'Case Orange' Variant: *Revisiting an Old Classic*

[1.0] INTRODUCTION

The *'Case Orange'* variant is a rule revision of Avalon Hill's original *PanzerBlitz*, a fast-moving game simulating tactical armoured warfare. Players will require a copy of the original game to play, including map-boards, playing pieces and other physical components.

The game uses a constant-scale map (*map-board*) and military formation playing pieces (*units*) of varying capability to translate simulated movement and combat events into a manageable symbolic format in a relatively simple two-player game. Units manoeuvre on the map-board during alternate players' turns. Combat losses are incurred by 'dispersion,' 'special dispersion' or elimination of units, representing personnel and equipment losses, ammunition expenditure and fatigue.

[2.0] HOW TO PLAY THE GAME

Players move and/or initiate attacks with their units for a number of game turns while attempting to satisfy victory conditions of a specific engagement (*scenario*) as outlined on its original or variant Situation Card. Most scenarios require a player to capture or defend territory, destroy a certain portion of the opposing force and/or exit a map-board edge within allotted time.

Players select a scenario and place their respective units on the map-board accordingly. Other units may appear as reinforcements as play proceeds.

The game is played in *game turns*, each consisting of two *player turns*. Each player turn consists of the *current player* conducting attacks with some units in the fire phases and moving others in the movement phase. The opposing player similarly attacks with and moves their units in the succeeding player turn; ending the game turn. Combat is resolved by die roll and results are applied to defending units based on the cross-reference column in a table reflecting the strength, range and terrain benefits of the respective units.

Game turns are repeated until game end when victory conditions are consulted to determine win, loss or draw. See [4.0] SEQUENCE OF PLAY.

GLOSSARY

½ movement: half movement allowance in movement factors; rounded down.

½ range: half range in hexes; rounded down.

Adjacent: hexes sharing a common hex side.

Adjusted attack factor: the unit's attack factor value after application of class modifier for attack type, weapon type, target type and range; rounded down.

Concealing terrain: town, village, broken and woods hexes.

Current player: player having combat or moving units in the current player turn.

Dispersed: unit may neither move nor fire until marker removed at end of player's turn; attacks on dispersed units subtract one (-1) from die roll.

Direct fire: eligible attack against opposing units in line-of-sight and within range.

Eligible: rule shorthand for 'friendly, undispersed and face-up;' sometimes qualified as in 'eligible observing units.'

Immobile unit; zero (0) movement allowance.

Indirect fire: attack conducted '(H)' or 'M' class unit against opposing units *not* in line-of-sight; requires participation of observer units.

Line-of-sight (LOS): a straight line from the centre of the sighting unit's hex to the centre of the target unit's hex.

Registration: marked indirect fire attack point for specific indirect fire unit; **parent unit**.

Spotted: observed units in town, village, broken and woods hexes can be fired upon and bear a **spotted marker**; either of both 'spotted' and 'opportunity spotted' markers.

[3.0] GAME EQUIPMENT
[3.1] THE GAME MAP

The uniquely numbered multiple sections of the original and variant "geomorphic" map-board may be rearranged to represents the relevant terrain on which the military formations of a specific scenario manoeuvred. A hexagonal grid is superimposed over the terrain features printed on the map-board to regulate movement and position units. The map-boards include various terrain features common to respective scenarios effecting play; [15.3] COMBAT COLUMN SHIFTS and [15.6] COMBAT DIE ROLL MODIFIERS give examples. Each hexagon (*hex*) on the respective map-board has its own identity key.

[3.2] GAME CHARTS AND TABLES

Various aids are provided for the players to simplify and illustrate game functions. [15.1] COMBAT RESULTS TABLE determines the outcome of various combat situations based on a die roll and the units involved. The Scenario Cards for each of the engagements show with which units each player starts and where initially placed; optionally noting what reinforcements are received and when.

[3.3] THE PLAYING PIECES

The square, cardboard units represent platoon or company sized military formations of different types (*eg* infantry, armour, artillery, etc) used in the game. The numbers on the face represent capabilities to move, attack and defend and the range of weapons. In the center a symbol or silhouette identifies the unit organization or equipment.

There are also playing pieces (fortification, improved position, wreck, block and minefield markers) used to alter terrain where placed on the map-board and status markers (spotted, registered and dispersed) which are placed on and removed from units as play proceeds. Additionally the game includes information markers, such as the game turn marker placed on the Situation Card.

[3.4] HOW TO READ THE UNITS

[3.4.1] **Attack factor:** offensive strength; upper left corner.

[3.4.2] **Defence factor:** defensive strength; lower left corner.

[3.4.3] **Range:** maximum distance away a unit may attack, in hexes; upper right corner. Infantry units bearing ranges with a trailing asterisk '*' may double range at half (½) attack factor; rounded down.

[3.4.4] **Movement factor:** maximum amount of movement activity a unit may perform in one turn; lower right corner.

[3.4.5] **Size:** in military notation, as follows: •• = section, ••• = platoon, I = company.

[3.4.6] **Type:** may be identified with standard military notation or vehicle silhouette and label.

[3.4.7] **Weapon class:** as follows: A = Armour piercing, I = Infantry, H = High explosive direct, (H)= High explosive indirect, M = Mortar.

[3.4.8] **Stacking points:** see optional rule [16.3] REVISED STACKING; as indicated by pips trailing the attack factor in the upper left corner of the unit.

[3.4.9] **Organisation:** the unit may optionally be specifically identified centrally below the unit type or silhouette; platoon, company and battalion to the left of '/,' regimental or brigade identifier to the right.

[3.4.10] **Markers:** are provided to track the status of units, including dispersed markers of two denominations, spotted and opportunity spotted markers, wreck markers in two denominations and individual registration markers for each indirect fire unit.

[3.5] GAME EQUIPMENT INVENTORY

A complete game of the original *PanzerBlitz* game or later editions typically includes at least the following components:
1. three or four map boards
2. one set of game rules
3. two sets of units (384 pieces)
4. five (5) Situation Cards
5. designer's notes booklet
6. a single six (6) sided die.

Players will require a physical copy of one of these games to play the 'Case Orange' variant.

[3.6] GAME SCALE

Each game turn represents six (6) minutes of real time. Each hex, from side to side, represents 250m (~275 yds.)

