

5. Air Warfare

5.1 Air Units – Air Units operate individually in the campaign, since they can be some of the most powerful units in the game. They are primarily broken up into the same types as used in PG II, and in fact the game had a provision for Level Bombers as well (as they used them in PG I), and I have taken advantage of that by programming Level Bombers into the game as well.

5.1.1 Fighters – Fighter Units encompass all of the Fighter types, including Fighter-Bombers and Night Fighters. The Reasoning is that at this strategic scale we are playing in the Campaign, the various types and sub types have to be rolled together as much as possible and modeled as 1 Unit. This means that all Fighters will have the capacity for air to air combat, escort, and ground attack.. There will be Fighters with high ground attack capabilities, but Fighters do not gain the long term suppression that Tactical Bombers provide. It is even possible to use a Fighter to Bomb Strategic Targets, but they don't tend to have much combat value in that regard. Typically, these would be of the "Intruder" Fighter-Bomber types making raids.

5.1.1.1 Night Fighters – These are Fighters that may be used on Night Bombing Missions. All Tactical and Level Bombers may be used for Night Bombing, but only Night Fighters may be used on such Missions. This includes acting as Fighter Escort, Intruders (Bombers), or to Intercept enemy Night Bombing Attacks.

5.1.1.2 Fighter-Bombers – Fighter-Bombers are normally not indicated except as a standard Fighter with enhanced ground attack abilities. However, only Tactical Bombers can attack submarines in PG II, so there are a very few units I have designated as Fighters with ASW capability, and as such they are classified as Tactical Bombers, but have an enhanced Air Attack ability including the ability to attack offensively.

5.1.2 Tactical Bombers – The Tactical Bomber is a dedicated ground attack aircraft with little or no ability to act as a Fighter. Therefore, it will always have a bracketed air attack, meaning it may only defend itself against fighter attacks. However, the Tactical Bomber is capable of causing long term suppression against ground targets.

5.1.2.1 ASW Ability – Bombers with ASW Capacity (only) may be used to support any battles against a Submarine Flotilla. However, Fighters may also be used even though they can't attack the Subs. This allows them to act as Escort for the Bombers and any Ships that may accompany them as well as scouts to find Subs.

5.1.3 Level Bombers – These are strategic bombers with heavy bomb loads and typically attack at higher altitudes – no dive bombing! In addition, they also have both long term suppression as well as reducing the ammo and fuel of units they attack. The larger the bomber, the more effective it is in this. In general, Level Bombers do less damage and more suppression than Tactical Bombers. However, there are some PG II game limitations to consider, one of which is that they cannot use Leaders.

5.1.3.1 ASW Ability – Level Bombers may have the ASW ability, which means they may actively patrol for and attack enemy Submarines. Since only Tactical Bombers in PG II may be used against Submarines, if there are Level Bomber types that have ASW Capability these will be Tactical Bombers for purposes of PG II.

5.1.4 Naval Air – Naval Air Units are still classified in PG II as either Tactical Bombers or Fighters (no Level Bombers or Air Transports are Naval Air Units) but are also capable of being Based on a Carrier or an Island without a Port. Naval Air can always conduct the same Missions that normal Fighters or Bombers could do, but have added capabilities as well.

5.1.4.1 Float Planes – Float Planes may also be based on an Island, but cannot deploy from Carriers. Most Float Planes are excellent ASW platforms and have very long ranges of operation.

5.1.5 Air Transport – Air Transport Units in PG II are assigned to a scenario and available from every airport, so there are differences in how they will operate in the campaign. It is not feasible to use different models, so each Nation will only have one type assigned (the most commonly used model). Air Transport Units will be tracked just like any other Air Units. If they are damaged during a battle by an enemy attack, however, the player must write the damage down because the game won't track it. In the Campaign, Air Transport may be used to airmobile units, airborne units, and supply.

5.1.5.1 Airmobile Units – Airmobile Units are those light enough to be transported by aircraft but not designed for combat landings. Most infantry and light guns are classified as airmobile, and may be transported by Air on the Strategic Map. If they are transported in a PG II battle, they may only deploy by landing on a friendly airport.

5.1.5.2 Airborne Units – In contrast to airmobile, airborne units may land anywhere and were designed to make combat landings. Airborne units assigned to a battle fly in via air transport and can then be dropped on any hex.

5.1.6 Air Bases – Air Units operate from an Air Base, rather than being assigned to a Territory.

5.1.6.1 Cities – The default Air Bases on the Map are Cities. Each Minor City can base up to 2 Air Units, and each Major City may base up to 4 Air Units.

