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## 1.0 INTRODUCTION

The Battle of Keren was one of the pivotal battles in East Africa during the Second World War. The

Italian units, particularly the *Savoia Grenadiers* had fought so well that the Commonwealth forces had to conduct three assaults to break the Italians' positions. Indeed, the *Savoia Grenadiers* were not dislodged from their hilltop positions, and were only compelled to surrender after being surrounded, when other Italian positions elsewhere had fallen. But despite their ultimate defeat, the Battle of Keren is regarded as one of the Italian Army's most impressive battles during World War II.

## 2.0 GAME COMPONENTS

This game is complete if it includes these rules, one counter sheet (228 counters), and one map of the Keren area of Eritrea (which includes all relevant charts and tables necessary for game play). Players will need to provide one 6-sided die.

#### 2.1 Maps

Each hexagon encompasses about 200 meters across. The map area portrays the Dongolaas Gorge and the heights on either side, dominating the area south of Keren. The map portrays the area of Eritrea over which the battle was fought. The hex grid printed upon the map is used to facilitate the movement of units and to delineate the various terrain features.

#### 2.2 Charts & Tables

The map includes the turn track and the victory point track, as well as the Terrain Key, which indicates the level and movement point cost of each type of terrain. If a level indicates "+1", it is to be assumed that the movement cost to enter that hex is the normal terrain cost and +1 additional movement point.

## 2.3 Combat Units

The various game pieces represent the historic combat units, as well as all necessary chits to facilitate game play. The game's combat units are primarily battalions (if infantry) and regiments (if artillery), and are color-coded by nationality.

Tan = Commonwealth/Colonials
Olive = Italians/Colonials

The numerical ratings and symbols that are printed on each unit are indicated as follows.

#### Unit Type

The kind of soldiers or equipment that is present in that unit.

### Regimental Integrity

Units of the same regiment (the same color band of the same division) that are stacked together are immune to any "Suppressed" results during a "1DE" or "2DE" combat result.

**Note:** Units printed with the same color band are only entitled to the Regimental Bonus if from the same division.

# **Infantry Type**

A unit representing infantry (soldiers).

## Battalion

The size of the unit, a component of an infantry regiment.

#### **Ranged Fire Factor**

The combat strength number of a unit that conducts Ranged Fire.

#### **Assault Factor**

The combat strength number of a unit that conducts an assault.

### **Movement Points (MP)**

The maximum amount of movement the unit may expend during its movement.

#### 2.4 Unit Sides

All units in Keren are only one-step; an infantry unit's front side is considered to be its fully supplied, full combat side (with a total supply range of 50 movement points), whereas its reverse side is its "Carrying Supply" side (with a total supply range of 100 movement points, but with reduced combat strength). An artillery unit's front side is considered to be its combat side, and its reverse side is its "Fired" side. Artillery units are not eligible to be "Carrying Supply" to extend its supply range over 50 movement points.

When any kind of unit is eliminated, the whole unit is eliminated, not simply one side. There are no step losses.

#### 2.5 Miscellaneous Markers

In addition to the various combat units, the game includes Suppressed markers, air markers (Commonwealth side only), artillery markers, as well as a Turn and VP (victory point) marker.

#### 3.0 SET-UP

Players decide which side each will play, and sort the game pieces accordingly. Each player, starting with the British (Commonwealth) player, must alternate the set-up of his own units, one unit at a time. All units of the scenario must be placed on the map before beginning the game, except reinforcements, which are to arrive as specified.

Place the "Turn" marker on the Turn Track printed on the map (Turn box 1), and set the victory points as per the current scenario. Set aside all other markers for use during the game.

## 4.0 WINNING THE GAME

The Commonwealth player is generally on the offensive throughout the game (though historically the Italians, the *Savoia Grenadiers* in particular, were often launching furious counterattacks to retake positions during the battle), and must break through the pass to take Keren. Historically the capture of Keren allowed the Commonwealth forces to drive on towards Mossawa and link-up with other Commonwealth units driving southward from the north. If the Italians can prevent the Allies from establishing a supply route to the village of Keren, the Commonwealth offensive in Eritrea will be halted.

# 4.1 Automatic Victory

The Commonwealth player will win the scenario automatically if he can, during any Administrative Phase, demonstrate a path of railway or road hexes to the Keren fort (Tigu), if that fort is not occupied by any Italian units, or within an Italian unit's Zone of Control (ZOC).

## 4.2 Victory Points

Victory Points are added and subtracted as follows.

- +1 VP = Per each Italian unit eliminated.
- -2 VP = Per each Commonwealth unit eliminated.

**Note**: Any unit that is found to be out of supply at the end of a scenario is considered eliminated for purposes of calculating VPs.

+? VPs = Various hexes throughout the map award the Commonwealth player VP (printed as a red "+" number in the hex) if a Commonwealth unit was the last unit to have occupied any such hex, and if any such hex is not within any Italian unit's zone of control.

# 5.0 TURN SEQUENCE

Each game turn is comprised of eight "phases," which regulate the movement and action of the units during a scenario. Some phases are only applicable to one side or the other, whilst some phases are applicable to both sides simultaneously. The players may only ever conduct the specified movements or actions during the phase indicated. When all activity of a phase is complete, the next phase then begins.

#### **Administrative Phase**

Both players check the supply status of all units, attempt to rally units (remove "suppressed" markers), and convert any units to carry supply.

#### **Commonwealth Bombardment Phase**

The Commonwealth player conducts all intended and desired bombardments.

## **Italian Bombardment Phase**

The Italian player conducts all intended and desired bombardments.