[4.0] SEQUENCE OF PLAY

[4.1] THE GAME TURN

Like the original game the *'Case Orange'* variant is played in game turns, each player alternately attacking and moving in their own player turn; a complete game turn composed of both player turns. A game begins by placing the game turn marker in the turn one (1) position of the Situation Card turn record track, where the first player is also identified. Each game turn proceeds as follows:

[4.2] GAME TURN SEQUENCE

A. *GAME START:* Set-up both factions on map-board as per scenario instructions and place game turn marker on first turn position of game turn record track

B. *GAME TURN START*
Check for reinforcements arriving.

C. *FIRST PLAYER TURN*
1. *First Player Turn Begin*
First player resolves all friendly minefield attacks against second player units. If optional rule [16.5] HEAVY EQUIPMENT then decrement or remove friendly loading or unloading turn markers. Friendly eligible engineer units roll for bridge demolition.

2. *Combat Phase: Indirect Fire Segment*
Eligible first player indirect fire attacks are all declared first and then resolved individually in sequence.

3. *Combat Phase: Registration Segment*
First player indirect fire registration markers are placed or refreshed.

4. *Combat Phase: Direct Fire Segment*
Eligible first player direct fire attacks are declared and resolved individually, applying combat results and inverting firing units immediately, before next attack, if any, is declared; spotted markers are placed on friendly units firing within eligible opposing unit LOS.

5. *Movement Phase: Vehicle Segment*
First player moves friendly, face-up vehicle units; overrun attacks are conducted and resolved as moved; spotted markers are placed on friendly vehicle units moving within eligible opposing unit LOS.

6. *Movement Phase: Non-vehicle Segment*
First player moves any friendly, face-up non-vehicle units and then declares, conducts and resolves infantry assaults individually.

7. *First Player Turn End*
Current player: demotes ('DD') or removes ('D') dispersed markers; all undispersed, friendly, inverted units then turned face-up. *Opposing player:* spotted markers removed from mobile units; all 'opportunity spotted' markers replaced with spotted markers.

D. *SECOND PLAYER TURN*
The second player repeats step C for own units.

E. *GAME TURN END*
Advance the game turn marker one (1) position on the turn record track; repeat game turn; at end of last turn game ends.

F. *GAME END*
Victory is determined according to victory conditions of the scenario.

[4.3] GAME LENGTH

Game turns are repeated until game ends as specified by number of game turns on the turn record track of the scenario Situation Card; or until a player concedes. After the last game-turn play ceases and the results of the game are evaluated according to the victory conditions for the scenario.

[5.0] MOVEMENT

The current player may move any eligible friendly face-up units during each movement phase of the player turn.

PROCEDURE:

Each unit has a movement factor value printed on the face of the unit. Each unit or stack of units is moved on the map individually, tracing the path of movement through the hexagonal grid. Movement of a unit or stack into a hex 'costs' a certain number of movement factors. Units may also expend movement factors, indeed whole turns, loading, unloading or performing other actions.

Example: for each clear hex entered a unit expends one movement factor of the unit's allowance. Thus an eligible unit with a movement factor of six (6) could enter as many as six (6) clear hexes in a single movement phase. Exception: 'C' class units, see [5.4.11].

[5.1] MOVING UNITS

The current player may move any, all or no eligible, friendly units during the movement phase and each unit moved may expend as many or few movement factors as desired up to the unit's movement factor limit.

[5.1.1] Movement factors are neither saved from one player turn to the next nor transferred from unit to unit.

[5.1.2] Inverted units may not move during the movement phase.

[5.1.3] Units with a movement factor of one (1) may <u>always</u> move one (1) hex per turn in any terrain. Exception: Cliffs, see [15.2].

[5.1.4] Each unit is moved individually. Movement and overruns conducted by each unit in the movement phase must be completed before movement of another unit commences.

[5.1.5] Overrun movement is performed during the vehicle movement segment of the movement phase. Overrun attacks are resolved immediately in the vehicle movement segment in which the overrun(s) occur.

[5.2] MOVEMENT RESTRICTIONS

Each eligible unit may be moved once per friendly player movement phase and must complete all movement before any other unit is moved; A transporting vehicle and loaded passenger(s) are considered one unit.

[5.2.1] Units may move unimpeded through friendly units subject to stacking limits (exception: see [5.4] ROADS) but may <u>not</u>

move through or end movement in hexes occupied by enemy units. Exception: see [9.8] OVERRUN.

[5.2.2] The Scenario Card of the current scenario may place additional restrictions on the movement or availability of units.

[5.3] TERRAIN EFFECTS ON MOVEMENT

Some terrain requires more (or in the case of roads, fewer) movement factors than clear terrain to enter or leave, see [15.2] MOVEMENT COST TABLE.

[5.3.1] **Multi-terrain hex**: A unit entering any hex containing a combination of terrain types expends the movement factor cost the most costly terrain in the hex only and ignores the cost of other terrain types. Exception: leaving gully is cumulative.

[5.3.2] **Wheeled vehicles:** 'C' class vehicles have additional movement restrictions in certain terrain; see [5.4.11], [5.4.12], [5.4.13] and [5.4.17.1]. Note: but not 'C(I)' class.

[5.4] ROADS

A unit entering a hex through a road hex side expends one half (½) movement factor regardless of other terrain in the hex entered. Units traveling along roads may use this 'road movement rate' regardless of other terrain, freely traveling along marked roads through hexes and across hex sides that otherwise would impede or prohibit movement.

[5.4.1] A unit entering a road hex through a non-road hex side expends the movement factor cost for other terrain in the hex.

[5.4.2] Units may freely combine normal movement with movement at the road movement rate.

[5.4.3] A transporting vehicle and loaded passenger(s) travel together as one unit at the road movement rate.

[5.4.4] Units may move through other units and move along roads at the road or non-road movement rate as determined by stacking.

[5.4.5] Occupancy by two (3) or more vehicle stacking points negates road to entering vehicles; by four (4) or more stacking points negates road to others. Also see optional rule [16.3] REVISED STACKING.

[5.4.6] **Hex with negated road:** units must expend full non-road movement cost of other terrain to enter; ignore road when leaving.

[5.4.7] If entry into a hex or across a hex side is prohibited for a unit except by road movement, that unit may not enter such a hex or cross such a hex side to a hex negated by friendly units; vehicles units may also not leave such a hex by crossing an otherwise impassable hex side.

[5.4.8] Roads do not negate defence effects of other terrain in hex. Exception: roads negate defence effects of gullies for occupying vehicles traveling along road; treat as "other terrain in hex."

[5.4.9] **Highways:** Paved roads; as roads in all respects except unaffected by optional rule [16.1] SATURATED GROUND.

