ship transit speed based on discussion with Dr. Nick Bradbeer (e.g. ship transit at 15 knots as a high but sustainable cruising speed). Distances estimated using the Google My Maps distance tool. US East Coast forces are considered to be based in Norfolk, US West Coast Forces in San Diego.

² Based on *AIR FORCE PAMPHLET 10-1403, 24 OCTOBER 2018, Operations, AIR MOBILITY PLANNING FACTORS*, https://static.e-publishing.af.mil/production/1/af_a3/publication/afpam10-1403/afpam10-1403.pdf, pg. 18-19, and open-source ferry range and fuel tank size (assuming drop tanks when possible) of US aircraft. Full Excel file is available upon request.

³ There is a limited amount of sealift available.

⁴ The military maintains dedicated units to open and manage APOD's, but this takes time and there are a limited number of them.

⁵ Calculated off of numbers given in *SDDCTEA PAMPHLET 700-2 Logistics Handbook for Strategic Mobility Planning, Military Surface Deployment And Distribution Command*, 2011, https://www.sddc.army.mil/sites/tea/functions/deployability/deployabilityanalysis/key%20publications/pam_700-2.pdf, TABLE 1. UNIT CHARACTERISTICS (REDUCED CONFIGURATION), pg. 2. Assumed 15% reduction in effectives of airlift from given numbers due to 1) enemy action, 2) the need to disperse equipment and personal in loads for survivability and use different routes/bases, 3) general friction. Full Excel file is available upon request.

⁶ Calculated from numbers in *How to Make War 4th Edition*, Dunnigan, 2004, pg. 513, using conversions based on the number of people in a unit and the type of unit. Full Excel file is available upon request.

⁷ Calculated from numbers in *How to Make War 4th Edition*, Dunnigan, 2004, pg. 513, using conversions based on the number of people in a unit and the type of unit. Full Excel file is available upon request.

⁸ Movement of a Patriot battalion from South Korea to the Middle east required 73 C-17 flights to do (<https://x.com/idreesali114/status/1910336411271569599>). A battalion has 4-6 batteries, and 4-6 launchers per battery + 1 radar and +1 command station, so 32-48 battery vehicles were moved plus supporting equipment, personnel, and logistics. Per battery this gives a minimum of ~2.3 flights per vehicle. Given average readiness of a C-17 squadron in the game is 7 aircraft, and a THADD battery has 8 vehicles, this means that 18 flights would be required at a minimum (~2.5 lift points of 7 aircraft each), not accounting for any extra equipment, personnel, and logistics, so more realistically 3 lift points would be required. However, as each THADD Battery represents a concentration of air defense assets (so likely also at least +1 Patriot Battery), another ~2.5 lift points of vehicles for the battery would be required, and thus we can say that 5 is the minimum number required. Adding in friction and the need for further supplementation, we add another 1 to be on the safe side and end up with 6.

⁹ Roughly based on numbers from the Afghanistan evacuation.

¹⁰ Calculated from *AIR FORCE PAMPHLET 10-1403, 24 OCTOBER 2018, Operations, AIR MOBILITY PLANNING FACTORS*, https://static.e-publishing.af.mil/production/1/af_a3/publication/afpam10-1403/afpam10-1403.pdf, assumes a route of CONUS -> Hawaii -> Guam -> Destination. Available uncommitted airlift available for discretionary tasking is 75% for C-5 and C-17. C-130's are assumed to be doing intratheater airlift and available at 50% rates. Mission capable rates from *Air Force & Space Force Almanac 2023*, June 21, 2023,

https://www.airandspaceforces.com/app/uploads/2023/06/Almanac2023_Fullissue_REV2.pdf, pg. 68. Full Excel file is available upon request.

¹¹ This was done during Desert Shield/Storm to increase the volume of movement (*So Many, So Much, So Far, So Fast, United States Transportation Command and Strategic Deployment for Operation Desert Shield/Desert Storm*, James K. Mathews and Cora J. Holt, 1996, pg. 39, <https://www.jcs.mil/Portals/36/Documents/History/Monographs/Transcom.pdf>). The number given here (4) was come to by modeling the removal of crew time from the flight time (and was tested with 2 and 4 hour crew times as well, all of which yielded the same rough result of 4) to see the increase in lift as a result.

¹² Calculated based on #'s and types of aircraft from *CIVIL RESERVE AIR FLEET (CRAF) CAPABILITY SUMMARY*, 7th January, 2016,

<https://www.transportation.gov/sites/dot.gov/files/docs/02%20-%20January%202016%20CRAF%20Capability%20-%20Allocation.pdf>. Assuming availability rate of 70%, .5 sorties per day, and friction reduction in effectiveness of 10%. I would prefer a more recent set of numbers, but this is the only source I can find that gives me the number *and* types *and* stages of activation that each aircraft is assigned too. Due to high volatility in aircraft that are covered in the CRAF year to year, I do not think that the age of the source is a major issue however, and that the volatility renders this a reasonable source to use.