### **Commonwealth Movement Phase**

The Commonwealth player moves all of his units that he desires to move, except any artillery units that had conducted a bombardment during the Bombardment Phase.

#### **Italian Defensive Fire Phase**

The Italian player conducts ranged fire at any adjacent Commonwealth units that have moved.

Note: Artillery units are eligible to both bombard during a Bombardment Phase and also conduct defensive ranged fire against an enemy unit that moved.

## **Italian Movement Phase**

The Italian player moves all of his units that he desires to move, except any artillery units that had conducted a bombardment during the Bombardment Phase.

#### **Commonwealth Defensive Fire Phase**

The Commonwealth player conducts ranged fire at any adjacent Italian units that have moved.

Note: Artillery units are eligible to both bombard during a Bombardment Phase and also conduct defensive ranged fire against an enemy unit that moved.

## **Italian Assault Phase**

Any Italian units presently adjacent to any Commonwealth units may initiate an assault.

#### **Commonwealth Assault Phase**

Any Commonwealth units presently adjacent to any Italian units may initiate an assault.

After the last phase has been completed, the game turn ends; move the Turn marker to the next higher turn box on the turn track, and begin the next turn, per the same sequence of phases listed above.

## 6.0 SUPPLY

The units of both sides need supply to operate at full movement and combat potentials. There are no supply counters, but rather units must trace supply to a specific supply source, indicated on the map by a supply symbol (orange color for the Commonwealth units, mustard color for the Italian units). Each supply source may supply an infinite number of friendly units, but each such unit must have a demonstrable supply path from its own hex to the supply source (see 6.1 below).

Historical Notes: The Commonwealth supply source symbols are printed at the map edge,

representing the long lines of communication back to British supply sources. The Italians, however, were able to bring supplies much closer to their positions because the parabola of the Commonwealth artillery trajectories could not target the mountains' reverse slopes once the projectiles had arced up and over the steep mountain crests.

## 6.1 Supply Path

Tracing a line of supply is a process by which a player must demonstrate a path of hexes from his own supply source to a friendly unit. A supply path is limited to a certain length of hexes, depending on the type of terrain the supply path is entering (see 6.2 below).

#### A supply path must consist of a route of contiguous hexes from a friendly unit to a supply source.

Any such path cannot cross any prohibited hexside (for example, 3224/3323), or enter any enemy unit's hex, or enter any hex within any enemy unit's zone of control (unless that hex is occupied by a friendly unit).

### Prohibited map symbol here

Other than negating an enemy ZOC, friendly units have no effect upon any other friendly line of supply.

If any particular unit does not maintain a line of supply back to a supply source, it will become subject to out-of-supply penalties.

## 6.2 Supply Length

A line of supply may be a maximum of 50 movement points from a unit to any friendly supply source. However, a unit that is flipped to its "carrying supply" side is eligible to trace a line of supply up to 100 movement points instead.

No supply markers exist in the game to be moved, but a player is to count off a continuous path of hexes as if a unit was moving, expending movement points in each hex along the path, per the normal movement costs required of any unit to enter each hex along that path.

A supply line need not include the hex of the unit drawing supply, or the hex of the supply source symbol.

## 6.3 Carrying Supply

During the Administrative Phase of any game turn, either player may voluntarily flip any friendly unit(s) to their reverse side, known as their "carrying supply" side. In doing do, the unit loses some combat strength, but may then trace a line of supply up to a maximum of 100 movement points.

Historical Notes: A unit that is carrying supplies represents a unit that has been required to detach a number of men to haul provisions and supplies to the main unit. For instance, during the battle for Cameroon Ridge, the Rajputana Rifles and Cameron Highlanders were compelled to dispatch men back down into the Ascidera Valley to bring up the supplies they needed, especially ammunition, to their positions atop the ridge.

Any unit that is flipped to its carrying supply side must remain so for the rest of the current turn. As of any following game turn, any unit may be flipped back to its normal full strength side (even if it is suppressed), but not before that unit itself is determined to be in supply for that game turn. In such a case, it may then trace a line of supply to a maximum of 50 movement points.

Any unit can be flipped between either status during each successive game turn, but is thus subject to the line of supply movement allowance accordingly.

No unit may carry supply for any other unit. A unit that is flipped to carrying supply is only ever eligible to increase its own supply length, never any other unit's supply length.

## 6.4 Capturing a Supply Source

If a supply source is occupied by any enemy unit, that supply source is simply unavailable as a

supply source for any units, but only while it is occupied by an enemy unit. If a supply source is no longer occupied, it may function as a supply source again normally, until it is occupied by any enemy unit again. No captured supply source can ever be used as a supply source for the capturing unit, or any other units.

## 6.5 Out of Supply

If, during the Administrative Phase, any unit does not have a demonstrable line of supply to a friendly supply source, it is considered to be immediately out of supply (and will remain out of supply until it can demonstrate a line of supply to a friendly supply source).

While a unit is out of supply, its combat and movement factors are halved (round down all remainders), even if it is also carrying supplies at the moment that it becomes out of supply. A unit with a combat factor of "1" is rounded down to 0.5 (not zero), and a unit with a combat factor of "½" is rounded down to ¼ (not zero).

### 6.6 Reestablishing Supply

Supply may only ever be reestablished during an Administrative Phase. A unit that demonstrates a valid line of supply to a friendly supply source will not be considered in supply during any other phase of that game turn.

#### 6.7 Deliberately Out-of-Supply

It is perfectly legal for any unit to move to any hex where it will become out of supply. Furthermore, a unit may remain out of supply; no unit is ever required to reestablish supply.