[5.4.10] **Tracks:** negate terrain, as road, but units moving along track expend movement factors as for clear terrain. Block markers and wrecks negate track. Occupancy by one (1) or more vehicle stacking points negates track to entering vehicles; by any two (2) or more

stacking points negates track to others. Also see optional rule [16.3] REVISED STACKING.

[5.4.11] **Clear, woods and village hex:** 'C' units expend two (2) movement factors to enter: others units one (1).

[5.4.12] **Broken and slope hexes:** 'C' class units expend four (4) movement factors to enter: others three (3): see [5.1.3].

[5.4.13] **Sand hex:** 'C' units expend four (4) movement factors to enter: others two (2).

[5.4.14] **Town hex:** All units expend one (1) movement factor to enter.

[5.4.15] **Hilltop hex:** As other terrain in hex.

[5.4.16] **Woods or broken hex sides** are impassable to vehicle units. Exception: vehicles travelling along roads or tracks, but not along gullies.

[5.4.17] **Gullies, wadis and streams:** Gullies, wadis and stream or streambed hexes represent low-level terrain not in line-of-sight from some other elevations. The terms "gullies," "wadis," "streams" and "streambeds" are interchangeable.

[5.4.17.1] Entering a gully expends only the movement factor cost of other terrain in the hex. Vehicles moving along or leaving a gully hex expend three (3), for 'C' class five (5), additional movement factors above the terrain cost of the hex entered.

[5.4.17.2] Hexes wherein a gully begins or ends (ie which have only one hex side crossed by a gully) are gullies.

[5.4.18] **Fords and bridges:** Fords are open sections of gully; identical to clear terrain for all purposes. Hexes wherein a road or track crosses a gully are treated as clear terrain for units traveling along the road or track and as gully for others.

[5.4.19] **Water hex:** Whether in a lake, river or at sea a water hex is impassable to all units. Exception: see optional rule [16.2] WINTER.

[5.4.20] **Swamp hex:** unless travelling along unblocked roads or tracks vehicle units may not enter; others expend one (1) movement factor.

[5.5] BLOCKS

[5.5.1] Block markers provided by the Situation Card are initially placed on the map-board during set-up, one per hex, and may not be subsequently placed, moved or removed. A unit, friendly or enemy, entering a blocked hex must begin its move in an adjacent hex and immediately halt. Note: block markers also replace a fortification when destroyed.

[5.5.2] Block markers negate roads; impassable hexes containing block markers and impassable hex sides adjacent to block markers ignore printed roads and tracks.

[5.5.3] Blocks have no line-of-sight or combat effect; though consume two (2) stacking points. See optional rule [16.3] REVISED STACKING.

[5.6] WRECKS

When eliminated armoured vehicle units are removed wreck markers of appropriate stacking point denomination replace them on the map-board; these may not subsequently be moved or removed. Example: a Soviet tank company is replaced by a two (2) stacking point wreck. See [7.0] STACKING.

[5.6.1] Hexes containing wrecks block line-of-sight and count against stacking limits but have no combat effect. Wrecks negate roads and tracks for all purposes.

[5.7] TRANSPORTING UNITS

Some eligible vehicles may load, transport or 'transport and unload' an eligible passenger unit in a single friendly movement phase; a 'transporting and unloading' unit may move up to half (½) its movement allowance before or after unloading but not both. The passenger unit may not move or fire during the player phase in which it loads or unloads. It travels with and directly under the transporting unit.

[5.7.1] When loaded transporting and passenger units are treated as a single unit with only transporting unit characteristics; it moves, fires, stacks, is spotted, attacks and defends accordingly. Combat results affecting the transporting unit are applied to the passenger unit equally and immediately. Exception: A transport suffering a DD result will also immediately apply the result to and unload its passenger unit in the current hex at no movement factor cost. If this violates the current hex stacking limit the owning player must remove the unloading transporting or passenger unit from play.

[5.7.2] Transporting and passenger units are attacked separately when unloaded. If a unit attracts opportunity fire by unloading it is considered unloaded for the purposes of combat while the opposite is true when the same situation occurs when loading. A transporting unit entering a hex, however, is always considered loaded even if unloading in that hex.

[5.7.3] Transporting units may fire while loading or unloading passengers: transported passengers may never fire. Exception: Transported observer units may observe for indirect fire on turns when loaded but the transporting unit must then be inverted.

[5.7.4] Only non-vehicle units may be transported and only 'C' or 'C(I)' class units may transport. Exception: cavalry may not be transported.

[5.7.5] Armoured vehicles: some factions have doctrines permitting some non-'C' class (neither 'C' nor 'C(I)' class) armoured vehicles to carry only infantry or engineer units. In this case the passenger unit is a valid target with a defence factor of one (1) when attacked by direct or indirect fire. Combat results suffered by a transporting unit apply also to the passenger but not by passenger to transport. A DD result on transport or passenger forces the passenger unit to immediately unload in current hex at no movement factor cost.

[5.7.6] Transporting units may not unload in a hex if doing so violates stacking limit.

[5.7.7] Units transporting are stacked directly above passenger units. When unloaded the transporting unit is placed beneath all other transportable unloaded units in the hex.

[5.7.8] When loading or unloading units in improved positions or fortifications the transporting unit remains above the respective marker.

[5.8] ENTERING/EXITING THE GAME

During the course of play units might optionally enter the map as [16.11] REINFORCEMENTS

while other units may exit the map to fulfil victory conditions, as noted on the Scenario Card.

[5.8.1] A unit may exit the map only if it is eligible to move, the Scenario Card specifically allows it and it exits via a hex containing a road leading off the map, or from a hex directed by the Scenario Card. A unit exiting via eligible road expends the road movement rate to leave. Exited units are removed and may not return to play; they are not considered eliminated and may count toward scenario victory conditions.

A unit must enter the map in accordance with optional rule [16.11] REINFORCEMENTS..

[6.0] OPPORTUNITY FIRE

When moving, each spotted enemy unit may be attacked on entry into a hex in line-of-sight and within half (½) range of an eligible direct fire unit. This attack suffers a die roll modifier of plus one (+1) in addition to modifiers for direct fire in the entered hex. Exception: enemy units conducting overrun attacks are immune to opportunity fire when entering the hex occupied by the unit overrun.

[6.1.1] Only one (1) eligible, friendly unit may conduct each opportunity fire attack, no units may combine opportunity fire.

[6.1.2] Exception: eligible units together in a hex adjacent to the target unit may be combined in a single direct fire attack using individually adjusted attack factors.

