Module 1. AIR WAR

Helicopter Operations

In these rules, helicopters are treated generally as AFVs-although with several exceptions, most obviously their ability to fly. However, unless a specific exception is given below, every rule in Assault which applies to AFVs also applies to helicopters. Helicopters are mobility class H, and are also identified as type H on the spotting tables and the conventional and indirect fire defense tables.

Rule 23: The Airmobile Reaction Phase

The airmobile reaction phase is an additional phase inserted into each player-turn between the first movement phase and the fire phase. This is a special movement phase in which the non-phasing player (the NATO player in the WP player-turn and the WP player in the NATO player-turn) may move his helicopters. The sequence is as follows:

Warsaw Pact Player-Turn
Artillery Phase
First WP Movement Phase
NATO Airmobile Reaction Phase
Second WP Movement Phase

NATO Player-Turn
Artillery Phase
First NATO Movement Phase
WP Airmobile Reaction Phase
Second NATO Movement Phase

The airmobile reaction phase is identical to a movement phase with the following exceptions:

A. Command: The only units which receive operations points or perform command functions in this phase are helicopter HQs, and only helicopter units may be affected. A helicopter HQ is any HQ with a helicopter silhouette.

B. Movement: The only units which may move are the non-phasing player's helicopters. (Exception: the non-phasing player's other units may mount or dismount from helicopters during this phase.) Helicopters' movement in this phase is in addition to movement in the two movement phases.

C. Spotting: Any eligible units of the phasing player may attempt to spot in this phase, but may spot only helicopters which are moving (and mounting/dismounting units). Of the non-phasing player's units, only helicopters may spot, but they may spot any units.

D. Opportunity Fire: Only helicopters and mounting or dismounting units are vulnerable to opportunity fire.

Rule 24: Helicopter Movement

A. Maneuverability: Every helicopter has a maneuverability rating as a superscript to its movement rating. The lower the rating, the more maneuverable the helicopter.

B. Formations: A helicopter in march formation is flying at medium altitude and moderate to high speed. A helicopter in combat formation is flying at low altitude (nap of the earth) and low speed. Movement rules are different for the two.

1. March Formation: The helicopter pays 1 movement point (MP) per hex entered, regardless of the terrain. It may only enter the hex it is facing. A change of facing cost MPs; the helicopter pays MPs equal to its maneuverability rating for the first hexside of change within a hex. It pays MPs equal to twice maneuverability rating for the second or third change within a hex. Thus, a change of 180◦ facing change within a single hex would cost five times the helicopter's maneuverability rating in MPs.

2. Combat Formation: The helicopter pays MPs equal to its maneuverability for each hex entered, regardless of terrain. It may enter either of its two front hexes and may change facing, without cost, immediately before entering a new hex. It may also change its facing, without cost, at the end of its movement. *A helicopter pays MPs equal to its maneuverability rating for each change of facing within one hex on the second and subsequent change. It would cost a helicopter twice its maneuverability rating to make an 180◦ change of facing within a single hex.*

Helicopters which have landed or whose morale has broken are in no formation; a landed helicopter may not move except to take off, while a broken helicopter moves as if in march formation.

Rule 25: Landing and Taking Off

A. Landing: A helicopter in either formation may land at the end of any friendly movement phase. It may land only in clear or urban strip terrain. When a helicopter lands, place a *landed* marker under it. A helicopter which has landed is in no formation and facing is unimportant. It may not move except to take off; units may mount or dismount. It may not fire its weapons. In all other respects (except for its unitary armor value) it functions as an AFV. References to helicopters in subsequent rules do not apply to helicopters which have landed.

B. Taking Off: A helicopter may take off at the beginning of any movement phase. It may assume any formation and facing without expending operations points.

C. In and Out: A helicopter may enter a hex, land, dismount leg-mobile personnel units, take off again, and leave the hex in the same movement phase. This action may be performed in any formation and costs half the helicopter's movement allowance. Only leg-mobile personnel units may dismount; no units may mount.