## 6.8 Out-of-Supply Elimination

Any unit that is currently out of supply as of the last game turn of any scenario (i.e., during the Administrative Phase) is automatically eliminated. If units from both sides are out of supply during the last Administrative Phase, eliminate the Italian units before the Commonwealth units. If an eliminated unit was the last to occupy a particular objective hex, the hex remains controlled by the eliminated unit's side, unless subsequently occupied by an opposing unit during that last game turn.

# 7.0 STACKING & FOG OF WAR

The stacking rules are in effect at all times throughout each game turn (there is no temporary over-stacking, even as a unit moves). Thus, players must move units in a sequence to avoid congestion, or risk blocking the movement of units that would become over-stacked.

**Note:** Reinforcements are subject to all stacking limits as they enter the map. A player must enter reinforcements in a manner to avoid over-stacking. Either player may delay the entry of his own reinforcements indefinitely to prevent over-stacking, however.

Units that begin a phase stacked in the same hex are never required to move as a stack. A unit may move independently of any stack, assuming it does not move to a hex where it becomes overstacked. Nevertheless, a stack of units may move together, although a moving player may not move a stack of units into a hex that would cause that stack to become over-stacked because of the terrain therein (see 7.1).

Units that are moving as a stack may be moved together, and individual units in that stack may be deposited in a specific hex as the stack enters therein and then moves on. No unit that moves as a stack may then continue movement after it is deposited, however. In other words, once any unit has been 'dropped off' in a hex as its stack continues moving must remain in that hex for the duration of that movement phase.

### 7.1 Stacking Limits

Both the Commonwealth and the Italian player may stack a maximum of three units of their same side in each hex during the same time, or up to four units in any clear terrain hex.

**Note:** All bombardment, suppressed and air markers are not considered to be units, and thus are ignored when determining stacking limits.

## 7.2 Stacking & Road Movement

If moving along a railway or a road via the railway or road movement rate, the stacking limit in that railway or the road hex is two units, regardless of the terrain in that same hex (even in a tunnel).

## 7.3 Stacking Penalties

Stacking is only enforced at the moment that multiple units are present in a hex; any number of units may pass through a hex without violating stacking limits if moving at different times during a turn. If any hex is found to be over-stacked, either by error or a retreat, the over-stacked unit(s) must then be eliminated immediately. In such a case, the owning player may always choose which of his own units are eliminated from an over-stacked hex.

## 7.4 Fog of War

Neither player may examine any stack of enemy units beneath the topmost unit, even if adjacent. A player is only ever required to reveal the units of a stack if that stack participates in Ranged Fire or an Assault (whether as the attacker or the target). If a player elects to assault a hex, he must announce his intention to assault that hex without knowing that hexagon's contents (beyond the topmost unit). In such a case, an assault cannot be canceled once the makeup of the hex is revealed.

#### 8.0 ZONES OF CONTROL

All units project a zone of control upon the six hexes surrounding the unit's own hex, which will affect the movement of enemy units that enter those hexes.

Generally, zones of control (ZOC) extend into all types of terrain, except across any prohibited hexsides (prohibited hexsides typically represent steep peaks or impassable slopes inaccessible to any unit, or even observable from the other side), and never across the roadblock hexsides, even if otherwise eligible to move across a roadblock hexside.

A unit that is carrying supplies or out of supply projects a ZOC without penalty, and regardless of combat strength of the unit (even if halved).

## 8.1 Zone of Control Effects

Any unit that enters a hex that is within any enemy unit's zone of control must end its movement immediately, and is then ineligible to move for the duration of that same movement phase. Any unit may exit an enemy ZOC freely, though, and must only halt its movement when reentering that or another ZOC.

Entering an enemy ZOC does not cost any additional movement points, in any case.

## 8.2 Limited Zone of Control

Artillery units do not project a zone of control.

#### 8.3 Negating ZOC (Supply)

No friendly line of supply hex is ever interrupted by an enemy zone of control if a friendly unit is currently occupying that hex (although a zone of control is assumed to extend into that hex in all other respects, nonetheless).

#### 8.4 ZOC Movement Exceptions

Generally, moving units may ignore any enemy ZOC during the following situations.

- 1) When advancing after combat.
- 2) If an enemy unit that is projecting the zone of control is eliminated during an engagement. In such a case, its ZOC is dissipated immediately.
- 3) When exiting an enemy ZOC if not entering another enemy ZOC.
- 4) When retreating into any hex that is occupied by another friendly unit.

## 8.5 ZOC to ZOC Movement

Any unit that begins its movement in a hex within an enemy unit's ZOC may be moved directly to any other, adjacent enemy ZOC hex, but must then stop in that adjacent enemy ZOC hex, per 8.1 normally.

## 8.6 ZOC Reciprocity

If two opposing units both project a ZOC into the same hex, that hex is affected by both ZOC equally. Both ZOC are considered to co-exist in that hex. There is no additional effect from having more than one ZOC projected into the same hex at the same time.

**Note:** All units are assumed to possess a ZOC in their own hex for purposes of a valid retreat of a friendly unit into that same hex.

## 9.0 FACING (OPTIONAL)

As an optional rule, all infantry type units in the game a printed with a "facing" that indicates the direction of their eligible ranged fire, although facing has no effect upon any assaults, one way or the other (i.e., weather assaulting or being assaulted).

Facing simply indicates that a unit may not conduct any ranged fire against an enemy unit that is adjacent but outside of the facing arc at any time during that phase.

A unit may change facing during movement, at no MP cost, any number of hexsides, even after the unit has completed its movement (if still during the movement phase), such as might occur of other units subsequently enter that hex.

If a unit retreats, it may reorient its facing to any single hexside that the owning player prefers, but once the retreat is complete, It may not reorient again (unless retreated again).