[6.1.3] The firing player may require the moving player to trace individual hexes during movement but must announce an opportunity fire attack on an eligible hex traversed by the moving unit before the next individual hex move is traced.

[6.2] INTERDICTION

Each eligible indirect fire unit may conduct a single 'interdiction' indirect fire attack during the enemy player's movement phase on entry into a hex in line-of-sight and of an eligible, observing unit and occupied by the indirect fire unit's registration marker. Modifiers for other terrain in the target hex apply and are cumulative; indirect fire is conducted normally. Optional: see [16.9] HORSESHOES.

[6.2.1] For eligibility of observing, see [12.2] OBSERVATION; for attacking, any eligible indirect fire unit with a registration marker in the observed target hex.

[6.2.2] Only one eligible unit may conduct each interdiction attack; interdiction attacks may not be combined, even among units with registration markers in the same target hex.

[6.3] MOVE CONTINUES

After opportunity fire or interdiction is resolved the attacking unit is inverted and remains so until the end of the owning player's next player turn. Attacked units that suffer no combat result may continue moving.

[7.0] STACKING

When more than one friendly unit occupies a single hex, the units are collectively referred to as a 'stack.' There is a limit to the volume of units that may combine in a single stack and actions exceeding it are prohibited under most circumstances.

[7.1] STACKING LIMIT

Only units with a cumulative stacking point value equal to or less than the stacking limit may co-occupy a hex on the map. Stacking limits apply at all times including during movement. Units may not enter or move through hexes where the stacking limit would be exceeded by the sum of friendly units, blocks, wrecks or combinations thereof; any action resulting in occupation of any hex in excess of the stacking limit is prohibited.

[7.1.1] Exception: overrunning units may exceed the combined stacking limit in the overrun target hex only but not in the entry hex, exit hex or otherwise during movement.

[7.1.2] **Stacking point limit:** four (4) or less. Each company-sized unit requires two (2) and other size unit one (1) stacking point each.

[7.1.3] Minefield, improved position and fortification markers do not count towards stacking limits; block and wreck markers do. Note: units below fortification markers have separate stacking allowance.

[8.0] SPOTTING

Units occupying non-concealing terrain in line-of-sight of an eligible enemy unit are always spotted. Spotting is required, however, for units occupying concealing terrain, even when in line-of-sight, and they may not be fired upon unless spotted A unit in or entering a concealing terrain hex is not spotted unless adjacent to an eligible opposing unit or in line-of-sight of an eligible opposing unit while entering or firing from the hex (see optional rules [16.4] CONCEALED MOVEMENT and [16.6] REVEALED MOVEMENT.)

[8.1.1] A 'spotted' marker is immediately placed on a spotted unit; if spotted firing during opponent's movement phase an 'opportunity spotted' marker is placed instead.

[8.1.2] A spotted marker is immediately removed when the spotted unit enters non-concealing terrain or no eligible opposing unit remains in line-of-sight.

[8.1.3] At the conclusion of the opposing player's player turn, friendly 'opportunity spotted' markers are replaced with 'spotted' markers while existing 'spotted' markers on friendly mobile units are removed.

[8.1.4] A dispersed or 'C' class unit may not spot ('C(I)' units may.)

[8.1.5] A unit that unloads from a spotted transport is also spotted.

[8.2] LINE-OF-SIGHT

Line-of-sight (LOS) must be established for spotting, direct fire between firing unit and target and observation for indirect fire. LOS is defined as a perfectly straight line from the centre of the sighting unit's hex to the centre of the target hex.

If the LOS intersects a blocking hex side it is blocked; woods, town, broken, hilltop and non-adjacent slope or dune hex sides block line-of-sight for units sighting at ground level. For elevation effects on line-of-sight see [15.5] TARGET ELEVATION TABLE.

[8.2.1.1] LOS is not blocked when crossing a slope, dune or hilltop hex side adjacent to sighting or target hex.

[8.2.1.2] Units in gullies are not in line-of-sight of; ground level units unless adjacent or units on slopes unless within two (2) hexes or units

on hilltops unless within four (4) hexes.

[8.2.2] Where the LOS intersects a hex side exactly lengthwise, the hex side blocks LOS unless it is a slope hex side touching a hilltop.

[8.2.3] Where LOS intersects exactly the 'corner' of a hex where a blocking and a non-blocking hex side meet the LOS is not blocked.

[8.2.4] Adjacent units are always in line-of-sight irrespective of blocking terrain.

[9.0] COMBAT

Attacks may be declared on enemy units during the appropriate segment of the friendly player's combat phase and are resolved individually. The player directing attacks is the 'attacker' and the player whose units are attacked is the 'defender.' Only defending units suffer adverse consequences as a result of combat. Exception: [9.7] Assault.

[9.1.1] Units may attack only if the adjusted attack factor combat ratio equals or exceeds the lowest combat ratio column of the combat results table. This restriction applies before column shifts are taken into account.

[9.2] ELEVATION EFFECTS ON COMBAT

[9.2.1] **Slope and hilltop hexes:** at half (½) range or less all unit classes direct fire attacks and assaults are subject to a column shift of combat ratio for each level, 'uphill' or 'downhill,' the line-of-sight rises or falls from attacking unit to target; a minus one [-1] column shift applies for each level 'uphill' and [+1] for each 'down.'

Example: from ground level and at half (½) range or less such attacks on units occupying slope or hilltop hexes suffer column shifts of minus one [-1] and minus two [-2] respectively. Conversely from hilltop to ground such attacks would enjoy plus two [+2] shifts; from slope to ground plus one [+1] shift.

[9.2.2] Exception: attacking units at the same elevation as the target hex or units attacking adjacent slope hexes when not attacking across a slope hex side.

[9.2.3] **Indirect fire** attacks are not adjusted or shifted due to elevation differences.

[9.3] TERRAIN EFFECTS ON COMBAT

[9.3.1] Defending units in **woods and broken hexes** enjoy a die roll modifier of plus one (+1) when attacked by assault or direct fire.

[9.3.2] Defending units in **village and town hexes** enjoy a die roll modifier of plus one (+1) when attacked by assault, direct or indirect fire.

[9.3.3] A direct fire attack conducted against any **non-vehicle unit in a town or improved position** must attack all occupying non-vehicle units in a single attack against the sum of their individually adjusted defence factors; combat results applying to all. Exception: see [11.3] IRON SIGHTS. Indirect fire attacks are conducted normally.

[9.3.4] Non-vehicle units in a **town or improved position** also occupied by any 'A' class vehicle enjoy an additional die roll modifier of plus one (+1) when attacked by assault or direct fire.

[9.3.5] **'Hull down:'** When conducting direct fire and attacker's LOS crosses slope or dune hex side adjacent to defending 'A' class

vehicle or artillery unit, the target enjoys a plus one (+1) 'hull down' die roll modifier.

[9.3.6] **Multiple terrain combat effects**: unlike effects on movement, are cumulative; when applying multiple die roll modifiers the net modifier is used to resolve combat. Example: village in woods enjoys net plus two (+2) die roll modifier against assault and direct fire attacks. Example: town hex on hilltop attacked from slope enjoys cumulative town _and_ elevation combat effects.

[9.4] DECLARING ATTACKS

[9.4.1] At the beginning of the player's indirect fire segment the player must declare _all_ indirect fire before resolving _any_ indirect fire attacks. The player must state the firing unit(s), target unit(s) and type of indirect fire in each case.

[9.4.2] No more than one (1) indirect fire attack may be conducted against each enemy unit in any indirect fire segment.

[9.4.3] Each enemy occupied hex may suffer no more than one (1) overrun and one (1) assault attack in the same player turn.

[9.5] DIRECT FIRE

During the direct fire segment of the friendly combat phase:

[9.5.1] Any eligible unit may conduct a single direct fire attack against any spotted enemy armoured vehicle unit in line-of-sight and within range, using its adjusted attack factor.

[9.5.2] _Any number_ of eligible units may conduct a single direct fire attack against any spotted enemy unit, not an armoured vehicle, in line-of-sight and within range, totalling their individually adjusted attack factors.

[9.5.3] Exception to both: see [10.4.1].

PROCEDURE:
When the current player initiates a direct fire attack the following steps are undertaken:

1. Declare a single direct fire attack as described in [9.5.1] or [9.5.2] above.
2. Determine the adjusted attack factor of attacking units by weapon and target type; for a multi-unit attack per [9.5.2] individually adjusted attack factors are totalled. The defence factor of the defending unit alone is used.
3. Determine combat ratio and roll for result per [9.9] RESOLVING COMBAT.
4. Declare next direct fire attack or end direct fire segment.

[9.6] INDIRECT FIRE

During the indirect fire segment of the friendly combat phase:

Indirect fire is conducted by '(H)' or 'M' class units only. Attacks occur during the indirect fire segment of the friendly combat phase. Exception: An (H)' class unit in direct line-of-sight to target must instead conduct direct fire in the direct fire segment of the friendly combat phase.

[9.6.1] Each enemy unit may only be attacked once per friendly indirect fire segment, by indirect fire attacks of all types, in practice limiting attacks to one per hex. Friendly indirect fire attacks may only be aggregated where registration markers for identical types of indirect fire units are already present in a single target hex (see 'party line') or when

using 'barrage.' Aggregate attacks are still adjusted for target type and resolved as individual discrete attacks against each enemy unit in the target hex.

[9.6.2] Indirect fire is resolved against each enemy unit in the target hex, in successive attacks, one per enemy unit, at the adjusted attack factor for each individual attack and target type.

[9.6.3] '(H)' class units in direct line-of-sight of an attacked enemy hex may only conduct direct fire attacks; and only against one (1) unit in the hex and at half (½) its unadjusted attack factor against all target types. When attacking a target in direct line-of-sight 'M' class units conduct normal indirect fire.

[9.6.4] After conducting indirect fire firing units are inverted; includes 'party line' and barrage.

[9.6.5] **Indirect fire segment:** occurs at the beginning of the combat phase of the player turn and commences with the declaration of all indirect fire attacks by type and target before any are resolved; registered, 'party line,' barrage, 'rolling thunder' and 'shoot from the hip' attacks are then conducted and resolved successively, inverting firing units and applying combat results as each attack is completed.

[9.6.6] During the **registration segment** each eligible indirect fire unit may place or replace a registration marker on the map-board at the owning player's discretion, but only in spotted hexes in current line-of-sight of eligible observing units.

[9.7] ASSAULT

At the conclusion of the non-vehicle segment of the friendly movement phase:

[9.7.1] _Any number_ of eligible infantry, engineer and cavalry units may assault an adjacent enemy unit. Assault attacks enjoy a minus two (-2) die roll modifier and possible column shifts.

[9.7.2] Assaulting units may have moved or may have been transported and/or unloaded in the same friendly player turn as their assault.

[9.7.3] Assaulting units may attack any type of defending unit in any terrain. Exception: may not assault across 'cliff' or 'escarpment' hex sides.

PROCEDURE:
1. Defence factors of all units in the assaulted hex are totalled. Unbreached fortifications use the printed fortification defence factor.
2. Attack factors of all assaulting units are totaled as 'normal' for all targets including armored vehicles and fortifications.
3. Combat modifiers apply cumulatively for terrain and/or elevation of the target hex. Modifiers for towns and column shifts for improved position apply to units defending against assault.
4. Assaulting units always enjoy an additional minus two (-2) die roll modifier.
5. If eligible apply combat ratio column shift of one (1) or more columns to the right for engineers or multi-hex attack, see [9.7.4] and [11.0].
6. Determine combat ratio and roll for result per [9.9] RESOLVING COMBAT.
7. Check for and apply combat result, if any, to all attacking units, see [11.4] OWN

GOAL.

8. Assaulting units are inverted.

No unit may use the road movement rate and make an assault in the same player turn. Russian cavalry may not move more than one hex in a turn in which it is to be used for an assault.

[9.7.4] Assaulting infantry or cavalry and **engineer units**, when stacked together, and assaulting the same hex, enjoy a combat results column shift of one [+1] to the right. At least one (1) engineer unit must be stacked with at least one (1) infantry or cavalry unit, in an assaulting hex.

[9.8] OVERRUN

During the vehicle movement segment of the friendly player turn:

[9.8.1] A_ny number_ of eligible armoured vehicle units with sufficient movement allowance may conduct overrun attacks against a single clear terrain hex occupied by enemy units.

[9.8.2] Overrunning units do move and attack in the same player turn.

[9.8.3] Each defending hex may only be overrun once per vehicle movement segment.

PROCEDURE:
When the current player conducts an overrun attack the following steps are undertaken:

1. Overrunning armoured vehicle units move adjacent to, over and through the target hex exiting directly opposite the entry hex and halting in an exit hex not occupied by enemy units. Overrunning units do not need to share the same entry and exit hexes in a single overrun attack but stacking limits apply except in the target hex.
2. The combined attack factors are not subject to adjustment via the weapon effectiveness chart. All overrunning units and all overrun units simply total their respective attack and defence factors to calculate the combat ratio.
3. The overrunning units enjoy a minus two (-2) die roll modifier and a combat ratio column shift of one (1) column to the right.
4. Determine combat ratio and roll for result per [9.9] RESOLVING COMBAT.
5. Overrunning units are inverted.

[9.8.4] Overrunning units may not use the road movement rate during the same movement segment. '(H)' and 'M' class armored vehicles may not make overrun attacks and 'C(I)' class vehicle units may not overrun hexes occupied by armoured vehicles.

[9.8.5] Hexes occupied by a block, wreck, minefield, improved position or fortification marker may not be overrun; Exception: see optional rule [16.10] BIGFOOT.

[9.9] RESOLVING COMBAT

Combat is resolved for each separate attack using a die roll cross-referenced with the combat ratio, the relative strength of the attack, on the [15.1] COMBAT RESULTS TABLE. Attack and defence factors are adjusted variously for weapon/target, tactic and terrain as described above for each individual attack type. They are all resolved as

follows:

PROCEDURE:

1. The sum of adjusted attack factors and defence factors are used to determine a combat ratio; rounding down. Example: adjusted attack factor of 12 and defence factor of 5 yields combat ratio of 2:1.

2. This ratio identifies the corresponding column of the combat results table to be used.

3. The ratio column on the combat results table is corrected for any terrain or tactical effect column shifts, left or right, which apply.

4. The net of all applicable die roll modifiers is determined and noted.

5. The attacker rolls a single 1D6 die, applying the net of eligible die roll modifiers, and locates the resultant row.

6. The cross-reference of the row with the combat ratio column, corrected by the net of eligible column shifts, yields the combat result.

7. The combat result is applied immediately to the defending unit, before conducting other attacks.

8. Attacking units are inverted.

[9.10] DISPERSED

[9.10.1] **'D' result:** If the unit already bears a 'D' marker, place a 'DD' marker in its place; otherwise place a 'D' marker on and invert the unit if face-up. **'DD' result:** If the unit already bears a 'DD' marker, the unit is eliminated and immediately removed from play; otherwise place a 'DD' marker on and invert the unit if face-up; remove 'D' marker if present.

[9.10.2] Friendly 'D' markers are removed and friendly 'DD' markers demoted to 'D' markers at the conclusion of each friendly player turn before undispersed friendly inverted units are turned face-up.

[9.10.3] Dispersed units revert to face-up at the end of the same player turn the 'D' marker is removed.

[10.0] FORTIFIED POSITIONS

'Dug-in,' improved position and fortification markers are set-up only as directed by a scenario.

[10.1.1] Units above a fortified position marker attack and defend normally per other terrain in the hex.

[10.1.2] Infantry, engineer and cavalry units may leave and enter improved positions and fortifications freely, subject to stacking limits and other terrain movement costs of the hex.

[10.1.3] Unoccupied improved position and fortifications may be entered and occupied by eligible opposing units.

[10.1.4] Fortified positions have no effect on line-of-sight or movement. The total of units above and below the fortified position marker must remain within stacking limit. Clarification: see [10.4.7].

[10.2] DUG-IN

'Dug-in' markers represent hasty, improvised fieldworks of the infantry units set-up directly under them only. Scenario note: not placed in town hexes. Units under 'dug-in' markers enjoy a plus one (+1) die roll modifier against direct and indirect fire attacks. Markers are immediately removed when all underlying units have moved.

[10.3] IMPROVED POSITION

Improved position markers represent open fieldworks of earth, wire and timber; not placed with mines or other improved positions.

[10.3.1] Units below an improved position enjoy a combat ratio column shift of one [-1] to the left against all attacks, assault, direct and indirect fire and overrun (see optional [16.10] BIGFOOT.)

[10.3.2] The rule permitting multi-unit direct fire attacks on any non-armoured vehicle target applies to all units below an improved position.

[10.3.3] Each indirect fire attack against improved position hexes is applied against all units in the hex, above and below the marker; the [-1] column shift to the left applies only to units below the marker.

[10.3.4] Modifiers for other terrain apply and are cumulative; when in town hexes either the non-vehicle units above or below an improved position are attacked collectively by direct fire, but not both in a single attack.

[10.3.5] Only artillery and vehicle units originally stipulated by the scenario or set-up initially by the owning player may be placed under an improved position; such units may leave or be removed from improved positions but may not enter or be placed in them.

[10.4] FORTIFICATIONS

A fortification marker represents closed casements and pillboxes of reinforced concrete and bears the hard target defence factor used against all attacks; not placed with mines or other fortifications.

[10.4.1] A unit under an unbreached fortification marker attacks normally but always defends with the fortification defence factor as a hard target against any attack; direct and indirect fire attacks are not conducted against individual units under an unbreached fortification. See also Assault.

[10.4.2] Indirect fire is conducted normally against all units above the fortification marker and a single attack added, adjusted for hard target, on the fortification itself.

[10.4.3] All unbreached fortification attacks ignore other terrain in the hex; 'D' and 'DD' results are also ignored; 'X' result 'breaches' fortification and applies 'D' to each occupying unit.

[10.4.4] When 'breached;' fortification markers are inverted; direct and indirect fire attacks may be conducted against individual units under a 'breached' fortification using the hard target defence factor shown; assault may be conducted against units occupying 'breached' fortification as if in improved position.

[10.4.5] Only artillery and vehicle units stipulated by the scenario and set-up originally by the owning player may be placed below a fortification; such units may leave or be removed from fortifications but may not enter or be placed in them.

[10.4.6] Either player may attack unoccupied fortifications; they are attacked normally and can be breached on an 'X' result but not removed.

[10.4.7] Fortification stacking limits apply collectively to all units above and below fortification markers; above limit is the remainder of normal stacking limit less the 'below' allowance. The below stacking allowance is scenario defined; default two (2) stacking points only.

[10.4.8] A scenario may specify fortification starting units and stacking allowances. Example: "One (1) 75mm battery only" or "two (2) stacking points of units," a scenario might read, "of the owning player's choice"

[11.0] DIRECT FIRE TACTICS

[11.1] MULTI-HEX ASSAULT

Eligible units from more than one adjacent hex may attack one (1) enemy occupied hex in a single assault. This 'multi-hex assault,' may be conducted only if all the following conditions are met:

1. All the assaulting units are eligible to conduct an assault.
2. All the assaulting units' individually adjusted attack factors are combined in a single combat ratio.