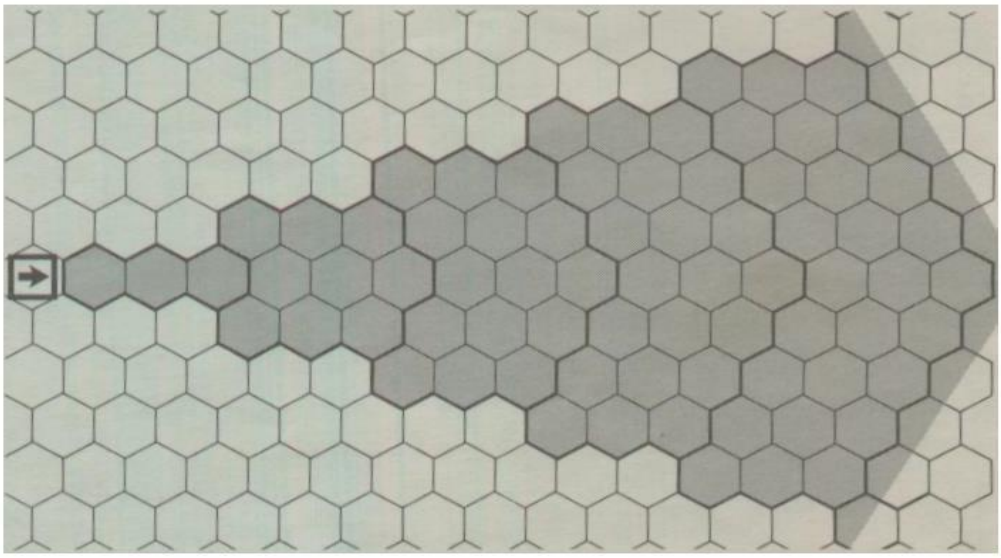
D. Movement Effects: Landing and taking off are considered movement for purposes of operations point expenditure, spotting, opportunity fire, and pass-through fire. A helicopter in combat formation, and which did not move in the phase, may enter cover as it lands.

Helicopter Landed

Rule 26: Helicopter Combat

A helicopter may fire in the fire phase even if it moved in the first movement phase; however, a helicopter which moves in the first movement phase or the airmobile reaction phase may not fire Msl ammunition in the following fire phase.

A. Firing in March Formation: Unlike ground units, a helicopter in march formation may fire, with certain restrictions. It may only fire within a restricted field of fire, as shown in the diagram below.
It may only fire within a restricted field of fire, as shown in the diagram below. It may not fire Msl ammunition, and may not fire at a range of 0.



B. Firing in Combat Formation: A helicopter in combat formation may conduct opportunity fire even if it is not under cover, but it may not fire Msl ammunition in the airmobile reaction phase if it moved in the first movement phase. (*This restriction on firing Msl ammunition must refer to opportunity fire by the phasing player in the non-phasing player's airmobile reaction phase).*

C. Firing at Helicopters: Fire against helicopters is resolved in the same manner as fire at AFVs with the following exceptions:

1. Armor: A helicopter has a single armor value which applies to both front and flank shots.

2. Conventional Fire: Helicopters are fully affected by all conventional fire rounds, not just HE.

3. Limitations: AAMs (see Rule 28) follow their own rules. The abilities of other weapons to fire at a helicopter depend on whether the helicopter is stationary. A helicopter is stationary if it is under cover or is executing a fire popup (See Rule 27).

a. Stationary Helicopters: Any direct fire weapon may fire at a stationary helicopter. Weapons (and ammunition) marked on the direct fire data charts with one or two asterisks (* or **) fire without penalty. Other weapons have their hit changes (for anti- tank fire) or fire values (for conventional fire) halved, dropping fractions.

b. Non-stationary Helicopters: Only weapons (and ammunition) marked with one or two asterisks (* or **) may fire at a non-stationary helicopter. Weapons marked with two asterisks fire without modification. Weapons marked with a single asterisk have their hit changes halved, dropping fractions.

Rule 27: Popups

Helicopters in combat formation may perform popups. There are two types: spotting popups and fire popups. In both types, the helicopter expends MPs equal to its maneuverability and rises to a higher level in the hex (14 is the maximum). Units performing popups are spotted as if they are in clear terrain.

A. Spotting Popups: A spotting popup may occur at any time during movement. The helicopter rises and returns to ground level in the same phase. Thus only spotting and opportunity fire may occur while it is at higher level. (*Exceptions: see rules 28 and 29*).

B. Fire Popups: A fire popup may occur at the end of movement. The helicopter rises and remains at the high level until the beginning of the next friendly movement phase or airmobile reaction phase, at which point it returns to ground level. Thus the unit may spot, perform opportunity fire, and participate in combat during the fire phase (unless it popped up in the second movement phase) at the higher level.

C. Movement Effects: A popup is considered movement for purposes of operations point expenditure, spotting, and opportunity fire. It does not prevent a helicopter from firing Msl ammunition (if it did not otherwise move in the phase).

D. Mast Mounted Radar: The Longbow is a fire control system developed for the Tiger UHT, Apache AH-64D and the OH-58D.The WP Soviet Mi-28N has a similar system. NATO Tiger UHT, AH-64Ds and OH-58Ds and Soviet Mi-28Ns can spot and conduct combat from 1 level higher than they actually are without performing a popup. For example, a U.S. OH-58D at level two conducts spotting as if it were at level three. This applies even if the helicopter is under cover; therefore, NATO OH-58Ds and AH-64Ds and Soviet Mi-28Ns can conduct spotting and fire (including anti-tank missile fire but not AAM fire) from under cover without having to perform a popup. The Tiger UHT only conducts spotting and not combat using the mast mounted radar. A helicopter equipped with a mast mounted radar is not considered moving for purposes of operations point expenditure, spotting, and opportunity fire unless it actually performs a popup.