#### 10.0 MOVEMENT

Each unit may move into a hex by paying a specific movement cost to enter each hex. The various types of terrain printed on the map dictate the movement cost of each hex, and are applicable to all of the units in the game, regardless of type.

A unit or a stack of units moves from its starting hex to an adjacent hex, and along a legal path of contiguous hexes up to the limit of that unit's movement allowance factor (printed on the lower right-hand corner of each unit). A unit is never required to move, but a unit that does not move may not impart any of its movement allowance, in full or in part, to any other unit. No unit can ever move more than its printed movement factor, nor may any unit skip or jump hexes as it moves.

## 10.1 Movement Costs

Peak

Each type of terrain requires a specific movement cost, listed as follows.

Terrain in Hex	Movement Points
Clear	1
Rail	1
Slope	2
Road	1
Hill	3
Tunnel	1
Bluff	4
Gorge	1
Precipice	5
Bridge	1
Fort Hexside	+1
(in addition to the	other terrain in the hex).
Ridge	+1
(in addition to the	other terrain in the hex).
Sheer Hexisde	6

6

## Prohibited Not Allowed

**Note:** The roadblock in hex 3516 has no effect on movement except that it forbid the "Maltida" tank unit from crossing the hexsides where the roadblock is depicted.

#### 10.2 Movement Procedure

A player may move none, some, or all of his units during his own movement phase only. Each unit must be moved to completion, one at a time (or as a stack of units). When each unit has completed its movement, then another unit may be moved normally. In all cases, each unit may only be moved once during its own movement phase, and once its has been moved, it may not be re-moved or undone (except by consent of the other player).

## 10.3 Special Movement

Movement into any rail, road, tunnel, gorge or bridge hex from an adjacent, connected rail, road, tunnel, gorge or bridge hex only costs one MP, regardless of the other terrain in the same hex (except prohibited).

## 10.4 Entering the Map

Commonwealth reinforcements that arrive on the map must enter a hexagon along the south edge. Italian reinforcements that arrive on the map must enter via any Keren north edge road hex if Italian (6003, 5300, 5100, or 4900), if not entering within any enemy unit's zone of control, or as over-stacked.

#### 10.5 Tunnel

The tunnel in hex 2622 is regarded as a road hex (and only requires a movement cost of 1 MP, per 10.3), but only if a unit enters the tunnel from hex 2621 or 2522. A unit in a tunnel hex must be indicated by a Tunnel marker to differentiate it from any other unit(s) in that same hex, if any, which are not in that tunnel.

A unit that is in a tunnel is not subject to ranged fire under any circumstances, although any units in a tunnel are liable to an enemy assault, but only from hex 2621 or hex 2522. No enemy unit in any other hex can conduct an assault against a unit in a tunnel. Of course, any unit(s) in the tunnel hex that are not "in" the tunnel itself are considered to occupy a normal bluff hex above that tunnel, and are thus subject to any ranged fire or assault attack normally.

The entrances to the tunnel may not be destroyed or blocked within the scope of the game.

The reverse of the above is also true, no ranged fire may ever occur *from* within a tunnel, and any assault from within the tunnel may only occur against hex 2621 and/or 2522.

## 10.6 Minimum Move

Regardless of the movement cost of terrain or accumulated terrain, unless a hex is specifically prohibited, all units are entitled to move at least one hex, even if that cost to enter one hex exceeds the moving unit's movement allowance (provided had not moved during that same movement phase).

## 11.0 RANGED FIRE

Ranged fire is a combat in which a unit may fire at any adjacent enemy unit, such that the enemy unit is targeted but does not affect the firing (attacking) unit. If playing with optional rule 9.0, ranged fire is permitted only from the firing unit's facing.

A player may only conduct ranged fire during his own Ranged Fire Phase, after the preceding enemy movement phase (whether or not any enemy unit moved). To conduct ranged fire, the attacking player simply nominates a target enemy unit and a firing unit. Any unit may conduct ranged fire, although no unit may ever conduct more than a single ranged fire attack during each Ranged Fire Phase.

An adjacent enemy unit cannot avoid a ranged fire attack, although no ranged fire attack may be conducted against an enemy unit across a prohibited hexside or a roadblock.

Each unit is eligible to conduct or to participate in one ranged fire attack, although ranged fire is not mandatory. Indeed, some units in a particular stack may conduct ranged fire while other units in that same stack may choose to not conduct ranged fire. An enemy hex is nonetheless eligible to be targeted more than once if attacked multiple times by different units during the same phase.

#### 11.1 Ranged Fire Combinations

When conducting a ranged fire attack, the attacking player may nominate one unit to fire at each enemy target unit, or nominate multiple units to individually fire at a single enemy target unit, or may nominate multiple units to combine their combat strength to fire at an enemy target unit. In every case, the firing unit(s) must be adjacent to the enemy target unit. No single attack may ever target more than one enemy unit, even if multiple enemy units are stacked together in the same hex (although some units may attack a particular enemy unit within a stacked hex, while other units may attack any other enemy unit(s) within that same hex normally).

Note: If combining ranged fire from different elevations, the worst elevation penalty must be used.

Units that are stacked in the same hex are never required to participate in the same ranged fire attack. Units that are stacked in the same hex, but adjacent to multiple enemy target units are eligible to attack different adjacent enemy hexes, or opt to not attack any enemy target unit instead.

The firing player is permitted to decide and resolve each ranged rire attack before declaring any other ranged fire attacks that he intends during the same phase.

**Note**: Each single unit's entire combat strength must always be used whenever conducting a ranged fire attack. No single firing unit may split its factors to be applied to more than one attack.