If a multi-hex attack is conducted, the attacker receives a combat ratio column shift of one (1) column to the right for each hex in excess of one (1) containing units attacking the defending hex. Example: if attacking units were in three adjacent hexes, the attacker would receive two column shifts.

[11.2] ARMOURED ASSAULT

Infantry and engineer units transported on eligible armoured vehicles may 'dismount' in the entry hex of a subsequent overrun by their carriers. During the ensuing non-vehicle movement segment the dismounted infantry may assault the unit(s) previously overrun by the vehicles.

[11.3] IRON SIGHTS

Direct fire attacks conducted by individual 'H' class units at half (½) range or less against units in improved positions, towns and fortifications enjoy a minus one (-1) die roll modifier and may target individual non-vehicle units in improved positions and towns.

[11.4] OWN GOAL

Assaulting units only sometimes suffer combat results when attacking at low combat ratios. Results marked in grey on [15.1] COMBAT RESULTS TABLE are applied immediately to assaulting units when rolled; defending units in these cases are unaffected.

[12.0] INDIRECT FIRE TACTICS

[12.1] REGISTRATION

One (1) friendly registration marker may be placed or replaced per turn for each friendly, undispersed indirect fire unit unless otherwise stipulated in the scenario. Markers are placed during the registration segment by the owning player; only on empty or spotted hexes and in current line-of-sight of undispersed, eligible, friendly observing units and within range of the parent unit.

[12.1.1] Friendly registration markers for more than one friendly indirect fire unit may not be placed in a single hex and consequently indirect fire attacks may not be aggregated. Exception: see 'party line' and barrage.

[12.1.2] Registration markers may not be placed in concealing terrain hexes containing unspotted enemy units unless a spotted enemy unit is present. Unspotted units may

enter hexes containing enemy registration markers (see also [6.2] Interdiction.)

[12.1.3] If a registration marker parent unit is loaded or moves <u>or</u> if all eligible observing units are 'dispersed' or eliminated the marker is immediately removed; it may not be placed again in until the registration segment of the owning player's ensuing indirect fire segment.

[12.2] OBSERVATION

Observation for indirect fire is performed by eligible observer units in line-of-sight to spotted target hexes. Scenarios may stipulate observer unit types or specific observer units for certain classes or groups of indirect fire unit(s). Observer units remain eligible to observe when inverted.

[12.2.1] Unless otherwise stated rifle companies and platoons may observe for 'M' class units of less than 120mm. 120mm and greater 'M' class units and all '(H)' class units require specialist forward observer (FO) units; revised scenarios retask original game CP units.

[12.3] PARTY LINE

Indirect fire conducted by specific groups of eligible indirect fire units may be aggregated in a single target hex when all eligible firing units are of identical type and <u>all</u> have registration markers in the target hex. The aggregate attack factor is adjusted and resolved individually against each occupying enemy unit.

[12.3.1] A 'party line' attack may be conducted against <u>any</u> currently spotted target hex in line-of-sight of an eligible, friendly face-up observing unit and containing registration markers placed on behalf of <u>all</u> firing units.

[12.3.2] The 'party line' attack may include the aggregate unadjusted attack factors of any or all eligible, undispersed, face-up, friendly '(H)' or 'M' class group members within range.

[12.3.3] Friendly registration markers for more than one friendly 'party line' eligible unit may be placed in a single hex during the registration segment for an attack in the next ensuing indirect fire segment..

[12.3.4] Only units specifically designated by the scenario may conduct or observe for 'party line.' Example: "Any three US medium howitzer batteries with a regimental forward observer" or "any three 'rolling thunder' units of the same type with specific observing unit," a scenario might read, "may combine their indirect fire with 'party line.'"

[12.4] BARRAGE

Indirect fire conducted by certain groups of indirect fire units can be aggregated into a single barrage attack against a target hex when eligibility of firing units meets stipulations of scenario and <u>any</u> have a registration marker in the target hex. The aggregate attack factor is adjusted and resolved individually against each occupying enemy unit.

[12.4.1] A barrage attack may be conducted against <u>any</u> currently spotted target hex in line-of-sight of an eligible, friendly face-up observing unit and containing a registration marker placed on behalf of <u>any</u> member of the barrage group.

[12.4.2] The barrage attack may include the aggregate unadjusted attack factors of any or all eligible, undispersed, face-up, friendly '(H)'

or 'M' class group member units within range.

[12.4.3] Only units specifically designated by the scenario may conduct or observe for barrage. Example: "Any three Soviet medium mortar companies and one (1) Soviet heavy mortar company with any guard's rifle company observing" or "any three US medium howitzer batteries with any observing rifle platoon" or "any three 'rolling thunder' units of the same type with specific observing FO unit," a scenario might read, "may combine their indirect fire in barrage[4]."

[12.5] SHOOT FROM THE HIP

Any eligible indirect fire unit may declare and conduct an *ad hoc* indirect fire attack against a spotted target hex within range and in line-of-sight of an eligible observing unit during the friendly indirect fire segment.

Each 'shoot from the hip' attack suffers a die roll modifier of plus two (+2) for '(H)' class and plus one (+1) for 'M' class units and is otherwise conducted normally as indirect fire; it does <u>not</u> require the unit to have a registration marker in the target hex. See also, [16.9] HORSESHOES.

[12.5.1] 'Shoot from the hip' attacks may never use 'barrage' or be combined with attacks of other units of any kind.

[12.5.2] After firing the attacking unit is inverted <u>and</u> its registration marker removed.

[12.5.3] Any eligible observing unit may conduct 'Shoot from the hip' observation. Example: "Any Soviet rifle company" or "any US infantry unit" or "any (CP) unit," a scenario might read, "may observe for faction on-board artillery."

[12.6] HEADROOM
OPTIONAL

Indirect fire attacks against 'C(I)' and '(H)' class vehicle units enjoy a minus one (-1) die roll modifier.

[13.0] ENGINEERS

Engineer units may additionally be used to perform non-combat actions; lift minefields, repair or destroy bridges. Engineer units also provide a column shift on the combat results table when participating in eligible, friendly assault attacks.

[13.1] MINES AND MINEFIELDS

Mine markers of various denominations provided by the Situation Card are placed on the map-board during initial set-up, one per hex, and may not be subsequently moved. Any unit, friendly or enemy, entering a hex containing a mine marker must immediately stop and is inverted. Mine markers may not be placed with improved position or fortification markers.

[13.1.1] At the beginning of the player turn the owning player conducts minefield attacks against *any* unit occupying the mined hex. The minefield attack is conducted with no adjustments or modifiers at 2:1, 1:1 or 1:2 combat ratios per the denomination of the mine marker.

[13.1.2] A unit receiving a 'dispersed' result may not move from the hex and will suffer minefield attack again in subsequent turn.

[13.1.3] Minefields remain active irrespective of attack conducted but may be removed by an eligible engineer unit.

[13.1.4] Minefield **removal:** may be performed by an eligible engineer unit adjacent to the minefield; roll for removal in lieu of movement. The engineer unit is inverted as if moved.

[13.1.5] An engineer may demote the minefield marker on a roll of 1-3 with single six (6) sided die. If successful mine marker is demoted to the next lower denomination; lowest denomination markers are removed.

[13.1.6] Stacking effect of mine markers is nil.

[13.2] BRIDGES

Bridges may be of wood, concrete or steel; as identified by the Situation Card or on the map-board. An engineer unit must expend a number of consecutive, complete turns on the bridge hex (2-wood, 3-concrete and 4-steel) for one (1) demolition roll. A single 1D6 is rolled and the bridge is demolished on a result of 1-5; a block marker is placed immediately and, if this exceeds the stacking limit, friendly unit stacking excess is eliminated. On demolition failure process resets to beginning.

[13.2.1] If no revised scenario notes apply in original game all bridges are concrete.

[14.0] CREDITS

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[14.1] REFERENCES

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[15.1] COMBAT RESULTS TABLE

				Attack/Defence Ratio			
Die	1:4	1:3	1:2	1:1	2:1	3:1	4:1
-2	DD	DD	X	X	X	X	X
-1	D	DD	X	X	X	X	X
0	D	D	DD	DD	X	X	X
1	–	D	D	DD	X	X	X
2	–	–	D	D	DD	X	X
3	–	–	–	D	DD	X	X
4	D	–	–	–	D	DD	X
5	DD	D	–	–	D	DD	X
6	X	DD	D	–	–	–	X DD
7	X	X	DD	D	–	–	D

[15.1.1] The combat odds ratio is used for entry into the combat results table along with the roll of a single six-sided (6) die. Results in blue from *Panzer Leader/Arab-Israeli Wars*; *AIW* 7:1 column excluded. Grey results apply to assaulting units only; see [11.4] OWN GOAL.

[15.2] MOVEMENT COST TABLE

Movement Cost		
To enter hex or cross hex side	*Movement factor cost*	*Conditions*
Clear	1	'C' class units 2
Woods	2	
Town	1	Non-vehicle unit defence factor *doubled*
Slope	3	'C' class units 4
Hilltop	Other terrain	
Gully, wadi or stream	Other terrain	Costs 3 to leave; 'C' class units 4 to leave
Sand	2	'C' class units 4
Broken	3	'C' class units 4
Track hex via track hex side	As clear hex	Stacking restrictions
Track hex via non-track hex side	Other terrain	Stacking restrictions
Road hex via road hex side	½	Stacking restrictions
Road hex via non-road hex side	Other terrain	Stacking restrictions
Woods or broken hex side	Other terrain of hex entered	Impassable to vehicles except on road or track; subject to stacking restrictions
Slope hex side	Other terrain of hex entered	
Cliff or escarpment hex side	Nil	Impassable to all units

[15.3] COMBAT COLUMN SHIFTS

Column shifts	
Direct fire/assault uphill two levels at ½ range or less	-2
Unit under improved position marker	-1
Direct fire/assault uphill; one level at ½ range or less/two levels at more than ½ range	-1
Overrun	+1
Engineer and infantry assault from same hex; per assault	+1
Multi-hex assault; per hex above one (1) hexes	+1
Direct fire/assault downhill; one level at ½ range or less/two levels at more than ½ range	+1
Direct fire/assault downhill two levels at ½ range or less	+2

[15.4] WEAPON EFFECTIVENESS CHART

WEC				
	Target type			
Firing by…	Armoured vehicle (and 'C(I)' class)		Hard (fortification)	Other (and 'C' class)
	At ½ range or less	At greater than ½ range	At all ranges	At all ranges
I	**Normal** Assault only	Nil	**Normal** Assault only	**Normal**
A	**Double**	**Normal**	**Half**	**Half**
H	**Normal**	**Half**	**Normal**	**Normal**
(H)	**Half**	**Half**	**Half**	**Normal**
M	**Half**	**Half**	**Half**	**Normal**

[15.4.1] All direct and indirect fire attacks use the weapon effectiveness chart to determine an 'adjusted attack factor' which is applied, along with terrain adjustments, to the defender's attack factor to determine a combat odds ratio.

[15.4.2] '(H)' and 'M' class entries apply to direct <u>and</u> indirect fire attacks; when indirect fire a separate attack is made against each unit in the target hex with individually adjusted attack factor values.

[15.5] TARGET ELEVATION TABLE

TET						
	Direct fire attack factor effect					
	Obstructed by hex side…					
Firing from…	Ground		Slope		Hilltop	
	Range					
	½ or less	More than ½	½ or less	More than ½	½ or less	More than ½
Ground	Nil	[-1]	Nil	[-2]	[-1]	
	All		*Slope/hilltop; any crossed adjacent*		*Intervening hilltop; slope ½ or less; non-hilltop crossed adjacent*	
Slope	[+1]	Nil	Nil		[-1]	Nil
	Slope; any crossed adjacent		*Slope/hilltop*		*Intervening hilltop; non-hilltop crossed adjacent*	
Hilltop	[+2]	[+1]	[+1]	Nil	Nil	
	Intervening hilltop; slope ½ or more; non-hilltop crossed adjacent		*Intervening hilltop; non-hilltop crossed adjacent*		*Non-slope/hilltop crossed*	

[15.5.1] **'Intervening hilltop:'** hilltop hex side not immediately adjacent to the firing *or* target hex. **'Crossed adjacent:'** a hex side obstruction which is crossed by the firing unit's line-of-sight and is immediately adjacent to the firing *or* target hex. **'slope ½ or less; slope ½ or more:'** a slope hex side which is closer than (less,) beyond (more) or exactly at the midpoint (½) of the distance to the target hex on *all* possible shortest traced paths of hexes counting from the firing unit (0) to the target hex as when calculating range.

[15.6] COMBAT DIE ROLL MODIFIERS

Die roll modifiers	
Overrun or assault	-2
Target dispersed	-1
Defender in broken, woods, town, village or swamp	+1
Defender in town hex occupied by 'A' class vehicle unit	+1
Attacker's LOS crosses slope or dune hex side adjacent to defending 'A' class vehicle or artillery unit	+1