Rule 28: Anti-Aircraft Missiles

Anti-aircraft missiles (AAMs) are a special type of ammunition which may be fired only at helicopters. For game purposes, the term AAM includes both surface to air missiles (SAMs) and air to air missiles (AAMs). AAMs may fire at stationary or non-stationary helicopters without penalty.

A. IR Homing Missiles: AAMs marked with a + on the fire data chart are infrared homing missiles. IR homing missiles add the infrared signature of their target to their hit chances. *For example, if a Stinger AAM is fired at a Mi-24E at a range of 10 hexes, the base hit chance of 3 is added to the Mi-24's IR signature of 2, for a combined 5 (50%) chance hit. IR missiles are unaffected by cover.*

A helicopter which performed a spotting popup during the first movement phase or airmobile reaction phase may fire IR homing missiles from the higher level in the fire phase.

B. MANPAD SAM: The NATO and WP forces both possess small, shoulder fired AAMs which are distributed among their maneuver units for local protection. MANPADs are included in the counter mix in Advanced Assault units and/or in the Direct Fire Charts for specific weapons systems.

(See the Homepage for each Country for available MANPADS)

C. Other SAMs: The UK Stormer/Starstreak SAM uses laser guidance during its attack profile. For UK Stormer/Starstreak do not apply the IR modifier.

Rule 29: Laser Designated Missiles

A laser-designated missile may be fired even if the helicopter moved, and a helicopter which performed a spotting popup during the first movement phase or the airmobile reaction phase may fire a laser designated missile in the fire phase from the higher position. In both these cases, another unit must be capable of designating the target. NATO Longbow helicopter (of the same company), dedicated FIST/OP or helicopter equipped with Laser Designated Missiles units same company may designate for laser guided missile attacks.

Any Warsaw Pact Helicopter (in the same company), assigned or dedicated FIST or OP may laser designate targets. The designating unit must not have moved in the first movement phase or airmobile reaction phase and must have an unblocked LOS to the target. Maximum range from designator to target is 24 hexes.

ADATS: ADATS (Air Defense Anti-Tank System) is used exclusively by the Canadian Army. ADATS (developed by Oerlikon-Contraves) is mounted on an M-113 carrier and can engage both AFV and aircraft. At the start of the game the NATO player must designate which ADATS unit is in air- defense mode and which one is in anti-tank mode. This can be noted as a cross-attachment simply by placing either AD or AT in the block. ADATS functions as a laser designated missile for combat purposes.

Rule 31: Variable Armament

The armament of some WP and NATO helicopters can vary. The Attack Aircraft Capabilities Chart in the NATO, Warsaw Pact, and Neutral Countries Home page list the available weapon stations by aircraft type. Examine the direct fire data chart. If the ammo supply for a round is followed by a "p", that round may be chosen for a pylon weapon station; rounds with ammo supplies followed by an "r" are rocket pods that may be assigned to a pylon weapon station. The number before the "p" or "r" indicates the number of rounds per weapon type selected. *For example, if a Hellfire Missile is selected for a pylon, the helicopter unit would be able to conduct 2 attacks with Hellfire Ammunition before being out of missiles.*

Rule 38: Close Air Support

Close Air Support, or CAS, provides the player with the ability to call in airstrikes on enemy positions or perceived positions. CAS use UGBUs (Unguided Bomb Units), GBUs (guided bomb units),AGM (air-to- ground missile) and internal guns to attack targets and hexes.

GBUs can attack hexes, units and bridges. AGM are used against installations (units in entrenchments, bunkers and hull down positions), and all vehicles. Guns can be used against all units. Each aircraft is considered to be 1 plane for direct fire and opportunity fire. See Appendix A. Sequence of Play for the Air Phase.

A. Flight: Aircraft move similar to helicopters in that they do not pay terrain costs and can enter any hex regardless of terrain. All aircraft have unlimited movement (The AV-8B Harrier has special movement rules and is covered separately). Aircraft are always considered to be in combat formation. Aircraft may enter from any map edge and exit from any map edge. All aircraft (except the AV-8B) must exit the map in the same air phase in which they entered it.

1. Facing: Aircraft are placed on the map facing a hexside. The nose of the aircraft is its front.

2. Turning Radius: Even though aircraft have unlimited movement (class ∞), they do have a turn rate. (Except the AV-8). CAS sircraft turn by moving two hexes forward, and then turn one hexside.