## 11.2 Ranged Fire Procedure

To resolve any ranged fire attack, the firing player simply totals the combat strength of his attacking (firing) unit(s), and consults the Ranged Fire Combat Results Table (RFCRT). The firing player then rolls one 6-sided die and indexes the die roll row with the combat factor column that equates to the net strength of the firing unit(s).

If an elevation difference exists between the attacking and the targeted hex, the final total "Ranged Fire" factor column must be shifted one column per each level of elevation difference, as follows

Shift Left One Column. If the firing unit is two elevation levels lower than the targeted hex (see 12.1). Shift Left Two Column. If the firing unit is three elevation levels (or more) lower than the targeted hex (see 12.1).

Shift Right One Column. If the firing unit is two elevation levels higher than the targeted hex (see 12.1).

**Shift Right Two Column.** If the firing unit is three elevation levels (or more) higher than the targeted hex (see 12.1).

## 11.3 Ranged Fire Results

A cross-referenced final die roll result indicates the outcome of the firing unit'(s') attack, as follows.:

**NE**= No effect; the enemy unit is unaffected.

- **S** = Suppressed; the enemy unit in the target combat hex is suppressed immediately. A unit that is suppressed already suffers no additional effect. See 14.3.
- **DR**= Defender's Retreat; the enemy unit(s) in the target hex must retreat two hexes (of the retreating player's choice). See 14.4.
- **1DE** Defender's Elimination; one enemy unit in the targeted combat hex is eliminated and then tallied as victory points on the VP track. If there are any other unit(s) in the same hex that are the same regiment (printed with the same color band) as the eliminated unit, there is no other effect. However, any *other* unit(s) of any other regiment (a different color band, or no color band.) in the hex are suppressed automatically.
- **2DE** Defender's Elimination; two enemy units in the targeted combat hex are eliminated and both are tallied as victory points on the VP track (if there is more than one unit in the target hex). If there is another unit in the same hex that is the same regiment (printed with the same color band) as the

eliminated unit, there is no other effect. However, any *other* unit(s) of another regiment (a different color band, or no color band) in the hex are suppressed automatically.

After all permitted ranged rire attacks have been completed, that phase ends, and the next phase begins.

**Note:** Units printed with the same color band are only entitled to the regimental bonus if from the same division.

#### 11.4 Advance After Combat Limit

No firing unit may ever advance after combat following a Ranged Fire attack, regardless of the result.

#### 12.0 BOMBARDMENT

Artillery units may conduct ranged fire, although artillery units are not restricted to only attacking enemy target units that are adjacent. Instead, an artillery unit is eligible to attack any enemy target unit anywhere on the map (at any range), but only if within line of sight (LOS).

An enemy target unit may occupy any elevation difference as compared to the firing artillery unit unless there is any type of hex terrain of an elevation that is higher than the firing artillery unit's hex, and also higher than the enemy target unit's hex directly in between them.

When delineating a line of sight between a firing artillery unit and an enemy unit, a direct line is traced from any corner of the artillery unit's hexspine (of the firing player's choice) to a hexspine of the enemy target's hex (of the targeted player's choice). If that line of sight delineation crosses through any hex terrain of an elevation higher than the artillery unit and the target unit, then no line of sight is considered to exist to the enemy target unit, and therefore no ranged fire attack may be conducted by that artillery unit upon that targeted enemy unit.

When each player selects a hexspine corner, the firing player must always choose which hexspine corner he will trace from first, and the targeted player must choose which hexspine corner the fire is traced to second.

## 12.1 Elevation

The elevation ranking of each type of terrain is listed as follows.

Peak Hex = Level "6"
Ridge Hex = Level "5"
Precipice Hex= Level "4"
Bluff Hex = Level "3"
Hill Hex = Level "2"
Slope Hex = Level "1"
Clear Hex = Level "0"
Sheer Hex = See 12.2

As per 11.1, an artillery unit may not conduct a ranged fire attack across any prohibited hexside, or across a roadblock hexside.

Line of Sight Example: An artillery unit that occupies a bluff hex (Level 3) conducts a Ranged Fire Bombardment against an enemy target unit occupying a clear hex (Level 0), with a precipice hex (Level 4) in between. Because that precipice hex is a higher elevation than the artillery unit's hex and the targeted unit's hex, and blocks a delineated line in between them, no line of sight exists, and thus no ranged fire attack may be conducted.

#### 12.2 Sheer Hexes

Sheer hexes represent very steep but not quite cliff mountain faces that rise up from a lower elevation to a higher ridge or peak hex. Each sheer hex is therefore considered to be a special Level existing lower than closest highest elevation, but at the same time higher than the closest lower elevation. Moreover, a sheer hex that is closer to a *higher* elevation (such as a precipice hex) is

considered to be higher than another sheer hex that is closer to a *lower* elevation. In this way, a sheer hex doesn't possess a distinct level, as it is always considered to be a special level between two surrounding levels, even if the two surrounding levels are only one increment apart (such as from level increment 3 to level increment 4). For example, a sheer hex in between a Level 3 and a Level 4 hex would thus technically be some undefined level in between 3 and 4. It is not necessary for players to know what numerated level a sheer hex is, only merely that a sheer hex is an undefined level *in between* the closest highest and the closest lower elevation surrounding that sheer hex (for line of sight purposes).

Example: A Commonwealth infantry in hex 1723 has a clear line of sight to hex 2121. There are no hexes in between the two locations that are higher than 1723 and 2121, so no line of sight is blocked. Also, because hex 2022 is technically a higher elevation than hex 1922, the unit in hex 1723 can see both of those Sheer hexes, as well as 2121 (which is higher than 2022), 2221 (which is higher than 2121), 2320 (which is higher than hex 2221) and 2420 (higher than all of the previous hexes). The unit could not see past hex 2420 because it is a ridge hex, however.

## 12.3 Ridge Hexes

Ridge hexes are identical to Precipice hexes, although no line of sight is ever possible across any ridge hex, even if from another ridge hex. A ridge does not, however, block the line of sight of any unit that is occupying that ridge hex (though a unit's line of sight is blocked across any other ridge hex normally).

## 12.4 Bombardment Procedure

A bombardment ranged fire attack is conducted exactly like a normal ranged fire attack. After each artillery unit has fired, it is flipped to its reverse ("Fired") side for the remainder of that Ranged Fire Phase.

## 12.5 Bombardment Coordination

An artillery ranged fire bombardment may be added to a normal ranged fire attack (per 11.0), if otherwise eligible (per 12.1), but air bombardment may not be.

## 13.0 AIR BOMBARDMENT

If the scenario includes Commonwealth air units, the Commonwealth player is eligible to conduct a ranged fire attack with each of the three air units during each Commonwealth Ranged Fire Phase. Unlike normal or artillery fire, an air bombardment may be conducted upon any enemy unit anywhere on the map, regardless of the terrain in the targeted hex, even upon the tunnel hex (it is assumed that large air ordnance can possibly collapse the tunnel).

Unlike a normal ranged fire attack, however, the Commonwealth player may not combine his air units to attack the same enemy target as a combined attack, but he may conduct multiple attacks (even against the same target) with multiple air units. The attack procedure is identical, but disregarding the terrain for all purposes (line of sight and die roll penalties do not apply to an air bombardment).

Furthermore, no air bombardment may be combined with any other normal or artillery ranged fire attack. It is legal for multiple types of ranged fire to fire at the same enemy target, but each must be resolved as a separate attack.

**Note:** If different types of ranged fire are to be conducted upon the same hex, the air bombardment must always be resolved first.

## 14.0 ASSAULTS

During a player's Assault Phase, he may announce that any of his non-artillery units that are adjacent to any enemy units will be conducting an assault.

**Note:** Artillery units may never conduct an assault, although an artillery unit can be attacked by any assault normally.

Each unit is eligible to conduct or to participate in one assault, although an assault is not mandatory. Indeed, some units in a particular stack may assault while other units in that same stack may not

attack. An enemy hex is nonetheless eligible to be attacked multiple times by different units during the same phase.

**Note:** A player is never required to declare all of his assaults at the outset of any Assault Phase; he may decide and resolve each assault, one at a time, as he conducts them (in any order that the assaulting player prefers).

To be eligible to conduct an assault, a unit must be adjacent to an enemy unit. If multiple units, either as a stack or from multiple adjacent hexes, will be assaulting the same enemy hex, their collective combat strength numbers are added together as a sum, and then compared to the enemy unit(s) present in the target hex. Multiple enemy units in the same hex must be assaulted as a sum, as well.

#### 14.1 Assault Procedure

Each assault is resolved to completion per the following procedure.

- 1) The assaulting player designates a particular hex to be the target of an assault by eligible and adjacent units.
- 2) The attacker then calculates the total assault factor (the second number printed on each assaulting unit) of all participating assaulting units, while the defender calculates the total assault factor (the second number printed on each combat unit) of all defending units in the adjacent target hex. Next, the attacker's and the defender's total assault factor strengths are compared as a ratio (dividing the attacker's total assault strength by the defender's total assault strength, rounding any fractions down to the next whole number; for example: 1:1).

**Note:** Calculated ratios greater than 4:1 are to be resolved per the 4:1 column, though the attacker may apply a +1 die roll modifier for each actual calculated ratio greater than 4:1 (for example, a ratio of 5:1 would grant the assaulting attack a +1 die roll modifier in addition to other applicable die roll modifiers). However, a calculated and adjusted ratio of less than 1:4 is always to be resolved as 1:4 (with no modifier).

- 3) The attacker then rolls one 6-sided die, and cross-references that net result of that die roll under the "Roll" column of the Assault CRT with the column under the correct ratio.
- 4) Add a die roll modifier if any of the circumstances are applicable.
  - Apply a +1 die roll bonus if the target hex is a clear type terrain.
  - Apply a -2 die roll penalty if the target hex is a fort is present in the target hex.
  - Apply a +1 die roll bonus for each ratio greater than 4-1, if applicable.
- 5) Implement the result indicated by the CRT (see 14.2 below).

## 14.2 Assault Combat Results

The combat result of any assault roll is indicated as follows.

- **2AE** Two attacking units must be eliminated (of the attacker's choice). If only one unit was attacking, then only that unit is eliminated.
- **1AE** One attacking unit must be eliminated (of the attacker's choice).
- **S** Suppressed; the enemy unit(s) in the target combat hex are suppressed immediately. A unit that is suppressed already suffers no additional effect.
- **DR** Defender's Retreat; the enemy unit(s) in the target hex must retreat two hexes (of the retreating player's choice).
- **1DE** Defender's Elimination; one enemy unit in the targeted combat hex is eliminated and then tallied as victory points on the VP Track. If there are any other unit(s) in the same hex that are the same regiment (printed with the same color band) as the eliminated unit, there is no other effect. However, any *other* unit(s) of any other regiment (a different color band, or no color band) in the hex are then suppressed automatically.

**Note:** If more than one enemy unit is present within the targeted hex, the targeted player chooses which unit is eliminated.

**2DE** Defender's Elimination; two enemy units in the targeted combat hex are eliminated and both are tallied as victory points on the VP Track (if there is more than one unit in the target hex). If there is another unit in the same hex that is the same regiment (printed with the same color band) as the eliminated unit, there is no other effect. However, any *other* unit(s) of another regiment (a different color band, or no color band) in the hex are suppressed automatically.