5.1.6.2 Air Base Construction – It is also possible to build Air Bases on any Map Square in the game. The cost of an Air Base is deducted from the Army Command Supply Reserve as an Infrastructure Build during the Orders Phase, and then placed during the Logistics Phase. It is only necessary to assign the infrastructure cost during orders. The actual build takes place during logistics. An Air Base normally costs 300 PPs and bases up to 4 Air Units. An Air Base built on a Minor City costs 150 PPs, and an Air Base built on a small island costs 100 PPs and only bases 2 Naval Air Units. If a built Air Base is captured, it may be used by an opposing force. However, any Air Base that has been constructed may be voluntarily destroyed during the Logistics Phase by the owning player.

5.1.6.3 Float Planes – 1 Float Plane can base on any small Island, regardless of whether it has an Air Base or not.

5.1.6.4 Air Base Attack – If any Air Units are based where an attack takes place and are not yet on a Mission, they are required to defend against the attack first, in equal numbers to the attacker. If the Air Base of any Air Unit is lost during the Turn, the Unit then may return to any friendly Air Base within Range of the Air Unit's current location. Operational Range is used if the Air Unit was on an offensive Mission, but if an Air Unit is Organizing, then Staging Range may be used instead. In either case, the Air Unit is listed as "Retreating" and is not moved until the Logistics Phase, so it is still considered to be "Organizing" on the following Turn. If no Air Bases are within Range, the Unit is destroyed, but keep in mind that the move to a friendly air base can even include newly acquired territory. You may also over-stack if no other choice exists, but this must be corrected during the following Orders Phase.

5.1.6.5 Aircraft Carriers – Only Naval Air Units may be based on a Carrier. Each Carrier may base from 1 to 3 Naval Air Units each, depending upon its Air capacity. These Air Units are then mobile such that they may be used from any location that the Carrier is in.

5.1.7 Range – Range is calculated by the number of squares from the Air Base to the Target Square. In the case of Ground Support, the Target Square can be any Square in the Territory. Ranges in the Far East are half that of Ranges in Europe because of the difference in the map scale.

5.1.7.1 Operational Range – This is the range at which an air unit may operate from its base and then return. Operational Range is the effective combat range of an air unit.

5.1.7.2 Ferry Range – The Ferry or Stage Range of an air unit is the distance it can travel from one friendly air base to another in a non-offensive mission. This is much further than operational range because armaments are typically not carried and drop tanks may be attached to extend range as well, on top of which there is no fuel used for a return trip.

5.2 Orders – Air Units each individually may be given the following Orders, which are indicated on the Air Force sheet for each Nation. Air units can only perform one mission per turn, and after they have performed a mission they are listed as “organizing” until the Logistics Phase.

5.2.1 Stage – An Air Unit may Stage to another Air Base within its Ferry Range. Staging is not considered a full mission, so an Air Unit that stages during orders will remain ready for missions later in the turn.

5.2.2 Strategic Movement – An Air Unit may move any distance by Staging multiple times via any friendly Bases over any distance. Strategic movement is a full mission and afterwards the air unit is listed as organizing until the end of the turn.

5.2.2.1 Sea Zones – It is possible to move across Sea Zones for long ranged aircraft. In the Atlantic, each Sea Zone Range is considered 10 squares, and in the Pacific 5 Squares (but that is against Pacific Range, which is already halved).

5.2.2.2 Territorial Zones – Unlike land movement, strategic movement for air units isn’t limited to crossing one front or territorial zone. Air Units may freely move from the map to any adjacent territorial zone, and from one territorial zone to another, via strategic movement.

5.2.2.3 Naval Transport – Shorter ranged aircraft will not be able to cross sea zones, so they may be carried by naval transport in the same manner as a ground unit. It is also possible to stage to and from any port during the strategic movement as well.

5.2.3 Train – Air Units that Train gain +25 XP, up to a maximum of their Training Limit. Air Units that Train will not be available for missions during the Turn and are therefore listed as Organizing.

5.2.4 Naval Air Patrol – A Naval Air Patrol order is possible for any Air Unit based in a Port, on a Carrier in a Port, or on a Carrier on Naval Patrol. This order allows the Naval Unit to use its Search ability by flying to any Naval Square within Range, and any Naval

Missions that pass through its search area are spotted. Naval Air Patrol leaves the Air Unit ready and available for any activity during Ops, as well. It is also possible to give no orders, in which case the default air patrol search is calculated from its base location (i.e. the port or carrier it is based in).

5.2.4.1 Patrol in Sea Zones – A Naval Air Patrol in a Sea Zone is covering a much larger area than a patrol on the Map is. Therefore, an order to Patrol a Sea Zone limits the Air Unit to covering and intercepting any activity within that Sea Zone. The Range calculation for such a Patrol is equal to the full range of the Sea Zone under Patrol (i.e. a 2 Range Sea Zone = 20 squares in Europe, etc.).

5.2.4.2 British Naval Air Patrols – Britain has a specific set of air units in its Coastal Command OOB as well as its Fleet Air Arm. Naval Air Patrols are designated as belonging to these 2 branches, and therefore only Coastal Command and FAA units may engage in Naval Air Patrols. This is not a big disadvantage, given the number of such air units available.

5.2.5 Air Transport – Air Transport missions allow an Air Transport Unit to move units and supply from one friendly Air Base to another within their Operational Range (not Staging, as the weight of fully loaded Transports will reduce their Range). However, because this is purely a mission within friendly territory, the air transport is able to move a net total of 2x its operational range (with no leg of the mission exceeding its range, however) and pick units and supplies at any air base, dropping them off at any other, and ending the turn based at the final air base. Only 1 unit or 100 supply may be carried in total during the mission, however, and at the end of the turn the Air Transport is considered “organizing” and its turn is complete.

5.2.6 Reorganize – This is an order necessary only if an Air Unit was forced to Retreat in the previous turn. This reorganizes the unit and basically represents a forced “stage” that happened at the end of the previous turn when the unit retreated.

5.2.7 CAP – This order (Combat Air Patrol) is the default and only possible order for a Naval Air Unit that is based on a Carrier which is Escorting a Convoy. It allows the Air Unit to defend the convoy against any attacks.

5.3 Operations – Air Units are highly mobile, therefore the Ops Phase for an Air Unit includes use within the breakthrough phase as well. The only restriction for an air unit is that it can only fight in one battle, and once it does it will not be available for the remainder of the Turn. The following missions are available to ready air units during the Ops Phase:

5.3.1 Ground Support – During Ops and Breakthroughs, any available air units within range of a battle can be assigned to ground support missions in support of either an attacker or a defender. No more than 4 Fighter and 4 Bomber units may be assigned to any battle by each side. Ground Support is considered a reaction, so if one side attacks, and the other sends in air units, then the attacker may react to it by adding air and/or ground formations to the battle, and so on.

5.3.1.1 Naval Air Support – Naval Air Units may provide Ground Support by launching from Carriers on Patrol.

5.3.1.2 Defensive Support – Ground Support for offensive use is prohibited if no Oil has been assigned for the Air Force. However, Defensive Ground Support is allowed, meaning that it restricts ground support to the defense of any friendly territory under attack.

5.3.2 Air Strike – An Air Strike is an attack on enemy Naval Units, either at Sea or in Port, by Air Units in conjunction with or independent of friendly Naval Units. The same limits apply regarding range to target and stacking as for ground support. Naval Units at sea have to be spotted and intercepted as part of an air strike, see details under Naval Warfare.

5.3.2.1 Submarine Flotillas – An Air Strike against a Submarine Flotilla, or in defense of an attack by a Submarine Flotilla, may only include Fighters and ASW Bomber Units.

5.3.3 Strategic Bombing – Industrial Cities and Refineries within Range may be Bombed. Up to 4 Bomber Units and 4 Fighter Units may be assigned to a Strategic Bombing attack. Strategic Bombing can never be used as a “Reaction” since it is an attack only.

5.3.3.1 Interception – Fighter Interception is possible as a Reaction to any Strategic Bombing Attack. Up to 4 Fighters may defend against enemy attacks. Note that unlike a land battle, the attacker cannot then decide to send in fighters as a reaction to a defender’s interception. Fighters must be assigned when the mission is announced or they may not participate. In addition, because bombers have such a long range and may sometimes be capable of flying over enemy territory in great swaths, Fighters can choose to intercept any mission either at the target, or along the route to the target over friendly territory. You may not intercept on enemy, neutral, or sea squares., and interception must be done within operational range of the fighter’s base.

5.3.3.2 Night Bombing – Night Bombing missions are safer but less accurate strategic bombing missions. Only Night Fighter units may be assigned to Night Bombing Missions or to Intercept such missions.

5.3.4 Air Transport – Air Transport may offensively carry any Airborne or Airmobile Units in support of a Battle, again during either the normal Ops Phase to support or react to an attack or during a Breakthrough for the same. Air Transport may also choose to go through various friendly air bases in order to pick up their cargo in the same manner as Air Transport does during Orders, except that in this case Air Transport cannot exceed its normal Operational Range, even if the transport ends up supporting friendly territory (this is because ops phase comes later in the turn and involves combat operations). It is also possible to assign Air Transport without any units at all, simply to provide for added mobility in a Territory, or to add extra supplies to a battle by drawing directly from a regional reserve.

5.3.4.1 Interception – It is only possible to Intercept Air Transport if it is crossing over friendly (to the Interceptors, that is) Territory or when the Allies send Lend-Lease across “The Hump” in Asia. In this case, the resolution should be identical to a Strategic Bombing Battle, except that the target of the friendly Transports is to reach one of several air bases on the other side of the Map and drop their cargo. Friendly fighters may escort these Transports and must be assigned to do so when the mission is announced. There should be 1air base for each Transport sent, and the interceptors cannot be placed on or adjacent to the friendly air base except to attack an enemy air unit (i.e. they cannot block).

5.4 Strategic Bombing Battle – Air Units in land and naval battles are handled under those areas respectively. The only uniquely air battle is the strategic bombing battle.

5.4.1 Setup – A Strategic Bombing Battle lasts for up to 11 Turns, with Turn 11 the accounting phase and movement allowed on Turn 1 for air units. There are no objectives in the game, nor are any airports available or supply.

5.4.1.1 Air Unit Deployment – Attacking Air Units are already deployed at the edge of the map within 2 turns striking distance of the defender's deployment area. Defending Air units are also deployed at the edge of the map and within range of the target deployment area. Both sides cannot reach each other's air units on turn 1, and therefore each side is allowed to move on Turn 1.

5.4.1.2 Anti-Aircraft Deployment – Anti-Aircraft units cannot be placed adjacent to any other unit, but otherwise are not restricted in their deployment. Units include AA guns, Factories, Refineries, Radar and Observation Towers.

5.4.1.3 Factories and Refineries – Factories and Refineries are assigned depending on the size of the target. For each 250 PP of value for an IC, 3 Factories must be deployed. For each Unit of Oil produced, 3 Refineries must be deployed. Each Factory and Refinery Unit may be deployed in any available location as long as it is not adjacent to another unit.

5.4.1.4 Radar and Observation Towers – To represent the fact that a defender is not blind over his own territory, each side is assigned 1 Radar or Observation Tower for each Target Deployed. Since Factories and Refineries only have a 1 spotting range, and anti-aircraft guns 2, these are needed to spot incoming enemy aircraft for targeting. Radar Towers have a spotting range of 6, observation towers 3. Germany, Britain, and the USA always deploy Radar Towers, but all other Nations use Observation Towers instead. Radar Towers may be deployed anywhere, as long as they are not deployed adjacent to any other units.

5.4.2 Resolution – The battle lasts until turn 10, with turn 11 being the accounting phase, or until the attacker retreats. The attacker or defender may retreat at the start of Turn 6 or later, but a defender retreating does not end the battle, and only applies to any fighters that may have been deployed to intercept. Defending fighters that retreat must be moved to the edge of the map more than spotting distance away from any friendly ground units (i.e. manually remove them from the battle as much as possible).

5.4.2.1 Hitting the Target – In order to actually do damage to factories and refineries, each attacking unit must at least damage a factory or a refinery by attacking it. Only the first successful attack counts, all others (against strategic targets) are of no consequence, and the amount of damage inflicted is also of no consequence as long as it was at least 1 point of damage. Once a target has been damaged, it is no longer eligible to be targeted again in the Battle (easy to keep track of, since it will no longer be at Strength 10). The actual damage done is calculated – for now merely note on paper (sorry, there is no avoiding this) what unit attacked, and if it was a factory or a refinery if there are both present, and how much strength the Air Unit had after it made the attack (at that exact moment – so taking into account previous damage and any defensive fire as the attack was made, but not subsequent damage). The amount of bomb damage will be equal to the strength x bomb rating in PPs. For damage to refineries, see the economic section. For factories, the damage is on a 1 to 1 basis, but cannot exceed the value of the target. Excess damage is lost. Note again, that fighters may also make bombing runs if they have a bomb rating.

5.4.2.2 Other Targets – Anti-Aircraft guns and observation towers and of course, enemy aircraft, are all fair game. You may also freely cover AA guns so they cannot regain ammo, if you wish to. Observation and Radar Towers can also be attacked, but of course need to be destroyed so they can't spot any more. All

ground targets like factories, refineries, radar and observation towers have 1 defense ratings and are soft targets. In addition, they will all have a [1] air defense to defend against lower level attacks. Since [1] defenses have no effect on level bombers, this only deters those lower level attacks.

5.4.2.3 Night Bombing – In a Night Bombing Battle, a few things are adjusted. In addition to fighters being restricted to Night Fighters, PPs damage is only assessed at 50% of the usual, and AA guns are prohibited from firing offensively.

5.4.2.4 Weather – Normal weather effects are added to all bombing battles, in exactly the same way as land battles.