3. Flight path: The flight path may be designated prior to entering the combat zone. Place a string or thread on the map to indicate the flight path to the point where the attack occurs. Other strings or threads are placed by the defending units (Air Defense or other) that are capable of performing opportunity fire against the attacking aircraft, from the unit firing anti-aircraft to the point along the flight path where the defending player determines the intercept to occur. Units may only fire at one aircraft once per Air Phase. Once the CAS aircraft attacks another string or thread is placed from the attack point to the exit point. Air Defense or other units that have not fired may attempt to opportunity fire along this path also. Units targeted by the CAS mission may fire self-defense fire against the CAS aircraft prior to the resolution of the CAS attack, regardless of having fired previously. Altitude may be changed up or down one level per hex but not below the minimum operating altitude for the specific aircraft as determined by the Aircraft Capabilities chart.

4. Altitude: Aircraft may fly at different altitudes as indicated by the Aircraft Capabilities Chart. Aircraft may not fly below the lowest altitude indicated in the chart. Only Helicopters in Combat Formation may fly at NAP but no higher than LOW unless performing a popup. Aircraft may operate at or higher than the altitude indicated in the Chart. The altitudes are:

a. NAP Altitude: Aircraft fly at 0-1 level above the hex terrain.
b. Low Altitude: Aircraft fly at 2-3 levels above the hex terrain.
c. Medium Altitude: Aircraft fly at 4-5 levels above the hex terrain
d. High Altitude: Aircraft fly at 6+ levels above the hex terrain.

A helicopter in combat formation is considered to be at the same level as the hex, +1 if the hex contains woods, urban strip or town. A helicopter in March Formation is considered to be +4 levels above the terrain of the hex. A helicopter executing a popup is at whatever level the player announces when the popup is begun, up to level 14. *(Altitude Level Markers are available in the Neutral Markers Section*).

5. Spotting: Normal spotting rules apply to spotting aircraft. All spotting attempts are against a moving unit (except the AV-8). Radar may detect any aircraft, just like with a Helicopter, given a clear LOS. Higher terrain between the Radar unit and the CAS aircraft blocks the LOS. (See Module 1A. RULE 30 RADAR) Radar equipped units may make unlimited number of spotting attempts but only once per hex entered. Aircraft will fly at different altitudes depending upon the type. Consult the Attack Aircraft Capabilities chart section for specifications.

6. Stacking: CAS aircraft may not enter a hex containing another aircraft but may enter a hex with a helicopter.

B. Availability: CAS may be canceled for a number of reasons. Enemy air superiority and weather may limit the number of sorties available. See Rule 40 on weather.

1. Air Superiority: In game terms, this means local air superiority and it only affects the availability of CAS missions. It is variable and could change each turn. At the beginning of each turn players roll the die. The player with the highest roll has local air superiority for the current air phase and may conduct CAS missions for the current air phase The losing player may not conduct CAS missions (Air Superiority of the winning side prevented the CAS aircraft from reaching the target area. If both players roll the same number, then both players may conduct CAS missions. Each player rolls for Air Superiority whether he has CAS missions available or not. Air Superiority does not affect Helicopter Operations.

2. Determining available CAS Missions: Prior to starting the game, each player secretly determines which CAS mission or missions are available. *When playing a Macro-Assault campaign CAS missions are determined by the number of available CAS aircraft in the counter mix and player assignment of specific unit counters to a specific battle.*

a. Procedure: Consult the Availability Modifiers for each modifier available. Add all modifiers together. Roll one die and add the die roll modifier to determine the appropriate column on the Mission CAS Aircraft available. Multi-role Aircraft as identified on the Aircraft Data Chart may be selected as either Attack or Fighter Bomber.

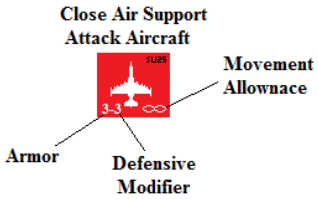
b. Countries: Roll once for each country, applying all modifiers. If a country does not have a particular type aircraft (Denmark for example has no ATT (attack aircraft) but does have a FB (Fighter- bomber), then that specific mission is not available. Multi-role (MR) class aircraft may substitute for ATT or FB class aircraft.

3. Strike Package Selection: Players may select weapons to be carried on CAS aircraft hard-point weapon stations as with helicopter pylon weapon stations. (See the appropriate Attack Aircraft Capabilities charts and Direct Fire Chart for the specific aircraft). Record the available ammunition on an Ammunition Record.

a. Sorties: A player may conduct 1 sortie per air phase per aircraft. The player may conduct sorties in as many air phases as he wants as long as the aircraft has ordinance (ammunition) and it is not damaged.

C. Combat

1. Anti-aircraft fire: To be attacked, an aircraft must be spotted. Aircraft have two factors that are used in anti-aircraft combat. The first factor is the unit's armor rating. The second factor is the unit's defensive modifier versus air defense attack by infra-red and radar guided units. Aircraft are more difficult to attack than Helicopters.