**Note:** If more than two enemy units are present within the targeted hex, the targeted player chooses which of the units are eliminated.

## 14.3 Retreat

A combat result indicating "DR" is a mandated Retreat, indicating that all defending units in a combat hex must retreat two hexes.

**Note:** Multiple units in the same hex that must retreat are not required to retreat as a stack; each unit in that hex may retreat separately and to different eligible hexes.

Retreats only ever apply to defending units, but do not require the expenditure of any movement points. However, any defending unit that is required to retreat must move closer to (never equidistant to or farther from) a supply source that is not occupied by or within the ZOC of any enemy unit.

Normal stacking limits (see 7.0) and movement restrictions (see 10.1) apply to retreating units. However, no retreating unit may ever move into any enemy unit's ZOC, unless that hex is also occupied by any friendly unit. Otherwise, if any unit is unable to complete a mandated retreat, it must be eliminated immediately and removed from the map.

If any artillery unit is forced to retreat by a combat result, it is automatically flipped to its "fired" side, whether or not it had fired beforehand. It will be eligible to be flipped back to its front side again during the Administrative Phase, normally.

#### 14.4 Suppression

Any unit or stack that is suppressed is incapable of moving or conducting any assault or ranged fire (until rallied). A suppressed unit's assault strength is calculated normally when attacked by an enemy assault, and must retreat normally when required to do so.

#### 14.5 Advance After Combat

After an assault (but not any ranged fire attack) has been resolved against a particular target combat hex, if all of the defending units have been eliminated or forcibly retreated, any of the assaulting units may immediately advance after combat into that same targeted combat hex (within the normal stacking limits). Only the unit(s) that participated in the assault upon that target hex are eligible to advance after combat.

Note: Enemy ZOC is ignored whenever conducting an advance after combat.

Advance after combat is never mandatory. The attacking player may choose to advance any of his units (that participated in the preceding assault) into the combat hex, or none at all.

# 15.0 ADMINISTRATIVE PHASE

During the Administrative Phase, both players perform the following actions.

- 1) Flip all fired artillery units back to their front sides.
- 2) Check the supply status of all units, and mark any unit(s), if any, that are out-of-supply.
- 3) Each player may flip any unit(s) to their carrying supply side, or back to their front side from their carrying aupply sides.
- 4) Both players may attempt to rally any suppressed units (see 15.1).

# 15.1 Rally

During the Administrative Phase, each player may attempt to "rally" any units that are presently suppressed. To rally a suppressed unit, the owning player must roll one 6-sided die; if the die roll is equal to or less than the unit's assault factor, that unit is rallied immediately, and the suppressed marker is removed. That unit then functions normally in all respects.

However, a rally roll must be modified as follows.

- +1 = If the suppressed unit is currently out-of-supply.
- +1 = If the suppressed unit is closer (but not equidistant) to any enemy unit than any friendly unit.
- -1 = If the suppressed unit is not within any enemy unit's zone of control.

## 16.0 SCENARIOS

## SCENARIO 1: FIRST BATTLE OF KEREN

The first scenario starts with the initial fighting at the Dongalass Pass as the Gazelle Force and the initial elements of the 4<sup>th</sup> Indian Division attempt to take the pass, while the Italians race down reinforcements from up north to relieve the forces defending the vital positions. This is a four-day, eight-turn scenario spanning 5 - 8 February.

## **Victory Conditions**

A Commonwealth victory occurs when the Commonwealth player has accrued 40 victory points.

## Italian Set-up (First)

Place within three hexes of "Hog's Back":

- 1 x 3-2-12 Grenadier Unit (Light Green)
- 1 x 1-2-24 Cavalry Unit (Light Green)
- 1 x 2-1-14 Colonial Unit (Light Green)

Place within four hexes of "Brig's Peak":

- 1 x 5-1-4 Artillery Unit
- 1 x 3-2-12 Grenadier Unit (Burgundy)
- 1 x 1-2-24 Cavalry Unit (Burgundy)
- 2 x 2-1-14 Colonial Units (Burgundy)

Place within four hexes of "Mt. Sanchil":

- 1 x 3-1-4 Artillery Unit
- 1 x 2-1-4 Artillery Unit
- 1 x 3-2-12 Grenadier Unit (Tan)
- 1 x 1-2-24 Cavalry Unit (Tan)
- 4 x 2-1-14 Colonial Units (Light Blue)

Place within three hexes of "Dologorodoc":

- 1 x 3-1-4 Artillery Unit
- 1 x 5-4-14 African Unit (Light Pink)
- 1 x 5-4-14 African Unit (Dark Green)
- 3 x 2-1-14 Colonial Units (Dark Blue)

Place in any hexes on and/or west of the 5000 hex row:

- 1 x 3-1-4 Artillery Unit
- 1 x 5-4-14 African Unit (Black)
- 3 x 2-1-14 Colonial Units (Black)

Place within 15 hexes of either "Zeban Summit" hex, although not south of the "Roadblock".

- 2 x 1-2-24 Cavalry Units (Light Pink)
- 2 x 2-1-14 Colonial Units (Blue)

#### **Italian Reinforcements:**

All Italian reinforcements arrive via any map-edge road hex west of Keren (hex 6004 and/or 5301), or via the rail hex in hex 6005.

## Turn 1:

- 3 x 5-6-14 Alpine Units (Any color)
- 2 x 3-1-4 Artillery Units
- 3 x 2-1-14 Colonial Units (Orange)
- 3 x 2-1-14 Colonial Units (Purple)

**Note**: The game actually provides more than three Alpine units of different color bands. This is meant to give the Italian player some flexibility so as to maintain the regimental bonus. As an example, the Italian player may select the three Alpine units with the same color band (olive green), or he may select different Alpine units with different color bands, to deploy them dispersed

among certain other regiments.

## Turn 2:

- 1 x 2-1-4 Artillery Unit
- 3 x 2-1-14 Colonial Units (Brown)
- 3 x 2-1-14 Colonial Units (Yellow)

## Turn 3:

- 2 x 2-1-4 Artillery Units
- 3 x 2-1-14 Colonial Units (Pink)
- 3 x 2-1-14 Colonial Units (Red)

## Turn 4:

- 3 x 2-1-4 Artillery Units
- 3 x 2-1-14 Colonial Units (White)
- 3 x 2-1-14 Colonial Units (Dark Green)

#### Turn 5:

- 1 x 1-2-24 Cavalry Unit (Light Pink)
- 4 x 1-2-24 Cavalry Units (Lght Orange)

#### Turn 6:

- 1 x 2-1-14 Colonial Unit (Purple)
- 1 x 2-1-14 Colonial Unit (Red)
- 1 x 2-1-14 Colonial Unit (White)
- 2 x 2-1-14 Colonial Units (Green)
- 1 x 2-1-14 Colonial Unit (Blue)

#### Turn 7:

- 2 x 2-1-14 Colonial Units (Green)
- 2 x 2-1-14 Colonial Units (Light Purple)
- 2 x 2-1-14 Colonial Units (Light Yellow)

## Commonwealth Set-up (Second)

Place in any Cameron ridge hexes from hex 2924 to 2016, in any of ridge hexes of the Commonwealth player's choice:

15 x 4-4-14 Infantry Units (4th Division)

3 x 5-2-4 Artillery Units (4th Division)

**Historical Note:** The Commonwealth 4-4-14 Infantry Units represent part of the 4<sup>th</sup> Infantry Division, which received special mountain training prior to the campaign. As such, they are rated with a higher defense and movement rating.

Place in any Happy Valley clear terrain hexes (any hexes east of hex 3029):

- 15 x 4-3-12 Infantry Units (5th Division)
- 3 x 3-2-12 Colonial Units (5th Division)
- 4 x 5-2-4 Artillery Units (5th Division)

#### Commonwealth Reinforcements:

The Commonwealth reinforcements are to arrive anywhere along the south map edge.

The Commonwealth air reinforcements are placed off to the side of the map, but may be deployed, once per turn (during a Commonwealth Bombardment Phase only) anywhere on the map to conduct a bombardment per 13.0.

## Turn 5:

- 9 x 4-4-14 Infantry Units (4th Division)
- 3 x Air Units

### SCENARIO 2: SECOND BATTLE OF KEREN

This second scenario simulates the first part of the Commonwealth's final attack whereby two infantry divisions fought up the mountains against very stubborn Italian resistance. The Commonwealth forces captured Fort Dologorodoc after repelling severe counterattacks, but they managed to hold on to the position and dominate the heights of Mt. Falestoh. The Italians were

forced to withdraw to Keren, leaving the other Italian units, including the Savoia Grenadiers on Mt. Sanchil, without flank protection. This is a six-day, 12-turn scenario spanning 15 - 20 March.

## **Victory Conditions**

A Commonwealth victory occurs when the Commonwealth player has accrued 50 victory points.

#### Italian Set-up (First)

Place within three hexes of "Hog's Back":

3 x 1-2-24 Cavalry Units (Pink)

3 x 2-1-14 Colonial Units (Brown)

4 x 2-1-14 Colonial Units (Purple)

Place within four hexes of "Brig's Peak":

3 x 2-1-14 Colonial Units (Yellow)

4 x 2-1-14 Colonial Units (Red)

Place within four hexes of "Mt. Sanchil":

1 x 5-4-14 African Unit (Dark Green)

1 x 5-4-14 African Unit (Black)

2 x 2-1-14 Colonial Units (Dark Green)

3 x 2-1-14 Colonial Units (Black)

2 x 2-1-14 Colonial Units (Blue)

Place within three hexes of "Dologorodoc":

2 x 5-6-14 Alpine Units (Any color)

3 x 2-1-14 Colonial Units (Orange)

4 x 2-1-14 Colonial Units (White)

Place in any hexes on and/or west of the 5000 hex row.

3 x 2-1-14 Colonial Units (Dark Purple)

4 x 2-1-14 Colonial Units (Green)

Place within 15 hexes of either "Zeban Summit" hex, although not south of the "Roadblock".

3 x 1-2-24 Cavalry Units (Lght Orange)

3 x 2-1-14 Colonial Units (Dark Blue)

4 x 2-1-14 Colonial Units (Light Blue)

## Commonwealth Set-up (Second)

Place in any Cameron ridge hexes from hex 2924 to 2016, in any of ridge hexes of the Commonwealth player's choice:

33 x 4-4-14 Infantry Units (4th Division)

3 x 3-2-12 Colonial Units (5<sup>th</sup> Division)

5 x 5-2-4 Artillery Units (4th Division)

Place in any Happy Valley clear terrain hexes (any hexes east of hex 3029):

33 x 4-3-12 Infantry Units (5th Division)

7 x 5-2-4 Artillery Units (5th Division)

1 x Matilda Tank Unit (4th Division)

## **Commonwealth Reinforcements**

The Commonwealth Air reinforcements are placed off to the side of the map, but may be deployed, once per turn (during a Commonwealth Bombardment Phase only) anywhere on the map to conduct a bombardment per 13.0.

**Turn 1**: 3 x Air