The Aircraft Defensive Modifier is subtracted from the base chance to hit value when being attacked by an infra-red homing missile or radar guided weapon. The final value is the new Chance to Hit value. Roll die and the Aircraft is hit if the roll is less than or equal to the value. A rolled 1 is always a hit regardless of the actual value. *For example, if a Stinger missile is fired at a WP SU-25 from 10 hexes away, the defensive modifier of 3 is subtracted from the base hit chance of 4 for a new chance to hit value of 1.*

2. Hit confirmation: If the aircraft is hit then the armor value is subtracted from the penetration value of the anti-aircraft weapon. Roll one die and if the roll is equal to or less than the difference, the ammunition penetrates the aircraft. The aircraft is removed from play and can make no further sorties. If the aircraft is firing a AGM or dropping a GBU that is being laser designated by another unit and that aircraft is hit by anti-aircraft fire at the same time, the AGM or GBU combat still occurs, regardless of the fate of the aircraft.

3. Weapons: The player announces what type of weapon is used in each sortie prior to entering the map. An aircraft may not change weapon types during the current air phase, but may select a different weapon type in subsequent phases. In other words, the player may announce a GBU attack for the current phase. Thus, the player may not change to an AGM or gun attack until the next air phase.

4. Opportunity Fire: Opportunity fire may occur versus aircraft during an aircraft's ingress or egress to the target, just like helicopters with some minor changes. Only Air Defense units (units whose primary weapon systems have a ** or † indicated on the Direct Fire Data Chart may engage in opportunity fire versus CAS aircraft. Opportunity

fire results against aircraft are applied at the instant they are obtained.

a. Tracking: An aircraft must be tracked for a number of hexes by the firing unit before opportunity fire by conventional means takes place (does not apply to IR and Radar guided units). Low Altitude Aircraft must be tracked for 6 consecutive hexes. Medium Altitude and High Altitude aircraft must be tracked for 4 consecutive hexes. Normal opportunity fire combat occurs at any time after the aircraft completes the tracking requirement for the engaging air defense unit.

5. Target Defensive Fire: The target unit may conduct defensive fire with any weapon marked with an *, **, or †, as long as it did not opportunity fire at any other aircraft. The target unit may not engage in direct fire in the current turn's Fire phase if it fires in the Target Fire versus aircraft portion of the Air Phase. Any Air Defense unit (i.e., weapon systems marked by an ** or †) may fire at the aircraft during Target Fire if it is adjacent to, or stacked with, and did not opportunity fire at any aircraft during aircraft movement.

6. Air-Ground Combat: *ONLY TARGETS SPOTTED BY FRIENDLY UNITS MAY BE ATTACKED BY CAS*. There are four types of air-to-ground combat. Bomb (Guided Bomb Unit GBU or Unguided Bomb Unit UGBU), Air-to-Ground Missile, HARM (Anti-radar) and Gun (SCAP and SCHE) attacks. To be attacked by AGM or Gun the target must be spotted prior to the aircraft ingress to target. A UGBU attack is made against a hex just like HE indirect fire, a GBU attacks specific targets that are designated by OPs, FIST or any unit capable of laser designating targets including the attacking aircraft itself. Observation Posts and FISTs act as the Forward Air Controller (FAC) for aircraft. AIRCRAFT MAY FIRE UP TO THE AMMUNITION SUPPLY OF THE SPECIFIC WEAPON BEING USED IN A FIRE PHASE. *For example, if the aircraft carries 4 GBUs, it may use all 4 in a combined attack against a single target or hex. Therefore, the ROF of a given weapon system is the available ammunition supply.*

A. Bomb Attack: There are two weapon classifications under Bomb Attack. Bomb Attacks are conducted on the Bomb Attack Table.

1. Un-guided Bomb Unit (UGBU) A UGBU mission does not have to be under observation by an OP/FO since the attack is against the hex. UGBUs have a +2 modifier to the Bomb Attack Table Die Roll. UGBU attacks must be made from minimum ***Medium Altitude*** above the highest terrain in the defender's hex. The attacking aircraft must overfly the attacked hex in a straight line by 4 hexes before changing direction or altitude. Helicopters attacking with GBUs must overfly 1 hex in a straight line before changing direction or altitude.

2. Guided Bomb Unit (GBU) A GBU is used against a specific target similar to an AGM. A FIST may designate for a specific target unit (that way the attack can still strike the target hex if the aircraft suffers loss during the Target Fire) or the aircraft can self-designate the targe. GBUs have a -3 modifier to the Weapons Attack Table Results Table Die Roll versus all units; EXCEPTION:

GBUs have a +3 modifier to the Bomb Attack Table Results Table Die Roll versus SHTORA equipped vehicles. Multiple GBUs may be combined into one attack or used against single target in the same hex. GBU attacks must be made from minimum ***Medium Altitude*** above the highest terrain in the attacker's release hex.

3. Overshoot-Undershoot A Bomb attack that fails to achieve a hit will drift similar to un-observed Artillery Fire. A failed Attack Die Roll that is +1 or +2 over the required hit on the CRT will undershoot. A failed Attack Die Roll that is +3 or greater will overshoot. Roll die once. Divide the result by 2 to determine the number of hexes the Bomb Attack drifts. Round up. If an *OVERSHOO*T, the Bomb Attack Impact Hex is in the flight path of the Attacking Aircraft past the target hex. If an *UNDERSHOOT*, the Bomb Attack Impact Hex is in the flight path of the Attacking Aircraft before the target hex. This is the new impact hex. Conduct Bomb Attack versus units in this hex. Reduce the total Bomb Attack value against this hex by 1/3 rounding down.

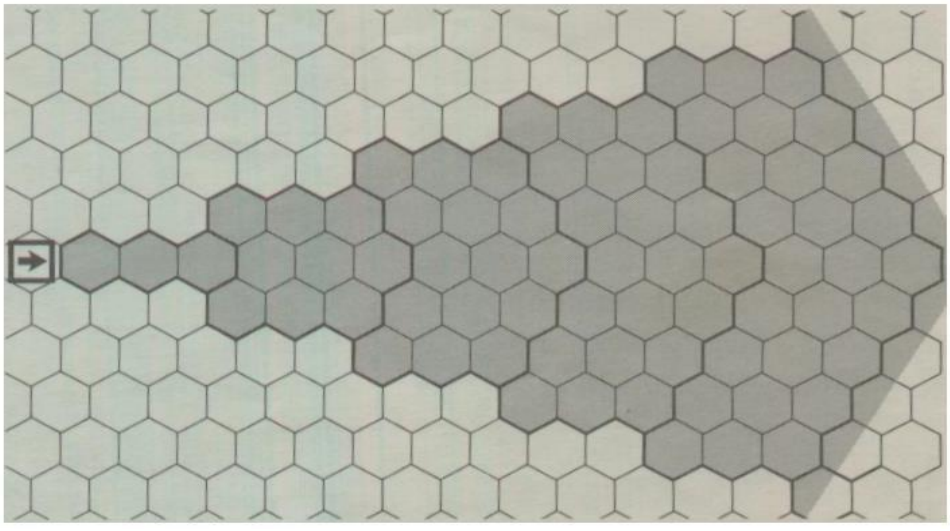
b. AGM/Gun Attack: A target unit may only be attacked by an AGM or Gun CAS mission if the unit has been spotted prior to the Air Phase. Both these attacks are resolved as direct fire attacks versus the target. If the attack is SCAP vs target resolve as you would a standard SCAP weapon. If the attach is SCHE vs target resolve on the Weapons Attack Table (CAS CHART).

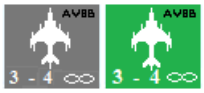
c. HARM Attack: Any target unit within the forward arc of the attacking aircraft that is utilizing surface to air radar may be attacked by a HARM missile. If the attacking aircraft successfully hits the unit utilizing surface to air radar, it is destroyed.

d. Altitude DRM: Add the appropriate Altitude Die Roll Modifier to all *TO HIT* die rolls.

e. Target Status DRM: Add the appropriate TS DRM to the *TO HIT* die roll.

f. Firing Arc: An aircraft may only fire or drop its weapons in its forward arc, similar to a helicopter in march formation firing. See Diagram below:



Rule 39: AV-8 Harrier 

The AV-8 series aircraft, unlike other jet aircraft, has the ability to hover and loiter over the battlefield similar to a helicopter. Therefore, AV-8 are not required to exit or egress form the target area and may remain on the map, at the discretion of the owning player. AV-8s are treated the same as helicopters and can conduct operations in all movement phases (of the owning player) and the Air Phase. The AV-8 may not use more than one weapon type and may only fire once per fire segment (i.e. opportunity fire, direct fire, etc.).

A. Combat: The AV-8 can fire any of its (but only one type) while hovering except the GBU/UGBU. The GBU/UGBU can only be dropped (fired) in the air phase and only if the AV-8B is making a strike run (moving towards) the target hex. The AV-8 may perform popups just like a helicopter except that it may not fire the GBU.

B. Movement: AV-8s have no turning radius and may turn in any direction at any time. The AV-8 has unlimited movement allowance class ∞. The AV-8 may not enter a hex containing other CAS aircraft or helicopters. It may occupy a hex containing only ground units.

C. Removal: An AV-8 is removed from the game, if it suffers damage or it expends all the ammunition in its Strike Package.

Rule 40: Weather

Weather is determined prior to the start of the game. Roll once on the month table to determine the month (unless already determined in the Macro Assault game). Then roll once on the weather table to determine the specific weather for the game. Consult the Availability modifiers list for the specific weather type modifier to the Mission Availability die roll. Weather only affects the availability of CAS.

Rule 42: UAVs (Unmanned Aerial Vehicles)

UAVs are unmanned aircraft utilized for intelligence gathering, artillery spotting and limited attack. UAV development began in the 1950s with the more modern systems such as the US Predator entering service in 1995. UAV counters are available in specific units. In simulations taking place after 1995, ground based MI (Military Intelligence) company 1 UAV available.

A. Intelligence/Artillery: NATO and WP UAVs function as reconnaissance units equipped with thermal imaging and laser designators for spotting and directed artillery fire. NATO UAVs have a spotting range of 2 hexes per each level of height and WP UAVs have a spotting range of 1.5 (round down) per each level of height; as determined by the owning player to be flying at. This is recorded at the beginning of each Record Artillery Mission by each player. Maximum altitude is level 15. Therefore, the maximum spotting range for a NATO UAV is 30 hexes for an UAV

flying at level 15. Altitude may be changed each owning Player movement phase.

1. **Organic UAVs**- UAVs assigned as part of an Observation Post (OP) platoon (unit) function as an airborne extension of that specific OP. In order to use its' UAV, the OP must deploy by not moving for 1 movement phase. A deploy marker is then placed on the OP. Beginning with the next movement phase following deployment, a UAV assigned (record UAVs assigned to a specific OP) to the OP is placed in the map in the same hex as the OP. This UAV may then move no more than 16 hexes from the deployed OP. Altitude is determined in the same manner described in (A) above. Organic UAVs DO NOT carry a weapons pylon. The OP may call for, and adjust artillery fire from the UAV's vantage point. NATO and Warsaw Pact Organic UAV counters are available on the Advanced Neutral Marker page.

2. **Military Intelligence/UAV Squadron/EW Unit UAVs**- Each unit may deploy 1 UAV. Units with dedicated UAVs may deploy those UAVs; other units may utilize an organic UAV counter from the Advanced Neutral Marker page. MI and EW units may only deploy a UAV when in ELINT operations. If the MI/EW unit terminates the ELINT mission, the UAV is removed from the map.

B. ANTI-AIRCRAFT FIRE vs UAV COMBAT: The biggest obstacle to attacking the UAV is the small size of some UAVs and the built-in stealth capabilities. There is no auto-spot vs UAV. All units must attempt to spot the UAV including radar equipped units. UAVs are always considered in clear terrain not under cover. Maximum spotting range vs an UAV is 15 hexes and Level 15 altitude by units equipped with radar, 10 hexes and Level 10 altitude by infrared missile equipped units (including MANPADs) and 5 hexes and Level 5 altitude by all other units. Radar equipped units add 3 to the base spotting chance die roll; Infrared missile units add 5 and all other units add 7. Once spotted UAVs may be attacked by anti-aircraft fire; appropriate modifiers apply.

Rule 43: Airborne Operations 

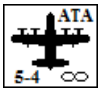
In the original Assault series, scenarios with airborne units began in the post drop phase. This optional set of rules allows players to simulate the actual drop itself. There is a chance that a unit will suffer casualties in the actual drop through loss of personnel, equipment and vehicles in accidents that occur outside of actual combat.

A. Airborne Transport Aircraft

Airborne capable units are transported via Airborne Transport Aircraft. Special Forces and Ranger units may conduct air drop operations via helicopter. Each ATA counter consists of several C-130 or AN-12 type aircraft. See the ATA Transport Capability Chart in the Transport Reference Guide of the Charts and Tables page. Airborne Transport Aircraft may be attacked by anti-aircraft fire. If

ATA suffers adverse anti- aircraft fire result it and transported para units are removed from play. ATA fly at medium altitude. ATA performing Low Altitude Parachute Extraction System (LAPES) fly at low altitude. Heli-borne aircraft fly at low altitude. The player conducting Airborne Operations must have Air Superiority to conduct Air Drop Operations (See Rule 38.B.1 Air Superiority). *When playing the Macro Assault game, the ATA counters are included in the counter mix and are used instead of the generic ATA/LAPES counters.*

1. ATA Availability: Players roll for Air Superiority (See Rule 38.B.1). Next determine the number of ATA available per turn by rolling the die and cross referencing the result on the ATA availability table on the Transport Reference Guide Chart. The number of ATA available is per turn. The player determines the type of ATA as needed; i.e. either Air Drop or LAPES.

B. Air Drop 

Vehicles with frontal armor of 10 or less and un-armored vehicles may be deployed by either the LAPES or air-dropped. Units may not Air Drop into a hex that contains an Alpine Hexside. Vehicles may not carry passengers while conducting air drops or LAPES. Vehicle crews are considered to drop in close proximity to their vehicles. (See Rule 44. C. for Soviet exception).

1. Air Drop Procedure

a. Determine weather: (Use weather chart in CAS Availability Table)

b. Determine wind and wind direction (Use the wind table on the Conventional and Indirect Fire Chart)

1. Light wind-no drift unit lands in march formation in designated Drop Zone (DZ) hex.

2. Moderate wind drift- Designate the Drop Zone hex that the unit is to land in. Roll the die and divide by 2. This is the number of hexes that the unit will drift from the Drop Zone in the direction of the wind. Conduct a morale check. The unit is suppressed in march formation if the morale check is failed.

3. Strong wind drift-Designate the Landing Zone hex that the unit is to land in. Roll the die and divide by 2. Add +2 to this number. This is the number of hexes that the unit will drift from the Landing Zone in the direction of the wind. No morale check is conducted. The unit is placed in the final DZ hex suppressed in march formation.

c. The player conducting the air drop determines the orientation of each unit.

d. All air-drops occur at minimum ***Medium Altitude***.

2. Adverse weather in Moderate and Strong Winds; adds an additional +2 for rain, +4 for fog, and +6 for snow to all landing zone drift die rolls. For Light

Wind roll for wind direction and move unit +1 hexes in direction of wind for rain and +3 hexes for Fog and +5 for snow.

3. Air drops occur in the Non-phasing player Airmobile movement phase. No suppressed air dropped units may rally until the Friendly 2nd Movement Phase following the air drop. Unsuppressed units may move in Friendly 1st Movement Phase after the air drop.

4. Units that land in woods or marsh hexes lose 1 step if full strength 2 step unit; and are broken if it is a 1 step unit. Air-dropped artillery and air dropped vehicles are eliminated if landing in a woods/marsh hex. All units are eliminated if landed in full sea or lake hexes.

C. Low Altitude Parachute Extraction System (LAPES) 

LAPES Procedure- LAPES Aircraft may fly at ***LOW Altitude*** or higher until final for hexes before LAPES action. LAPES Aircraft must fly 4 consecutive hexes at ***NAP altitude*** in clear non-slope terrain before depositing transported unit in 4th hex. Units cannot be LAPEd into a slope hex. *ONLY 1 LAPES action per hex*. After LAPES action the LAPES Aircraft may exit at ***Low Altitude*** or higher.

1. Determine the landing status:
   - **a.** On a roll of 1-3 the LAPE unit loses 1 step and is suppressed. A 1-step unit is eliminated.
   - **b.** On a roll of 4-6 the LAPE unit lands suppressed.
   - **c.** On a roll of 7-10 the LAPE unit lands in march formation.
   - **d.** The player conducting the LAPES determines the facing of the unit.

2. LAPES is not affected by weather conditions or wind drift.
3. No passengers may be carried by vehicles deploying via LAPES
4. No suppressed LAPES unit may rally until the Friendly 2nd Movement Phase following the LAPES.

D. Soviet Airborne BMD-3 Units 

Soviet Airborne units that are equipped with the BMD-3 may air drop with passenger units loaded on board the BMD-3. Loaded passengers do not count toward the ATA transport capacity limits. This is the only exception to loaded vehicle restriction. Loaded BMD-3 may only deploy via air drop. Unloaded BMD-3 may still deploy via LAPES if desired. The passenger unit suffers the same damage as the transporting BMD-3 from the air drop procedure.

E. AC-130 Spectre Gunship 

The AC-130 Spectre Gunship is an American C-130 Hercules modified for Close Air Support (CAS). The AC-130H is armed with two 20mm M-61 Vulcan cannon, one 40mm Bofors L/60 cannon and one M-102 105mm howitzer. The Spectre is also equipped with thermals, Low Light Level TV and laser ranging/designating equipment.

1. The AC-130 is available as a U.S. CAS aircraft. It may be selected in place of a Fighter Bomber aircraft on the CAS availability chart only if U.S. units are available. Only 1 AC- 130 may be substituted for a CAS aircraft.
2. The AC-130, like the AV-8B, is not required to exit the map at the end of a strike mission and may continue to operate in all friendly movement, fire and CAS phases.
3. The AC-130 minimum combat ***Medium Altitude*** above the highest terrain in the hex and conducts movement as an Attack Aircraft in regards to the turning radius.
4. The AC-130 is subject to anti-aircraft (SAM, AAM, and Gun), opportunity and direct fire from units capable of *,**, and fire.
5. The AC-130 may not conduct opportunity fire.
6. All weapons may be fired simultaneously at the same target or individually at separate targets, up to the maximum rate of fire of each weapon system.
7. The AC-130 has a restricted firing arc 4-10 hexes to the left of the aircraft orientation. No weapon may fire into the 0-3 hex dead zone. The AC-130 conducts what is called a "pylon tum" to deliver continuous fire to a single point. See below: