ANCIENT WARFARE SERIES RULES
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Introduction:

The *Ancient Warfare* series of games provides historical tactical conflict dealing with ancient warfare over the period 3000 BC – 650 AD. A series of battles called scenarios are presented for play and represent various confrontations during this period. The owner may also create their own scenarios providing an unlimited number of scenarios to play.

Based on a scale of 15-minutes per turn and 20 metre hexes, the game's small scale and 3D capability bring the entire spectrum of ancient warfare into dramatic close-up. Primary emphasis has been placed on historical accuracy and the great battles presented in the series have been meticulously researched and re-created.
This manual details rules that are common to all games in the *Ancient Warfare* series as well as rules that are specific to particular titles. For a quick introduction to your game and basic instruction on how to play, see the *Getting Started* guide. Additional material on Scenario Design and use of the Scenario Editor are included in the documentation, along with a FAQ and tactical advice.

Once a scenario has been chosen, you and your computer or human opponent, manoeuvre, attack and defend with units representing infantry, cavalry, artillery and siege equipment. Your goal in each scenario is to either capture or hold specific objective(s) while trying to eliminate as many of the opponent's units as possible. However, you must avoid significant losses to your own units as casualties suffered by each side are added to the other side's victory point total.

More so than many games, *Ancient Warfare* requires attention to the manual, and players are urged to print it for ready reference. The manual has been made with simple formatting and as few graphics as possible to facilitate printing.

The Basics of Play:

The battlefield is composed of hexagons that will from now on be referred to as 'Hexes'. If you are a beginner it is strongly recommended that you ensure the "Hex Outlines" option is turned on. This gives you a better understanding of distances when judging how far your units can move and shoot. "Hex Outlines" is switched on from the menu under "Options". When a menu option is activated there will be a tick against that option. You can de-activate the option by left mouse clicking the option again. Most options toggle between the 'on' and 'off' state.

A game turn is composed of 3 phases – Each player assigns commands to his units; movement, changing formation etc. The computer then determines the net effect of these orders as the move is played out. This last phase is known as the 'Events Phase'. Shooting and combat is automatic. At this point the players can do nothing but watch the outcome. The game then moves on to the next turn.

Assigning movement for your units, changing formation and direction can be done in any combination and is only limited by the number of action points available to each unit. At the start of a player's turn each of his units has a set number of action points. Assigning movement, changes in formation or direction expends some or all of these action points. Once the unit has allocated all its action points or does not have sufficient left to undertake another task then that unit has finished for that particular player turn. A unit's action points are shown on the unit's information box that is accessed as described under 'Selecting Units'. A player does not have to use all the action points available to a unit.

A command is assigned by left mouse clicking the unit on the map at which point a unit information box appears. If the command is the first command and a 'Move' or 'Skirmish' the player can right click on the map at the target destination hex. For other commands the player needs to left click the unit information box and then one of the command options that appears in the pop-up box. If the command is 'Move', 'Skirmish', 'Charge' or 'Forced March' then the player has to right click the destination target on the battlefield. Given the unit has sufficient action points a line is drawn to the target hex using the least number of action points. Units may be given multiple commands or all units in the same organisation given just one common command.

Combat: There are two types of combat in the game. 'Ranged Fire' and 'Hand to Hand' combat. A unit that suffers combat losses has its manpower reduced. This is shown on the unit's information box and is represented by its strength.
Ranged Fire is simply one infantry, cavalry or artillery unit shooting at an enemy unit at a range of two hexes or more. 'Ranged Fire' occurs automatically once an eligible target enemy unit is in range and the friendly unit has sufficient action points to shoot. If the target is in range of your unit's weapon and in the 'Line of Sight' of the same unit the target will be hit. 'Hand to Hand' combat will from now on be referred to as a 'Melee'. A melee occurs when a friendly unit is adjacent to a hex occupied by enemy unit(s). There are no supply issues as most historical conflicts describe use of salvaged enemy missiles as sufficient for the day of battle.

Terrain can affect movement, formation changes, line of sight and combat. A player therefore needs to know what his units are capable of in all types of terrain. This can be found by playing the game and referring to the 'Battle Charts' at the back of this manual or under Help on the menu bar.

Up to three friendly units are permitted on a hex at any one time irrespective of their type or condition. Stacking of units is also limited by the total number of men/horses/chariots etc. See 'Stacking' later.

Selecting Units: To select a unit you left mouse click on the unit. To identify the type of unit and see important information about the condition of the unit, you need to have the "Unit Information" option ticked. Left mouse click the menu "Options" then left mouse click "Unit Information". An information box will appear on your screen. If there is more than one unit on the hex then more information boxes will appear to identify all the units in the hex. If you wish to move, change formation etc. one specific unit in a group found on one hex then you must left mouse click on that unit's information box first. This will activate the unit. To determine which unit is activated look for the yellow star in the top left of the unit's box. Only one unit can be activated at any one time. The unit information boxes can be moved around the screen to suit the player and avoid obstructing the battlefield.

Multi-National armies can only be assigned orders in sequence :-
Once a player has assigned the required orders to one nationality click 'Next Turn' and this releases the next group (nationality) of units to place orders to. Ensure you have placed orders on all the units required of the same nationality before clicking 'Next Turn' as there is no way of going back. Once the last nationality group under your control is done and 'Next Turn' is clicked the game moves on to the next player.

Selecting Your Game: With the installation routine a shortcut to the game and editor is placed on your Programs menu. If not you can open Windows Explorer and look for the file game name with a file extension '.exe', double click the executable file; the graphics and sound files are loaded automatically.

Choose to play a "PBEM" (Play-By-E-Mail) game or not. The next option is to choose to play a new game or continue a saved game. Once chosen, a pop-up box appears to select your battle. For a new game a "Scenario Description" is provided. Once read, click "OK" and a pop-up box for "Scenario Options" appears. You can choose whether Fog-of-War is in play and whether "Command Control" and "Stop Clock" is in use. Once you have made your selection and clicked "OK" the battle map appears with the player's units on the map. As a minimum you must choose (click) which army you wish to command. If both players are using the same computer and the A.I. is not required click 'Hot Seat'.

"Fog-of-War" limits the appearance on the map of enemy units to those visible to your units. Under "Extreme Fog-of-War" all properties of an enemy unit are hidden except their name, weapon and strength. These two properties are also hidden under "Extreme Fog-of-War" if a unit is in non-Open terrain (not Clear, field, shallow water, river).

"Command Control" and "Multiple Commander Option" are described in detail later. "Prevent Screen Saver" if clicked will ensure the PC does not go on to the screen saver part way through the action (Events) phase.
"Supply impacts Morale" if clicked will reduce the army morale each turn that losses occur to any friendly supply wagons.

The "Stop Clock" means you are playing against the clock and determines the time before play moves on to the next player.

The Game Interface: There are 3 views, 3D zoom-in, 2D zoom-out and 2D zoom-in. An example of the 2D zoom-in map view is shown below with the red-line highlighted unit showing the information box on the top right hand side:
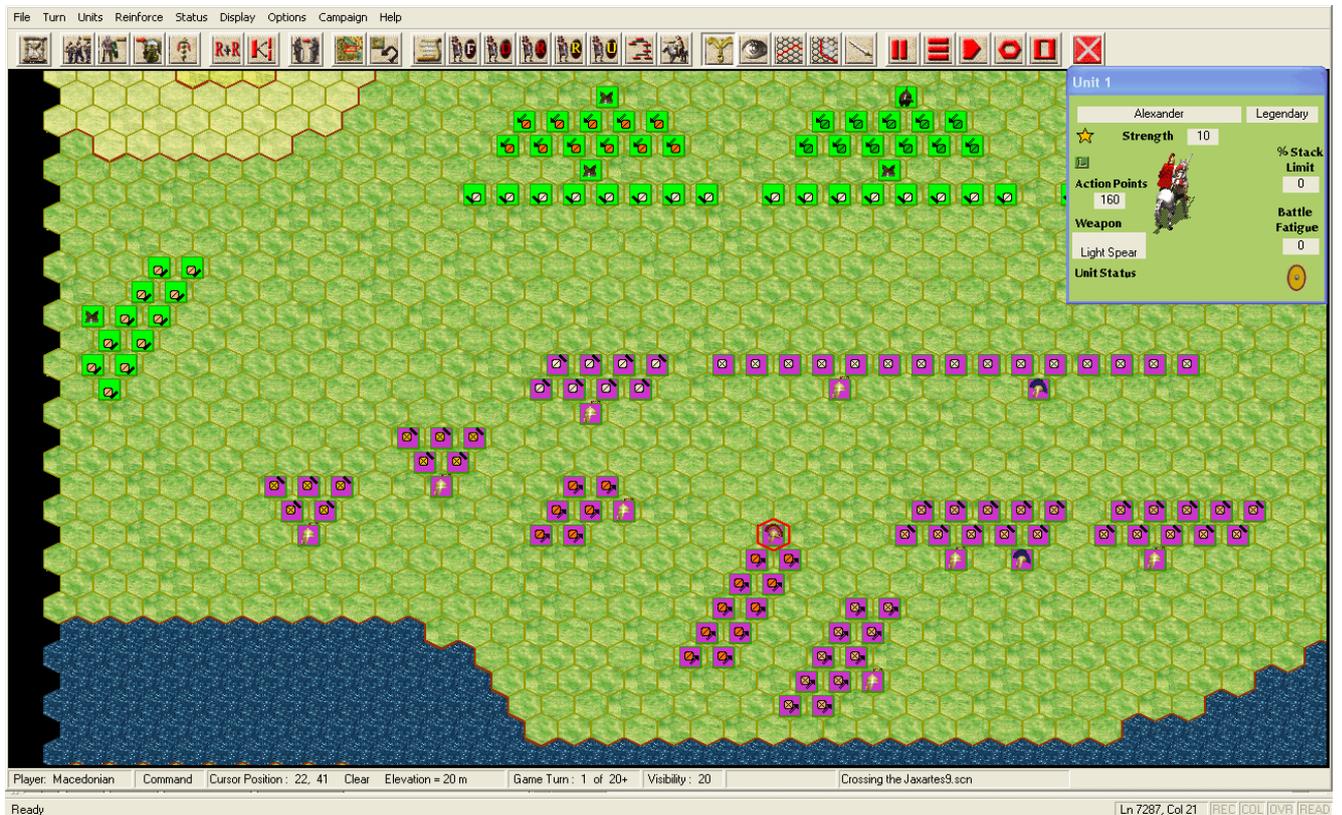
Use of the Pop Down Menus:

The pop-down menus of the Menu Bar and their commands are explained below. Many (but not all) menu items can be accessed by the toolbar buttons.

The main (top level) menu contains the following items:

File   Turn   Units   Reinforce   Status   Display   Options   Help

"**File**" pop-down menu contains:

Open
Save
Save as
Exit

"Open" allows the owner to choose a scenario and this is done following the description given in **Loading an Alternative Scenario.**

"Save" and "Save as" will allow the user to save the running scenario using a selected filename.

"Exit" allows a user to shut down the game.

"**Turn**" pop-down menu contains:

Next
End Game Status
Army Command

Cancel Army Commands
Multi-Player Game

"Next" moves the game turn on to the next turn.
'End Game Status' is only available at the end of a game and allows a player to view the status of each army. Once this option is chosen, the player chooses the army and then goes to menu – Status – Victory.
'Army Command' moves all eligible units in the army forward one hex. The units move in the direction specified in the Scenario Editor – Scenario Header as the direction the army is pointing. Units eligible are non-attacking, non-routing units, not fixed, with less than 3 commands allocated prior to the Army Command. Up to 3 such 'Army Commands' can be issued by a player per turn.
'Cancel Army Commands' erases all commands to all units in the active nation. To cancel all commands in a multi-national army the cancel option needs to be used for each nationality.
'Multi-Player Game' provides the facility to allocate units to different players on the same side. Details are given in Multi – Player PBEM System

"Units" pop-down menu contains:-
(If a command is light grey it is not usable for the type of unit activated.)

Divide Unit
Recombine Unit
Pikemen 'Fall Back'
Formation Change
Limber/Unlimber Artillery
Make/Destroy Assault Ladders
Climb Assault Tower
Save Action Points for Firing
Save Action Points for Unloading

Recombine Unit – Allows a player to join two units of the same organisation and type into one unit if both units are not disrupted.

The options highlighted above are described later. 'Make/Destroy Assault ladders' and 'Climb Assault Tower' are described in 'Fortifications & Siege Warfare'. Pikemen 'Fall Back' is detailed under 'Unit Types' near the end of the Rules Manual. 'Divide Unit' is described in 'Use of the Toolbar'.

Remove from Map – This will remove a unit adjacent to any edge of the map to an off-map position and hence out of play. Once a player moves a unit off map he may not return the unit. However no victory points are lost for the absence of the unit as it is not considered destroyed.

Rally & Reform – Units that have routed may be re-organised and form up again. This is done by a left mouse click on the routed friendly unit then left mouse click on the pop-down menu or toolbar.

Artillery Dialog - when clicked generates an artillery dialog listing all available artillery units and positions thereof in your army. By left mouse clicking on one of these artillery units

listed then left clicking the "Locate" button; the red hexagon (Hot Spot) will move to the location of the artillery unit in question.

Next Unit to Move – Described in '**Use of the Toolbar**'

Create New Unit Group – Once this option is clicked, left mouse click on each unit to be assigned to the new group. Once all units you require are in the group, click the option again to turn it off. To create a second new group, re-activate the option and proceed as described above. This function will allow a player to make and break groups as required throughout the game. There is no limit to the number of groups a player may wish to create.
Note: It is better to de-select the Command mode by clicking off the toolbar 'Eagle' button before creating a new group.

"Reinforce" Menu: Use this menu to check on the availability of reinforcements.

- Select **Scheduled** to display the reinforcements that are scheduled to arrive during the current scenario as well as their arrival turn and probability of arrival.
- Select **Arrived** during a friendly turn to display the reinforcement groups that have just appeared on the map including their arrival hex.
- Select **Releases** for a display listing the release times of units fixed at the start of play.

"Status" Menu:

- Select **Strength** to see the number and types of units currently available to each side. The units listed on the left hand side of the Strength Dialog are the total number of men for each unit type *currently* available. The right side of this dialog lists the number of men for each unit type eliminated thus far. The *Strength* of the opposing side is not available until that player turn.
- Select **Army Organisation** to see a list of units grouped by organisation and their corresponding manpower.
- Select **Command Report** to see army status including overall army morale, number of improved positions built and reinforcements arriving.
- Select **Intelligence Report** to see further information on the battle tactical situation.
- Select **Objectives** to see the number, value and hex location of each Objective.
- Select **Victory** to see the current level of victory and related items.
- Select **Removed Units at Exit Hexes** to display those units that have left the battlefield at an exit hex. The victory points scored by the exiting units are also given.
- Select **Scenario Description** to display information on the scenario, including its title, historical background and the scenario's designer.
- Select **Scenario Information** to display the time the battle started and the *actual* time plus the ground conditions, visibility and weather conditions.
- Select **Scenario Settings** to display the game settings chosen at the start of play for FOW, Command Control, Multiple Commanders and the Stop Clock.

"Display" Menu: Use this menu to control how information is shown on the map.
- Select **Units Off** to toggle (off or on) the on-map display of units. This option is provided to temporarily hide the unit icons so that you can see the underlying map terrain better.

- Select **Units to Bottom of Stack** to remove the activated unit icon as the icon on the top of a group of units on the same hex. This has no impact on the game.
- Select **Leaders to Top** to move each friendly leader unit to the top of a group of units on the same hex. This has no impact on the game.
- Select **Unit Fly-by Box** to see quickly the strength of friendly units when passing the mouse cursor over said units. This only works for friendly units.
- Select **Show Unit's Fatigue Level** to change each friendly unit icon colour to reflect the level of fatigue incurred by the unit. In 2D - Pale white for low fatigue level, tan for medium fatigue and red for high fatigue. In 3D – this is seen as a coloured bar at the bottom of the unit - green for low fatigue, blue for medium fatigue and red for high fatigue. This is a toggle (on or off) option.
- Select **Show Unit's Quality Level** to change each friendly unit icon colour to reflect the unit's experience level. In 2D - Pale white for militia and levies, tan for warband and experienced and red for elite, veteran, fanatics and bodyguard. In 3D – this is seen as a coloured bar at the bottom of the unit – black for militia and levies, green for experienced and warband, blue for veteran and bodyguard and red for elite and fanatics. This is a toggle (on or off) option.
- Select **Show Battle Losses** to change each unit icon colour to reflect the level of losses incurred the previous turn by the unit. In 2D - Pale white for (<6) low losses, tan for (>5 and <11) medium losses and red for (>10) high losses. In 3D – this is seen as a coloured bar at the bottom of the unit - green for low losses, blue for medium losses and red for high losses. This is a toggle (on or off) option.
- Select **3D Unit Bases** to observe the army colour identification on all units.
- Select **3D Unit Stack Level** to observe if more than one unit is on a hex without clicking on the hex. A light blue bar will appear at the base of the visible unit if 2 units exist on the hex. A black bar if 3 units are on the hex.
- Select **Show Icons in 3D Forest** to see units in woods and buildings when in 3D view. Here the unit type is given as an abbreviation e.g. Heavy Infantry are shown as HI on the army coloured disc
- Select **Objectives** to toggle (off or on) the display of Objectives on the map. When this is enabled, each Objective hex is denoted by an objective marker displaying the victory points allocated to it.
- Select **Locations**.. to help you find a named location on the map.
- Select **Hex Contours** to toggle (off or on) a brown 'contour line' along all hexsides where an elevation change occurs.
- Select **Command Range** when a leader is selected to see the Command Range for that unit.
- Select **Fire Range** to toggle (off or on) a shade over all hexes which are not within the unit's fire range.
- Select **Line of Sight** (LOS) to toggle (off or on) a shade over all hexes which are not in the LOS of the current Hot Spot hex.
- Select **Fire Arc** to toggle (off or on) a shade over all hexes which are not eligible hexes for the unit to fire at given the direction the unit is facing.
- Select **Highlight** to get a sub-menu of the following options:
  - **Orders Placed** toggles (off or on) a red marker on all units that have allocated A.P.s.
  - **Leaders** toggles (off or on) a red marker on all Commander units.
  - **Fixed Units** toggles (off or on) a red marker on all Fixed units.

- o **High Fatigue Units** toggles (off or on) a red marker on all units with a battle fatigue of 51 or more.
- o **Disrupted Units** toggles (off or on) a red marker on all units that are disrupted.
- o **Routed Units** toggles (off or on) a red marker on all routing units.
- o **Retreating Units** toggles (off or on) a red marker on all retreating units.
- o **Uncontrolled Units** toggles (off or on) a red marker on all uncontrolled advance units.
- o **Organisation**.. toggles (off or on) a red marker on all units belonging to the same organisation as the activated unit.
- o **Player's Units** toggles (off or on) a red marker on all units under a Player's command. This is for multi-player PBEM games only.
- o **Irregular Units** toggles (off and on) a red marker on all units that are **not** disciplined, regular trained troops.
- o **Units with ferocity bonus** toggles (off and on) a red marker on all units that are fierce barbarians.

The options in this sub-menu are mutually exclusive. I.e. selecting any one of them will toggle off any of the others that had previously been selected.
The 'Highlight' function only highlights units on a player's side not the enemy unless highlighting Routing, Retreating or Disorganised units.

- Select **Mini-Map** to display a miniature of the map. When you select Mini-Map all your units are shown but only those of the enemy in LOS (if under the FOW rule). The main screen map will jump to the location a player clicks on the mini-map. This is a fast way of moving around the battlefield.
- Select **Rotate Map by 180** to view the map from the other side. Selecting this a second time returns you to the original view. This is helpful to get a better view when in 3D mode.
- **View 2D Zoom-in** provides the player with a close up top-down view of events on the battlefield and will show on-map losses.
- **View 2D Zoom-out** provides the player with a more distant view of the battlefield and allows a player to appreciate the bigger picture.
- **Army Colours Only** toggles on or off and when activated only shows the base army colour of all units instead of the troop type. This option is only available when viewing the battlefield in the 2D Zoom-out mode.
- **View 3D Zoom-in** provides the player with a close up three-dimensional view of events on the battlefield. (To activate a unit left click at the base of the unit).

"Options" Menu: Use this menu to set the default for certain options associated with the main programme. A check mark next to a command in this menu means that it is 'on'.

- Select **Hex Outlines** to hide or display the map's hex outlines. When the hex outlines are visible this command has a check mark next to it.
- Select **Flash Hot Spot Position** to flash the "Hot Spot" red hexagon. Units within this flashing hexagon are shown in the information boxes.
- Select **Unit Information** to toggle (off or on) the information box(es) detailing the condition & strength of the units at the hot spot.

- Select **Background Sound** to toggle (off or on) the playing of background and weather sounds.
- Select **Battle Sounds** to toggle (off or on) the playing of 'clash of arms' sounds.
- Select **View Losses on Map** to see casualties inflicted during the Events phase on the map. If this option is not ticked then casualties are reported through a pop-up dialog box.
- Select **Computer A.I.** to control the "Artificial Intelligence" (A/I) capabilities of the currently in-progress scenario. Select "'First Side" or "Second Side" if you want the programme to handle all decisions and actions for that side. Select "None" if you want the A/I switched off. You can change sides or switch the A/I off part way through a game but you can not select the A/I to run a side which is part way through its turn. You must choose the presently non-active side for the A/I.
- Select **Auto Scroll to Action** to allow the computer screen to automatically move to the action as it unfolds during the Events phase.
- Select **Mouse Scrolling** to scroll the screen across the map. Place the mouse near the edge of the map. Left edge to scroll to the left and so on. Scrolling of the screen can always be achieved during a player's command assignment phase using the keyboard arrow keys.
- Select **Fast Action** to choose the speed at which combat events unfold. Movement of units in the Events phase are still conducted at normal pace.
- Select **Fast Movement** to significantly increase the speed units are seen moving on the battlefield.
- Select **Fast Computer Processing** to progress through all the Events phase rapidly. This may be appropriate when playing large battles.
- Select **Auto Save** to ensure the game is saved at the end of each player turn.
- Select **Introduction Movie** to view the game credits.
- Select **Screen Saver Timer Check**. This option creates a pop-up message box at each ¼ stage through the 'Events' phase requiring the player to acknowledge the box before the action sequence continues. By so doing, any active screen saver timer is reset. This avoids the screen saver taking over and disrupting the game. Such a situation may otherwise occur when playing large battles.
- Select **No Command Box** to use hot keys instead of pop-up windows with the mouse for command instructions for your units.
- Select **No Replay** to jump through display of the Events Phase and move straight on to the next turn.
- **No Error Alert.** This toggles on and off the 'ping' sound to alert a player to check the Status Bar for comments / guidance. The default is ON.

"Campaign" Menu: (Only functional for Campaign battles)

- **Load Campaign Army** places the player's army inside the set-up area.
- **Replacements** displays a dialog showing the choice of replacements available for purchase at the start of the new campaign battle.
- **Initial Set Up** allows movement of the player's units within the set up zone(s) highlighted. Click on a unit and while holding the left mouse button down drag the unit to the new location.
- **Rotate Unit in Campaign Set Up** permits a player to rotate the facing of a unit before the battle commences.

- **Campaign Set Up Complete** should be selected only when allofthe above are complete. A player cannot go back to the 'Set Up' phase once this option has been ticked.

"Help" Menu:

- Select **About …** to display a dialog containing version number and copyright information about the game.
- Select **Parameter Data** to choose key information on playing the game. Each option provides a 'read-only' pop-up box of information. Click the box to clear it from the screen. Key information provided includes –
  - Missile Weapon Range
  - Missile Weapon Effectiveness
  - Initial Troop Action Points
  - Change in Formation Cost
  - Terrain Cost
  - Stacking Limits

Use of the Toolbar: The icons shown below are on the toolbar that appears at the top of your screen. Note: When viewing the game in 1280 x 800 or higher resolution the toolbar appears as shown below. For lower resolutions some icons will not be seen.

Note - All of the commands are still available from the menus.

The first toolbar button located on the far left is a clock (hourglass) and provides the ability to move on the game to the next player turn. Once a player left mouse clicks this button a pop-up dialog box checks this is the correct decision. If answered 'Yes' then the player's game turn is over.

The second button deletes the previous command issued to the activated group of units.

The third button deletes all existing commands issued to the activated unit.

The fourth button allows a player to move sequentially through the units in his army checking that his units have used their action points fully.

The fifth button allows a player to create a new grouping of units. This assists the player move units quickly by use of the 'Group Command' instruction. See details on 'Creating a New Group' above. Use of this button switches the 'Eagle' command button off.

Rally & Reform – This button is used to stop a friendly routing unit. Such a

command takes all the unit's action points.

Divide Unit – This allows a player to detach a formation from its parent unit. Left click the unit concerned then click this toolbar button. A pop-up dialog box will appear giving a minimum and maximum detachment size permitted. The player chooses the size of the detachment within that range. There is also the option to implement for all units in the same group if they have sufficient strength to detach, are not in combat, not routed and in good order.

Campaign Initial Set Up – This allows the player to move his units within the pre-defined set-up zone(s) before turn 1 of a campaign battle commences.

The next symbol represents a small version of a typical battle map and is known as a 'Mini-Map'. By clicking on this button an overview of the complete battlefield showing all friendly units appears at the top left of the screen. This helps the player maintain an overview of the situation and for large battles should be called upon regularly. The 'Mini-Map' is closed by clicking the toolbar button again. If the player clicks on the 'Mini-Map' then the main screen will jump to the equivalent location.

This button rotates the map by 180 degrees thereby providing the player with a view of the battlefield from the other side.

The next eight buttons are mutually exclusive:-

The 'Scroll' symbol highlights all units that have been assigned one or more orders.

The black circle with white 'F' symbol highlights all units fixed in position.

The red 'D' highlights all units which are disrupted.

The red 'R' highlights all units which are in rout.

The yellow 'R' highlights all units which are in retreat.

The yellow 'U' highlights all units which are in uncontrolled advance.

The red box graphic that follows is a pictorial of an organisation chart and represents the ability to highlight units that belong to the same part of an army's organisation. This is helpful when using the leader, who is able to assist in re-organising routed troops, particularly effective for those that come under his command.

The 'Leader' or commander icon when clicked highlights all commanders in your army and provides a quick means of identifying their position.

The next five buttons are mutually exclusive:-

The 'Eagle' button establishes the "Command Mode" necessary to issue orders to units and groups of units.

The 'eye' button when clicked highlights the surrounding hexes visible from that hex and is referred to as the 'Line of Sight' or 'LOS'. Any opposing unit that is in the LOS and weapon range may be fired upon. LOS is blocked by any unit or combination of units in a hex with a strength of greater than 20 men.

Fire Range – The hexes that a unit can hit with their weapon.

Fire Arc – Based on the direction the unit is pointing and the range of the weapon, a number of hexes are highlighted. Any enemy unit within the highlighted hexes are valid targets. A unit may not shoot through a hex containing 20 or more men. Light infantry, light cavalry, elephants and chariots with missile weapons can shoot all round.

Command Range - How far a Leader can maintain command and prevent a unit from becoming fixed.

Form Line – Units assigned to change to Line formation. See Formation Change on page 20.

Form Column - Units assigned to change to Column formation. See Formation Change on page 20.

Form Wedge – Elite and Veteran Regular Medium and Heavy Units can change to Wedge formation where historically accurate. See Formation Change page 20.

For screens with a resolution of 1280 upwards further toolbar buttons are provided. They are:-

Form Circle – Light Cavalry can form Cantabrian circle .See Formation Change on page 20.

Form Square – Regular Infantry can form hollow square. See Formation Change on page 20.

The final toolbar button is a quick 'Game Exit' button. Once a player left mouse clicks this button a pop-up dialog box checks this is the correct decision. If answered 'Yes' then the game shuts down.

The Status Bar: The status bar is shown in Figure1 as the game frame line below the map.

"Player" signifies which player's army is presently activated and able to assign commands. Once a turn is completed the sequence restarts and the game turn counter shown in the fourth box of the status bar is increased by one. You will notice the game turn information specifies the game length. This is the last two digits in the example "Game Turn : 1 of +10". The "+" sign indicates that the game may not conclude at the end of game turn 10 but may extend depending upon the state of the battle. If the outcome is not decisive then there is a chance that one or more turns may have to be played to complete the game.

The second box specifies whether the group command is active or not.

The third box specifies the location of the hot spot on the map and the terrain at that position. The hot spot is shown as the flashing red hexagon on the map. It is not the mouse 'arrow' position. The hot spot is used to help the player and shows relevant troop information for that hex when appropriate.

The fifth box is empty unless a player is playing against the clock in which case the time elapsed before the end of the player turn is shown. Playing against the clock is most commonly used in a "Hot Seat" game where two players use the same PC screen and alternate on the "Hot Seat" depending upon whose turn it is.

If you are playing on a 1024 x 768 screen resolution or above you will see a final box containing the name of the game file presently loaded.

Viewing the Map: You can scroll around the map using the mouse to move the cursor to the edge of the map. E.g. moving the cursor to the left hand side of the visible portion of the map will scroll the map shifting the visible portion to the left. Alternatively, the map can be scrolled using the keyboard arrow keys. The map can be viewed in 2D or 3D mode.

The "2D View" shows a top down view with the units represented by icons. The "3D View" is a three dimensional representation of the units and terrain. This is a larger scale than the 2D view and therefore does not cover the same number of hexes on the screen.

Definition of Unit Types :
The units in *Ancient Warfare* vary widely from one scenario to another and include everything from civilians to elephants, from lightly-armed peasant infantry to massively armoured cataphracts. When in 2D mode, the games use both colour and conventional military symbology to identify units. In 3D, the stunning graphics provide a complete depiction of unit type. Please note that not all unit types listed below are present in each title in the *Ancient Warfare* series.

Abbreviation	Symbol	Description	Typical Example
LI		Light Infantry	Javelin men / skirmishers
MI		Medium Infantry	Macedonian Phalangites
HI		Heavy Infantry	Greek Hoplites
LMI		Light Medium Infantry	Peltasts
LC		Light Cavalry	Thracian cavalry

MC		Medium Cavalry	Greek cavalry
HC		Heavy Cavalry	Successor cavalry
EHC		Extra Heavy Cavalry	Parthian Noble cavalry
El		Elephants	Successor armies
LCh		Light Chariots	Galatian armies
HCh		Heavy Chariots	Greco-Phoenician armies
Art		Artillery – bolt shooting & stone throwing engines	Macedonian armies
BT	BT	Baggage Train	Supplies - Wagons
BR		Battering Ram	Siege equipment
AT		Assault Tower	Siege equipment
P		Civilians	
M		Mantlets	Portable wood shields

On the 2D view, light infantry missile units would be identified with a 'B' for bow armed. 'S' when armed with the sling (including lead-shot slingers).

To clarify the type of infantry and cavalry the following colour code is used inside the icon symbol:

Colour	Unit Type Represented
Cream	LI, LC, LCh
Tan	MI, MC
Red	HI, HC, HCh
Pale Brown	LMI
Green	EHC
Brown	LHI

Explanation of Unit Types*:* Medium Infantry (MI) are distinguished from Heavy Infantry (HI) chiefly by the amount of armour worn. Both types of infantry are closely formed –that is, they operate almost shoulder to shoulder –but Heavy Infantry are better protected. The difference in armour is reflected in differences in Movement Costs and casualties. Light Infantry is distinguished from both MI and HI by its unformed state and lack of any armour. Some LI lack even a shield.

Light Medium Infantry (LMI) is like MI but does not operate in close formation. LMI fight as individuals. That they do not adhere to a rigid formation gives them advantages in movement. The same is true of Light Heavy Infantry (LHI) who can readily move through forest and other close terrain.

Armies: Each *Ancient Warfare* game will contain 5 or 6 armies; these armies are usually defined as a Regular standing army or Barbarian / Irregular forces.

The Info Box: The info box is displayed in the upper right hand corner of the screen when a unit is in the hex selected. If more than one unit is in the same hex then more than one info box will appear. Each info box can be dragged to any part of the screen the player wishes to ease viewing of the main map.

You can activate a unit in the same hex by left mouse clicking on its info box. A right mouse click on the info box will bring up a dialog box with more information on the unit including its movement cost in Action Points (A.P.s) for each type of terrain.

The centre section of the info box displays the unit's 3D icon. Other important data is shown around the icon.

Strength: The unit's current manpower.

Unit Type: e.g. HC for Heavy Cavalry

Formation: e.g. Column, Wedge etc.

Direction the Unit is facing: Shown as the red highlighted side of the hex.

Action Points: The number of action points a unit has remaining (unused). **Note** that, due to differing movement rates, different unit types will expend different amounts of A.P.s for entering the same hex.

% Stack Limit   Shows how much space in the hex is occupied by the strength of the unit.

Battle Fatigue: The unit's current morale & exhaustion.

Weapon: The missile weapon (if it exists) and the hand weapon used by the unit.

Shield: If the units carry shields a shield emblem will be shown.

Unit Status: No symbol means the unit is normal, a red "D" means it is Disrupted, a red "R" represents Routing, a yellow "R" the unit is Retreating, a yellow "U" the unit is in Uncontrolled Advance.

Experience: Troops' experience level determines the unit's combat effectiveness or in the case of a leader, his command effectiveness.

Unit Action: A ladder symbol means the unit is carrying ladders and can climb fortification walls. A castle symbol means the unit is on a fortification. A shovel and axe symbol means the unit is constructing a palisade. An assault tower symbol means the unit is on an assault tower.

Discipline	Combat Effectiveness	Examples
Regular	A	Elite, Guard, household troops
	B	Veterans
	C	Trained experienced
	D	Militia, Raw untrained recruits

Irregular	A	Fanatics
	B	Chieftain's personal bodyguard
	C	Typical warrior (Warband)
	D	Levies
Leaders	**Leadership Rating**	
Legendary	A	General e.g., Antigonus
Experienced	B	Divisional Commander
Mediocre	C	Unit Commander e.g. tribal chief

Terrain Information: Each game map is composed of a variety of terrain types that affect combat, movement and LOS. The terrain type in the "Hot Spot" hex is displayed in the middle of the status bar. The impact of terrain is given in the appendices.

The Command Report: At the beginning of each player turn the program generates a "Command Report". This report will specify if any reinforcements have arrived, if any existing units on the map are released from their "Fixed" (unable to move) status plus the number of friendly units with high fatigue and routed, the number of improved positions and bridges built. At the bottom of the report the Army's Overall Morale rating is shown. If the level drops to 50% then all units (except A & B Class units) who have a fatigue level greater than 50 have their fatigue level increased by 10. If the level drops to <33% and the morale of the opposing army is >43% then the army routs from the field and the game is over immediately. The winner is the opposing player irrespective of the game turn reached, ground occupied or men lost during the scenario.

Overall Army Morale: This is determined for all forces on one side. Morale of a Unit is determined by the following equation:
(70 – Battle Fatigue Level of Unit) / 70
This calculation is done for every unit including those completely eliminated and then placed in the equation:
[(Sum for all units of (Current Morale of a Unit x Present Unit Strength x Unit Class)) / (Sum of all units of (Full Morale(=1) x Initial Strength of a Unit x Unit Class))] x 100
- to determine the Overall Army Morale percentage.

Issuing Orders

Before orders can be issued the Roman Eagle button on the toolbar must be depressed and a unit must be selected. See the Getting Started document for instructions on how to select units and the role of the Unit Information Box.

Orders may be issued to units one at a time or by group. Any single unit may be given up to 4 orders while in Command mode if there are action points remaining.

If you use the Group Command function, all units of the same organisation will be given the same order. This can greatly simplify the task of commanding large numbers of units. Note, however, that if a Group Command is issued only one order can be placed on the units in the group. This command then overrides all other commands previously issued to any single unit in the same group.

Group commands only work with units that are not routing, in uncontrolled advance, retreating, fixed or in combat.

Hot Keys may be used as an alternative to the pop-up command box for issuing orders. To activate the set of Hot Keys click on Menu: Options: No Command Box. A complete listing of hot keys is provided at the end of this manual.

Player's Note: If the keyboard command key does not work – left click on the unit on the map then try the keyboard again. This takes the focus away from the unit information box and returns it to the battlefield map.

Movement: To move a unit, left click the unit on the map, if there is only one unit on the hex the unit is immediately activated then can right click on the target hex. This will result in a standard default movement order of 'Move' or 'Skirmish' depending on the unit type. If there is more than one unit on the hex, left click on the unit information box of the desired unit to activate it (yellow star appears on the unit info box) this will result in a pop-up box appearing giving you the viable command options. Choose one then if the instruction is movement beyond the unit's hex, right click at the destination hex. If you use the 'Group Command' function on the pop-up box; all units of the same organisation will be given the same order as that given to one of the group's units.

Hot Keys may be used as an alternative to the pop-up command box. To activate the set of Hot Keys click on the menu – Options – No Command Box.

Note: If an infantry unit in line formation moves at night then it immediately becomes disrupted. Similarly, infantry in line and infantry in Column moving through rough, woodland, orchard, village, building, marsh or swamp become disrupted. Regular infantry and all cavalry in Column remain in good order if following continuous road hexes.

- Regular infantry in Column and cavalry in Column moving from road hex to road hex have their movement cost reduced and do not suffer penalties for a change in direction or the relevant terrain.
- Any unit except a leader, LC or LI become disrupted when moving over a stream, ford or gully. Moving over these obstacles also costs action points in addition to the adjacent hex terrain cost. Moving over a hedge or low wall costs action points but does not cause disruption to the unit. Movement over a palisade wall costs action points and causes disruption.
- Pike and Long thrusting spear units can move through orchard terrain.
- Only infantry, elephants and leader units can move across a palisade unless it is a palisade gate.
- A unit that is disrupted can not undertake "Forced March" movement.
- Routed units only have one viable command option and that is 'Rally & Reform'. A routed unit not performing a 'Rally & Reform' action will automatically be moved away from enemy units.
- A change in elevation costs 10 action points per 10 metre change in elevation.
- A unit can always move one hex per turn if capable of travelling through that terrain even if it exceeds its initial number of action points. However, the penalty of exceeding the unit's action points is that the unit becomes disrupted.
- Only Leaders, LI / LMI / LHI can enter a 'Forest' or 'Rocks' hex.
- Charging troops can not change direction. This limited manoeuvring is due to their speed of movement whilst trying to hold a formation. Troops can not charge through villages, special buildings, woods, rivers, vineyards, marsh or swamp. Medium or heavy and extra-heavy cavalry may not charge across streams, fords or other linear obstacles. A cavalry unit may not charge if its fatigue is 'High'.
- Horse units can not move voluntarily adjacent to the front or flank of an enemy elephant unit.

- Basic movement cost of infantry and cavalry is reduced by 5 action points when in column irrespective of the terrain. This reduction does not apply if a unit is moving in Group Command mode.
- Basic movement cost of infantry is increased by 5 action points when in wedge formation, by 10 when in square, by 10 when carrying ladders.
- Basic movement cost of cavalry is increased by 10 action points when in wedge formation.
- Infantry in Wedge formation can not charge but cavalry units in Wedge can charge. Infantry would loose the wedge formation when at the run.
- Units in a cantabrian circle can only move at ½ speed.
- Infantry (except LI), cavalry (except LC), elephants & chariots once in an enemy 'Zone of Control' can not disengage until the enemy facing is recoiling or routed. However this only applies when an enemy unit is adjacent to the front or flank of a unit and the enemy strength is greater than 49 infantry or 24 cavalry or 2 elephants / chariots or combination. The size of the enemy unit will determine if it can pin down a friendly unit. Any unit other than artillery, siege equipment and wagons has a 'Zone of Control' (ZOC) to its front and front flanks. A unit (except Leaders, LI & LC) may not move directly from one enemy ZOC to another.
- Troops can not 'Rally & Reform' if an enemy unit is visible within 4 hexes. Routed, retreating units and units in an uncontrolled advance can not be given commands and therefore are flagged on the unit info box unit status and on the 2D view with no formation or direction in the unit square. Such units will be moved automatically by the computer based on their state and the presence of the enemy around them.
- Two different cavalry types using Column formation can occupy the same hex without disruption but different cavalry formations, irrespective of the type, can not.
- Rivers can only be crossed by Leaders, Elephants, LC or LI. All other unit types must use a bridge or ford. A bridge can only be crossed when the unit is facing the bridge entrance.
- Light Chariots can not charge or move adjacent to close formed units. LCh can only attack LHI, LMI, LI, LC, LCh, wagons and artillery but will fight back if contacted by others.
- All units can not charge in thick fog.
- Heavy Chariots and Light Chariots can not cross a palisade wall, low wall or hedge, gully or stream or orchard
- Cavalry and chariots can not move in to a palisade hex
- Elephants and chariots can not do an about turn only rotate face. Pike infantry in Wedge or Line formation can not rotate face only about turn or move from one hex to the next in a circle to rotate the unit. This is due to the difficulty in maintaining formation whilst carrying the long pike.
- Limbered artillery and wagons can not do an 'About-Turn'
- Stakes and pits delay infantry movement (2 x Clear terrain cost) and cause a strength loss of 2 on entering the hex. Any infantry unit entering the hex is also disrupted. Only infantry and foot leader units are permitted to enter these hexes.
- Caltrops delay all movement (2 x Clear terrain cost) and cause a strength loss of 2 to any infantry, cavalry or chariot unit entering the hex. All units entering the hex are also disrupted.

Simultaneous Movement / Charging: When the computer runs the events for a turn and two units move / charge against each other, there is a priority to type based on the following hierarchy:

1 – MC	11 – LCh
2 – HC	12 – LI
3 – MI	13 – LC
4 – EHC	14- Civilians
5 – SHC	15 – Bolt shooting engine
6 – HI	16 – Wagons
7 – HCh	17 - Mantlets
8 – El	18 – Stone throwing engine
9 – LHI	19 – Battering Ram
10 – LMI	20 – Assault Tower
	21 – Leader
	22 - Camelry

Elephants routing: Elephants that rout are said to be rampaging, charging any unit in its way. When an elephant unit routs, the computer determines events by generating a random number between 1-9. If the number is:

- 1 – The unit heads in the direction of the nearest friendly unit
- 2-7 – The unit rampages in the direction of one of the hex faces.
- 8 – Only one rampaging elephant from the unit is killed by its mahout.
- 9 – Half the number of rampaging elephants are killed by the mahouts.

A rampaging elephant also attempts to use the maximum number of action points in a straight line. If a rampaging elephant unit moves to a map edge hex it is immediately taken off the map i.e. for all intents and purposes it is eliminated.

Charging through for Elephants & Chariots: Elephants or chariots charging or moving into an enemy occupied hex may pass straight through if :-
- There is only one enemy unit in the hex
- The enemy unit is a class 'A' or 'B' Regular unit
- The enemy unit is directly facing the charging elephants/chariots
- There is no unit to the rear of the enemy unit preventing the elephants/chariots from charging through
- The terrain to the rear of the enemy unit is clear or fields only

This event simulates drilled troops parting ranks to let through enemy elephants/chariots before closing up the ranks again. The tactic was for elephants/chariots to be dealt with by the rear units. Certain armies were capable of this manoeuvre to prevent shock attack to the front formations.

Facing Pikes: Cavalry refuse to move/charge in to the front of units armed with pikes. They can still be joined in combat at the front through normal movement. This rule is designed to reflect the visual impact created by a solid wall of spear points. Cavalry can move/charge pike men who are in Column formation.

Rally & Reform: This order takes all of a unit's action points and therefore is the only command that can be issued to a unit in the same player turn.

- A unit can only rally if there is no enemy unit visible within 4 hexes of the rallying unit and it has a strength of 10 or more.
- A routed unit can attempt to rally if it has greater than zero action points. Only one attempt to rally per turn is possible. A unit has a 1 in 4 chance of successfully rallying. However if a leader (of any nationality on the same side) is within command range of the unit then the probability of rallying improves. A leader who is the commander of the unit being rallied has an additional contribution to the rallying attempt.
- After a successful rally the icon of a routed unit changes to one of a unit in line for infantry and in column for cavalry.

Note: A routing unit of less than 20 men does not disrupt other units as it passes through the same hex.

Multiple Orders: By left clicking on the unit it may be given up to 4 orders whilst in 'Command Mode' *if* there are action points remaining. If a Group Command is issued only one order can be placed on the units in the group. This command then overrides all other commands previously issued to any unit in the same group. Group commands only work with units that are not routing, in uncontrolled advance, retreating, fixed or in combat.

 The 8 different orders available are:

Move: See the movement rule earlier.

Charge: This increases the number of action points available to a unit. Typically by a multiple of 1.5. Once a 'Charge' command is issued no further command can be given to that unit on the same turn. A 'Reaction Test' is undertaken automatically when an irregular unit commences a charge. This reaction test may result in the unit failing to follow the charge through to contact. LI are not allowed to 'Charge' – they are ill-suited to close-combat and often trained to avoid it. Infantry units armed with the pike or long thrusting spear can not hold formation if they charge and therefore are not permitted to do so. When a unit charges its fatigue level increases by 2 for every quarter turn moved.

Forced March: This command represents an infantry unit moving at double-time and increases the unit's action points available by a multiple of 1.5. In the process of moving at double-time a unit will increase its fatigue level by 2 for every quarter turn moved and there is a 50% chance of suffering a loss of 2 men as stragglers per turn. No further commands can be issued to follow on from a 'Forced March' instruction in the same turn. This command can only be used by infantry in column.

Hold: This instruction prevents a unit from moving under local initiative. Local initiatives include charging an enemy unit close by and skirmishing actions.

Pause: This delays movement of a unit for ¼ turn.

Skirmish: Skirmishing is only permitted to LCh, LC, LI, or LMI/LHI not in Column. A skirmishing unit will automatically evade when an enemy unit moves adjacent to it. A unit

may skirmish forward or in its present position. If skirmishing without moving then the player must right click the unit's position as its final destination for the command to work. A 'skirmish' order is the last order a unit can receive. A unit can not skirmish when in a palisaded hex.

Change Face: Clicking this option presents a further dialog box allowing the player to rotate the direction an activated unit is facing. This is essential in a game; a unit can only fire at an enemy unit it is facing and a unit attacked in its rear will suffer higher losses than one attacked in the front. Infantry units armed with the pike or long thrusting spear can not manoeuvre when hit in the flank and therefore are not permitted to change face unless in Column formation.
Click the button alongside the hexagon face you wish the unit to rotate to. If the button is greyed out then this option is not available to the unit at that time.
Note – LI and Leaders are in a 'loose' formation and have no clear frontage. They can change face without penalty and LI can shoot in any direction.
Note – To change face by 120° takes 2 commands of 60° rotation.

Formation Change:
- Leaders do not change formation.
- Disrupted and routed units can not change formation.
- Units can not change formation adjacent to an enemy unit.
- Units eligible for formation changes – all units except siege equipment & wagons. Most cavalry units operate in Line, Column or Wedge (where historically accurate) as the standard formations. LC can also employ the cantabrian circle if armed with missile weapons. Infantry use line. Regular infantry can also use column, wedge and the square formation. Only Elite and Veteran Regular MI, HI, MC and HC are permitted to form a wedge. All units can split and combine. This is described later. All units using the 'Wedge' formation have their left flank secure and right flank unsecured. (See Reaction Test).
- Elephants and chariots only operate in Line formation.
- Pike units can not use the Wedge formation.
- Only units in Clear terrain / ploughed and crop growing fields can change formation.
- LI can not change formation.

Clicking this option presents a dialog box allowing the player to change from / to a circle / wedge / square / line or column formation. Any of these formation changes takes all of a unit's action points if irregulars and half the action points if regulars.
This command overrides all other commands previously issued to the same unit.

Default Orders: Where units have received no orders during the planning phase – see '**Fixed Units**' page 26.

Interpenetration: Troops can charge through a friendly unit who is not disordered, forced to recoil by combat or moving under the following circumstances:
- LC through LI
- Elephants through LI
- Chariots through LI or LC
- LMI through artillery
- MI, HI through a unit of the same type

Troops can not charge through a friendly unit engaged in combat.
Non-charge interpenetrations do not disorder those penetrated under the following conditions:

- LI through any troops in good order and stationary
- LC through LI or LC who are in good order and stationary
- Any unit through a unit of the same type who are in good order and stationary

All other interpenetrations results in both parties becoming disordered.
Movement of any unit into or through a hex occupied by a battering ram or assault tower does not disrupt the ram or tower but does disrupt the unit.
Note – LI are in a 'loose' formation and are not disrupted by any interpenetration.

Remove Units From Map: A unit must be adjacent to the edge of the map and left click before calling pop down menu "Remove Units From Map". This will remove the unit from the field of play.

Once a player moves a unit off map he may not return the unit. However no victory points are lost for the absence of the unit, as it is not considered destroyed.

Stacking: If a unit moves into a hex that already contains a friendly unit then both units become disrupted if they are not of the same type or contravene the 'Interpenetration' rule. Disruption is represented by a red "D" icon at the bottom of the unit information box. The number of friendly units that can stack in one hex is three or less dependant up on terrain.

For any close terrain (i.e. non-clear or field hex) the stacking limit is ½ of the maximum number tabled below except for Light Infantry.

Unit Type	Stack Limit (No. of) per hex	Strength per rank per hex
HI,MI	400 (512 for pike men)	24 (32 for pike men)
HC,MC	120	16
LMI,LHI	180	16
LC,LI	80	12
El, Art, LCh, HCh	8	8
Wagons	8	-
Battering Ram	1	-
Assault Tower	1	-
Mantlets	1	-

In 2D – the number of units in a stack is marked by a red bar on the right hand side of the unit. The thicker the bar the more units are stacked together. In 3D – this is seen as a coloured bar at the bottom of the unit – black for 3 units, pale blue for 2 units, no bar for 1. This is a toggle (on or off) option with the Fatigue and Quality bar indicators.

Stacking Limit Calculation: Where differing unit types exist on the same hex, the stack value will be determined by the sum of the fractions of each unit type. If the stack value plus that of the unit attempting to move in to the hex exceeds 1.0 then over-stacking would occur and the unit is prevented from moving into the hex.
Example –

HI unit stack value is Unit Strength / 400 in Clear terrain. (Unit Strength / 200 in Close terrain). So for a HI unit of strength 200 in Clear terrain, it has a stack value of 0.5

If a LMI unit is attempting to move in with strength of 90 (also with a stack value of 0.5) it can do so. But with a strength of 100 (stack value of 100/180) the combined stack value will exceed the stacking limit of 1.0 and will not be permitted.

Note – Routed pike units loose their pike and are only allowed a sword for the remainder of the game, this can result in a routed or rallied pike unit having greater than 100% shown in its stack value. The same applies to units with the long thrusting spear.

Routing and retreating units can not over stack. If such units have no hex to move to without over stacking they surrender and the whole unit is lost.

Leaders do not count towards the stacking limit although they still count as a unit and the maximum number of units allowed on a hex is 3.

Re-Combining Units:
This is achieved automatically by the programme at the start of the computer AI turn but needs to be done manually on the player's turn using the menu – Units – Recombine Unit option. Any units of the same nationality, same type and same organisation group not routed, retreating or in uncontrolled advance, will combine.

● If two units re-combine and one is disrupted then the newly formed single unit is disrupted.
● The fatigue of the combined unit is the average of the individual units adjusting for the strength of each unit.

Note   - Leaders do not combine. If a unit is building a bridge or palisade, destroying a bridge, on a fortification or assault tower it can not combine.
   - When two units with different formations or different facing combine, they take the formation or the facing of the biggest unit.

Disruption: A unit is disrupted (i.e. loss of formation) under the following conditions:
• Having evaded a charging enemy unit
• If in an uncontrolled advance.
• Having been contacted in the rear by an enemy unit.
• Having been contacted before completing a formation change in the flank.
• If forced to recoil by cavalry charging into melee that turn
• If infantry moving at the moment they are contacted by charging cavalry
• Troops other than LI, LMI, LHI and LC passing through close terrain. I.e. Non-clear or field hex
• Been interpenetrated by a friendly unit other than those permitted to do so without penalty. E.g. move different unit types into the same hex
• Any cavalry within 5 hexes of elephants.
• Any unit except a leader, LC or LI moving over a stream, ford or gully.
• Moving over a palisade wall.
• Any infantry unit in line formation moving at night.
• Any unit constructing palisades or making ladders.
• If moving through a hex containing caltrops, stakes or pits.
• If MI or HI moving through tents
• Any unit except a Leader, LI or LC moving across a long bridge (spanning a full hex) not in Column formation.
• Having undertaken a Reaction Test (possible result is 'Disruption').

The effect of disruption is:-
- -1 in Melee
- -2 when shooting
- -1 on Reaction Test
- A disrupted unit can not change formation unless the unit is a Regular Elite or Veteran unit.

Recovery from disruption may occur at the end of a turn when a unit is not in contact with the enemy, undertakes no action and is not on a full-hex bridge. A random die role is undertaken by the computer. For a Regular unit the die role is between 2 & 5, for an Irregular unit the die role is between 1 & 6. If the random number is greater or equal to the troop quality then the unit recovers.
- 'A' class troop quality value = 2
- 'B' class troop quality value = 3
- 'C' class troop quality value = 4
- 'D' class troop quality value = 5

A friendly leader within 5 hexes helps the recovery by a factor of +1 to the die roll.

Command & Control: If the "Command Control" box is ticked on the Scenario Options dialog box (at the start of a game) - at the start of a player's turn, all friendly units are checked to determine if they are in range of their group commander or legendary leader. If so, they are in range of command control and therefore respond as normal. If a unit is not in range of an appropriate commander then the unit is 'Fixed' until the start of a turn when it is within range. A 'Fixed' unit shows local initiative only as described below. The only exception to this rule is if a unit is in a melee or shot at during the previous 'Events Phase' (computer simulation).

Command Range: A commander has a leadership rating equivalent to his experience level. A leader's command range is equal to his leadership rating. The command range determines how far his influence reaches when issuing orders and determines which units are fixed or not at the start of a player's turn. The command range is reduced as a leader unit suffers fatigue but does not fall below a 'C' leadership rating.

	Leadership Rating	**Command Range (in hexes)**
General	A	18 for Regular Leader otherwise 15
Divisional Leader	B	12 for Regular Leader otherwise 10
Unit Leader	C	6 for Regular Leader otherwise 5

Note – Foot Leaders can only issue commands to infantry units and siege equipment.

Fixed Units: If the Command Control option is ticked when starting a scenario; units are fixed at the start of a player turn (except turn 1) in which they are out of command range. A unit that has been shot at or in combat on the previous Events Phase will not be Fixed even if out of Command Range. This is to simulate the fact that no unit will remain stationary under missile fire or when attacked simply because they are out of Command Control. When a unit is fixed it is shown with an icon on the unit information box. Fixed units and those with no orders at the end of a player's phase default to the following action during the Events Phase:-

LI & LC :-	Skirmish with any enemy unit within 4 hexes. If none – no order given for missile troops, Hold present position for non-missile troops.
All other cavalry :-	Attack any enemy within 4 hexes unless in Column then no order given. If none – no order given for missile troops, Hold present position for non-missile troops.
All other infantry, Elephants, Chariots :-	Hold present position for non-missile troops, no order given for missile troops.

Contact with the Enemy: At the start of any player turn, the player's units will be given their maximum number of action points unless in contact with an enemy unit. For infantry, EHC, SHC, elephants and chariots - If a player's unit has its front or flank adjacent to an enemy unit then the player's unit only has sufficient action points to turn to face said enemy unit. This reduction in action points set at the start of a player's turn reflects continued combat with the enemy. *They are pinned. This rule reflects historical reality. It was very difficult to regain freedom of movement once engaged.*

This rule does not apply to LI/LC/MC/HC and leaders as these units typically operate as skirmishers and would easily break contact with the enemy. Similarly, any unit in contact with an enemy artillery unit, siege unit, civilians or wagon unit would not suffer a loss of action points at the start of the player's turn given the enemy unit could not pin down the player's unit. Any unit with less than 50 infantry, 25 cavalry or 3 Elephants/Chariots has insufficient strength to pin down an enemy unit in combat. This means small units do not stop an enemy unit from receiving its normal allocation of action points
Light cavalry may only move adjacent to routed units, LI, LMI, LHI, Leaders, LC, LCh, wagons, artillery, and unmanned siege equipment. Otherwise they require having twice the strength of the enemy units in the adjacent hex unless making contact with the rear of the enemy unit.
Note: Except LI/LC and Leaders, attacking units can not do an about turn.

Combat – Melee :
Combat occurs automatically during the Events phase when the front of a friendly unit is adjacent to an enemy unit. Your units will combat any enemy to the front of the direction faced and to their left and right front.
The maximum number of men in a unit able to attack one hex is determined by the number of eligible troops (if the unit is facing the hex) or x 0.5 (if the unit's flank is facing the hex). There are up to 4 rounds of combat per turn. The army assigned by the Scenario designer as the 'First Player' strikes first in rounds 1 and 4 and the opposing army strikes first in rounds 2 and 3.

The rear ranks fill the gaps to ensure the maximum number of men are always fighting.

Number of troops eligible for combat:
- The number of troops eligible for combat is determined by the 'number of eligible ranks in a formation' x 'the number of men per rank'. The number of eligible ranks is given in the 'Melee Effectiveness' table and the number of 'men per rank' is given earlier in **Stacking**. Note – 1 rank of 32 pike men only has a strike capability of 24 non-pike men and is therefore considered as 24 men for combat calculations.

- Infantry or cavalry in a wedge formation have 1.5 ranks eligible for combat. The number of combat eligible infantry or cavalry when in 'Column' is 1/2 that for 'Line'.
- Number of combat eligible infantry when in 'Square' is 1/4 that for infantry in 'Line'.
- Number of combat eligible cavalry when in 'Circle' is 1/2 that for cavalry in 'Line'.
- The loss of strength of a leader unit in combat is a maximum of 5 per quarter turn.
- Only infantry, elephants and leader units can attack a defended watch tower or across a defended palisade hexside.
- No unit may move in to combat if its fatigue level is HIGH. If a unit is already in a melee then it continues. Leaders can not attack independently of a non-leader unit.
- Routed units can not inflict losses on the enemy. Units fighting from a bridge hex can only combat enemy units to their front not the flank.
- Units in a tight wedge formation may not throw the javelin or use the pilum.

Modifiers :
Player's Note: Awareness of these factors can greatly enhance one's game play. This section repays study.
The "plus" or "minus" below refers to calculation of the Losses Factor. Modifiers are cumulative. Once the final Losses Factor is found, the game engine correlates it with the Number of Men Eligible For Combat in any particular instance to come up with the actual losses inflicted. See the combat examples below.

- For a friendly unit, except elephants and chariots, facing pikes or long-thrusting spears of infantry, who are not disordered and have not been pushed back in the same turn;

  -3 where the enemy has pikes at least 6 ranks deep (strength of >191) and the friendly unit does not have pikes or long spears.
  -2 where the enemy has pikes at least 6 ranks deep (strength of >191) and the friendly unit does have long spears.
  -2 where the enemy has pikes 3 - 6 ranks deep (95< strength <192) and the friendly unit does not have pikes or long spears
  -2 where the enemy has long spears at least 3 ranks deep (strength > 71) and the friendly unit does not have long spears.

- -1 if infantry fighting to cross a defended linear obstacle such as a stream, hedge etc.
- -1 if a commander is defending.
- -1 if a unit is attacking across a palisade wall.
- -1 if a unit is attacking into a wood, shallow water, orchard, rough ground, marsh or swamp.
- -1 if the attacking unit's fatigue is 'medium'
- -1 if unit is disrupted
- -1 if 'Militia' or 'Levy' troops

- -2 if a unit is attacking into a building, village, rocks or forest.
- -2 if cavalry fighting to cross a defended linear obstacle.
- -2 if the attacking unit's fatigue is 'high'.

- +1 if following up opponents who are falling back in a melee.
- +1 if up slope of opponents.
- +1 if a Mediocre commander is attacking.

- +1 if enemy is shieldless.
- +1 if attacking the right flank of a shielded non-LI infantry unit
- +1 if attacking the rear, right rear or left rear of a non-pike / non-long thrusting spear unit.
- +1 if opponents are MI or LMI who have no shields.
- +1 if unit is 'Elite'.
- +1 if unit is 'Bodyguard'
- For Greek Wars; +1 if Spartan units with a fatigue value<10
  For Alexandrian Wars; +1 if Thracian / Illyrian army units with a fatigue value<10
  For Diadochoi Wars; +1 if Barbarian army units with a fatigue value<10.
  For Punic Wars; +1 if Gallic units with a fatigue value<10
  For Gallic Wars; +1 if German or Gallic units with a fatigue value<10
  For Roman Civil Wars; +1 if German units with a fatigue value<10
  This represents the initial tribal Ferocity Impetus or Elite status of an army
- +1 if troops armed with long thrusting spears with 8-12 ranks deep (that is with a unit strength of >191 and <288)
- +1 if troops armed with pike with 8-12 ranks deep (that is with a unit strength of >255 and <385)
- +1 if troops **not** armed with pike or long thrusting spears with 10-15 ranks deep (that is with a unit strength of >239 and <360)
- +1 if charging in or subject to uncontrolled advance to the front of a unit.
- +2 if fighting against the flanks or rear of elephants.
- +2 if attacking routed enemy troops.
- +2 if charging in or subject to uncontrolled advance to the rear of a unit.
- +2 if unit is 'Fanatics'
- +2 if troops armed with long thrusting spears with >12 ranks deep (for 24 men per rank that is with a unit strength of >287)
- +2 if troops armed with pike with >12 ranks deep (for 32 men per rank that is with a unit strength of >384)
- +2 if troops **not** armed with pike or long thrusting spears with more than 15 ranks deep (that is with a unit strength of >359)
- +2 if HC charging in
- +2 if Experienced Commander is attacking
- +3 if Legendary Commander is attacking
- +3 if attacking the rear, right rear or left rear of a pike or long thrusting spear unit.
- +3 if EHC or SHC charging in

If units attacking elephants with javelins -
For LI an additional random factor of 1-6 is added to the modifiers
For LMI an additional random factor of 1-5 is added to the modifiers
For LHI an additional random factor of 1-4 is added to the modifiers
For MI or HI an additional random factor of 1-3 is added to the modifiers
For cavalry +1
Javelins were far more effective at killing elephants and heavy chariots than arrows or lead-shot.

If there is more than one unit in defence then the losses are taken by the largest unit which is assumed to be the front unit except for civilians. A civilian unit does not count when there are non-civilian units in the same hex.

Units armed with the axe weapon will automatically attempt to destroy an adjacent palisade hex side when attacking through such an hex side.

Note – When using the pop-up Combat Results box instead of the losses shown on the map; a result of zero losses are not reported.

Examples of Melee Combat Calculation
To get a combat result, we have to find first the Losses factor, apply all the relevant modifiers to it, and then turn to the Combat Losses Chart. There we cross-reference the modified Losses Factor to the Number of Troops Attacking. The final number represents the actual number of men lost in that round of the melee.
Example #1
A force of 40 HC charge downhill into the rear of a force of disrupted Light Cavalry.
The Melee Effectiveness Chart tells us that HC armed with light spears attacking LC create an initial Losses Factor of 6. We next apply modifiers to that number to reflect the particular circumstances of this melee. Attacking Downhill provides a +1 modifier, so we now have 6+1= a modified Losses Factor of 7. We add 2 more points for charging in to the rear of a unit, and 2 more for "HC charging in". Note that the enemy's Disrupted status does not give us an extra point. Our final Losses Factor is 7+4= 11.
We next turn to the Combat Losses table and find the row for 11. We want to Cross-reference that row to the column corresponding to the number of troops we're attacking with. That number is 16; though there are 40 HC in the attacking hex, only one rank of 16 men is "eligible for combat". Thus we come up with an actual casualty total of 10.
Example #2
90 LI attack 50 HI directly. The CombatLosses factor drawn from the Melee Effectiveness Table is 2. As there are no modifiers to consider in this hypothetical, we turn to the Combat Losses Table immediately. The number of LI "eligible to attack" is 1 rank (the total # of ranks able to attack) times 12 (the total number of men per rank.). Cross-referencing the Combat Losses factor of 2 with the column denoting 12 men in the attacking hex, we find an actual loss to the HI of 1.
The HI attack the LI in their turn. Assuming this is not the first turn of contact, HI attacking LI generate an initial Loss Factor of 3. The number of HI eligible to attack is 1 rank times 24, the number of men per rank. We turn to the Combat Losses table and cross-reference the final Losses Factor of 3 with 24 men attacking andfind the actual loss to the LI to be 3.

Units assaulting (in melee) & those being assaulted must undertake a Reaction Test. The consequence of a Reaction Test are given in the Battle Charts appendix. The Reaction Test is conducted before the combat result is determined.

Surrender: A unit only surrenders when assaulted and pushed back whilst surrounded by enemy units and/or impassable terrain. If the unit is other than Light Infantry, Light Cavalry, Elephants or a leader, the unit looses its Standard / Banner to the enemy. Any captured Standard / Banner scores 10 extra victory points for a player.

Overruns: An enemy hex may be entered if it contains only leaders, wagons, siege equipment and/or artillery. To achieve such an overrun, the friendly unit must have a strength of 50 or more. The cost to overrun a unit is that of the terrain the enemy unit is on. Units can charge through skirmishers if they evade but not if they hold their ground.

Unreliable Units: This is normally associated with certain Barbarian units in history but can be assigned to any unit in the game. Unreliable units can only be given such status in the Scenario Editor and are therefore set at the start of the scenario. Such units are shown as 'Fixed' and the owning player will see the units have no release turn specified. These units can not move until the enemy is within 7 hexes at which time a reaction test is conducted and the result is either the unit is released and behaves as normal or it immediately routs. This is a one-off test and will not be repeated as more enemy units approach.

Ranged Fire:
When using the Combat Result report box instead of showing losses on the map, the player will see the shooting unit highlighted with a red hot spot and the target unit highlighted with a blue hot spot.
If infantry in Line formation fire then all other units in the same hex can not fire as they must be behind. The other units can not move forward as they would be hit by the firing line unit therefore their action points are reduced to zero.
A unit can not fire if it is charging, on a forced march, retiring, evading, recoiling, following-up or in an uncontrolled advance.
A missile unit fires on any enemy unit when it has enough APs, the enemy unit is in range and it has a Line of Sight to the enemy unit.
Infantry or cavalry in column or wedge can not fire. A unit in a River hex can not fire
Disrupted artillery is not permitted to fire.
Troops may not fire at an enemy unit adjacent to a friendly unit for fear of hitting their own men.
Foot archers with the composite bow can fire overhead but their range is reduced to 6 hexes. Stone throwing engines can fire overhead without impacting the maximum range. However, stone throwing engines have a minimum range and can not hit a target nearer than 5 hexes. Overhead fire is known as 'Indirect Fire' and results when the firing unit itself can not see the enemy target unit but other friendly units can.
Only one missile unit may fire from each hex.

Troops eligible to fire:
- Mounted troops – 1 rank unless in Cantabrian circle then equivalent to 2 ranks.
- Foot archers – 2 ranks.
- All others – 1 rank only.
- A unit can not fire from a river/sea/lake hex.

Modifiers:.
- If infantry move then fire or are firing a second volley in the same turn their effectiveness on firing is reduced; the attack factor is reduced by 1.
- If the shooting unit is disrupted then the attack factor is reduced by 2.
- If the shooting unit has HIGH fatigue then the attack factor is reduced by 1.
- If the target unit has shields then the attack factor is reduced by 1.
- If the enemy target has more than 100 men in the hex then the density of troops increases the probability of losses. Hence the attack factor is increased by 1. For >200 men the attack factor is increased by 2 and for >300 men the attack factor is increased by 3.
- If the shooting unit is shooting up hill then its attack factor is reduced by 1 per elevation change.

- When shooting into a forest, rocks, village or special building the attack factor is reduced by 1.
- When shooting into a mantlet, palisade, watch tower or fort defended hex the attack factor is reduced by 2.
- If a unit's experience is 'A' or 'B' then the attack factor is increased by 1.
- If the shooting unit is infantry in Square, it does so at ¼ strength.
- If the shooting unit is horse or foot archers against Extra Heavy Cavalry, the attack factor is reduced by 1.

Examples of Ranged Fire Combat Calculation
Example #1
A group of 40 LI armed with Javelins attack a unit of 150 HI. Turning to the Missile Weapon Effectiveness Table, we cross-reference the Defending Unit Type (HI) with "LightHand-Hurled Weapons". This gives a Losses Factor of 3. Because the target has more than 100 men present, we apply a modifier of +1 to this factor for a total of 4. But, the defending unit also has Shields, resulting in a -1 modifier. So we remain at 3.
Turning to the Combat Losses chart, we cross-reference 3 with the number of troops attacking. There are 40 LI present but not all are eligible for combat. With the exception of foot archers, only 1 rank of LI can fire, and the charts indicate that 12 men arein that rank. So we cross "3" with "12" to find an actual loss of 2.
Example #2
A group of 60 archers armed with composite bow fire on a unit of 80 Light Cavalry. The Missile Weapons Effectiveness Table gives archers a Losses Factor of 3 against LC. Assuming there are no modifiers, we go straight to the Combat Losses chart. To find the final casualty figure, we have first to determine the number of archers firing. Archers are the only LI that have 2 ranks eligible for combat. With 12 men in each, we have24 archers in combat. Cross-referencing 3 with 24, we find the final toll on the LC is 3.

Fatigue: Battle fatigue (a combination of physical exhaustion and morale) occurs as the unit suffers losses.

- +2 per quarter turn moved if units are charging.
- +2 per quarter turn moved if units are undertaking a 'Forced March'.
- +1 for each casualty suffered.

In the case of casualties suffered:-
- If the initial strength of a unit is 20 or less then this factor is multiplied by 5.
- If the initial strength of a unit is 21-30 then this factor is multiplied by 4.
- If the initial strength of a unit is 31-40 then this factor is multiplied by 3.
- If the initial strength of a unit is 41-50 then this factor is multiplied by 2.
- If the initial strength of a cavalry unit is >50 then this factor is multiplied by 2.

Rate of increase in fatigue is reduced for a large unit with many ranks. As losses occur in the front rank they are readily replaced by men from the ranks behind.
For a unit strength of 350 – 449, increase in fatigue of 4 is reduced by 1.
For a unit strength of 350 – 449, increase in fatigue of 5 or more is reduced by 2.
For a unit strength of 450 or more, increase in fatigue of 4 is reduced by 1.
For a unit strength of 450 or more, increase in fatigue of 5 is reduced by 2.
For a unit strength of 450 or more, increase in fatigue of 6 or more is reduced by 3.

This is particularly important for play with Alexandrian Wars where a steady phalanx is critical to the Macedonian war effort.

Irregular MI units of less than 200 strong and LMI units of less than 120 suffer loss of confidence (morale / battle fatigue) after each round of combat given the lack of multiple ranks in the rear of the same unit. Fatigue increases by 1 per combat action phase.

Units with a low fatigue have a fatigue value of <30. Medium fatigue = 30-50, High fatigue for 51-70. A unit's battle fatigue is shown on the Unit information box. The unit also has a coloured box representing the fatigue level providing a simple overview on the battle map for the player. In the 3D view this is seen as a coloured bar at the base of each friendly unit.

If a unit's fatigue rises to 70 then it automatically routs. If a unit is routed it may recover and be re-organised unless it exits from the map at which point for all intents and purposes, the unit is eliminated.

2D view Colour	3D view Colour	Unit Fatigue Level Represented
Cream	Green	Low
Tan	Blue	Medium
Red	Red	High

Fatigue Recovery: At the end of each turn, a unit may recover from fatigue and/or move its status from disrupted to organised. The probability for success for the unit depends upon its troop class. I.e. Elite troops have a better chance than levies.

The maximum fatigue level possible is 70.

In order for the unit to be eligible for fatigue recovery, the unit must not move, fire or be fired at, charge or be in a melee that turn. It must also not be building / destroying a bridge or creating a palisade wall. The rate of fatigue recovery is between 0 & 12 depending on troop quality and probability. The best way to ensure a unit recovers from fatigue is to assign it a 'Hold' command.

Units that suffer casualties due to Ranged Fire or Combat with a fatigue rating of more than 50 are liable to retreat and should be considered unreliable.

The impact of Fatigue:
If a unit has Medium Fatigue:
- 1 is subtracted from its 'Reaction Test' result.
- 10% is subtracted from the unit's melee strength.
- 10% is subtracted from its missile strength when the unit fires

If a unit has High Fatigue, then
- 2 is subtracted from its 'Reaction Test' result.
- 20% is subtracted from the unit's melee strength.
- 20% is subtracted from its missile strength when the unit fires
- Will not follow-up recoiling enemy unit in combat.

Victory Hexes (Objectives): To score victory points for key hexes, a friendly unit must be on the hex in question at the end of the Events Phase or at the end of the game. Leaders, wagons, battering rams, assault towers, civilians and routed units do not count towards control of a victory hex and therefore a player can not gain the associated victory points unless other friendly units occupy it. The Victory Report shows points for units occupying Victory hexes as if it is the end of the game. In the 3D view – The victory hex flag is a plain red flag if the hex is occupied by a 'First Side' unit and a Bird symbol if the hex is occupied by another a unit from the 'Second Side'. If unoccupied, the victory hex flag is a pole without an emblem.

Visibility: The visibility varies depending on the weather, night or day and line of sight. The table below helps a player understand the conditions that brought about the visibility restrictions for the battle. The weather on a particular game turn in the battle is given in the pop-up box called from the Menu – Status – Scenario Information.

Note: The visibility range is automatically adjusted during a scenario and is further restricted by the line of sight from a particular hex. Winds above 10mph can blow fog away and increase the visibility during a game.

Weather Condition	Visibility
Clear	20 and over
Overcast	18-19
Slight Haze	15-17
Light Rain	10-14
Light Fog or Squalls	8-9
Heavy Rain	6-7
Fog	5
Thick Fog	4
Dawn / Dusk	3
Night	2
For Desert terrain - Dust clouds / sand squalls / sand storms where wind speed > 10mph	2 - 8

"Line of Sight" (LOS) is blocked by any terrain feature other than rough ground, tents, hedges, a low wall, gully, stream or river. "Line of Sight" and a unit's "field of fire" are blocked by 20 men or more in one hex. LOS is determined by using the tool bar 'eye' button. This button can be used to determine the LOS from any hex when the FOW mode is off but with FOW on a player can only determine the LOS when clicking on a hex containing a friendly unit.

Reaction Test: This is to determine the behaviour of a unit during the battle. An adverse reaction test may result in the unit failing to follow a player's commands. Units suffering from an adverse reaction test may suffer disruption, retreat, rout, undertake an uncontrolled advance or halt.
Player's Note: An adverse reaction test is the chief reason units fail to follow a player's commands or otherwise behave in unexpected ways.

Occasions for testing:
- If a unit is irregular and charging.
- If a unit is contacted by a charging enemy unit.
- If a unit is hit by missiles
- If a unit is in contact (melee) with an enemy unit.
- If a unit is below 1/2 original strength and a enemy unit is within 5 hexes of the unit.
- If a unit is within 5 hexes of a routing friendly or unfriendly unit.
- When the player uses the 'Rally & Reform' command for a routed unit and the unit is not within 5 hexes of an enemy non-routed unit.

Procedure: A random number generated by the computer is adjusted according to the following factors and the result checked with the table given in the Battle Charts appendix. For units above 2/3rds their original strength the sum of 3 random numbers is used. For units below 1/3rd their original strength only 1 random number is used. For all other units the sum of 2 random numbers is used. For Regular armies, the random numbers are between 2 & 5 and for irregular armies the random numbers are between 1& 6.

Add 1:
- If there are more non-routed friendly units than non-routed enemy units within 5 hexes of the unit under test.
- If testing unit status is 'Normal' i.e. not disrupted, routing etc
- If any enemy troops within 5 hexes are routing.
- For each secure flank (i.e. adjacent hex is occupied by a non-routed friendly unit. A square has no flanks. A cantabrian circle and shielded troops in a wedge formation have 1 secure flank)
- If the unit's rear hex is occupied by a friendly unit.
- If both rear left and rear right flank hexes are occupied by friendly units.
- If a friendly leader is within 5 hexes of the unit.
- If there is a friendly civilian unit within 5 hexes resulting in the need for desperate defence.

Add 2:
- If there are at least twice as many friendly non-routed troops than enemy units within 5 hexes
- If the testing unit or any friendly unit within 5 hexes is charging, following-up or in uncontrolled advance
- For each enemy unit within 5 hexes which is in rout.
- If in cover or in square.

Deduct 1:
- If there are less non-routed friendly units than non-routed enemy units within 5 hexes of the unit under test.
- If there are any enemy uphill of the testing unit within 5 hexes.
- If within 5 hexes of unfriendly cover (i.e. occupied woods / buildings)
- If the testing unit has troops who are not carrying shields.
- If testing unit or any friendly unit within 5 hexes recoiling as a result of a melee.
- For each unsecured flank (i.e. adjacent hex is not occupied by a non-routed friendly unit.) Left flank is not unsecured if unit has shields.

- If shot at by missiles other than artillery engines.
- If the testing unit has 'Medium' fatigue level.
- If the testing unit is disrupted.

Deduct 2:
- If there are only half as many or less non-routed friendly units than non-routed enemy units within 5 hexes of the unit under test.
- For each non-routed enemy unit adjacent to the testing unit and behind the testing unit's flank.
- If there are any non-routed enemy elephants within 5 hexes.
- If testing unit is armed only with bow and normal sword. (Such units try to avoid combat).
- For each friendly unit routing within 5 hexes of the test unit.
- If shot at by engines.
- If the testing unit has 'High' fatigue level.

Deduct 3:
- If there are no non-routed friendly units within 5 hexes.
- If the testing unit contains horses who are within 5 hexes of non-routed enemy elephants.
- If the testing unit contains elephants that have suffered casualties

The results of a reaction test are given in the Appendix Battle Charts.
An 'Uncontrolled Advance' will result in the unit moving in to contact with the enemy and will not be eligible to receive orders. Note – Units in a Palisade or Fortification hex will not suffer an 'Uncontrolled Advance' reaction test result.
A unit 'Retreating' will fall back (away from the local enemy) up to 4 hexes during the Events Phase and will not be eligible to receive orders.
A 'Recoiling' unit still faces the enemy but falls back one hex. Only cavalry and infantry can recoil. Other units are eliminated.
Rout is the collapse of a unit's morale and ability to function as a combat entity. A routed unit may not move autonomously nor engage in combat (though it may suffer casualties when attacked). Routed units are moved automatically by the program toward the edge of the board. Rout may result from a failed reaction test or overwhelming fatigue. Rout is denoted by a red "R" on the Unit Information Box.
Heavy Chariots do not rout but are eliminated instead.

'Shock & Awe' – Experienced, warband, militia and levy units will undergo a morale break test if contacted by a charging enemy unit. If the unit fails the test it will rout automatically.

Special Unit Types: The letters on a green or red box in the upper left corner of a unit's information box denotes the unit type. E.g. LI – Light Infantry, HC – Heavy Cavalry.

Leaders: Leaders should be used for issuing of orders and rallying of routed units. When assaulting they do contribute to the assault but are at risk of being killed.

A leader can only have a command range of 5 – 18. It is advisable for a player to have a leader with each group of units at the start of play. A Group leader can only give orders to units within 5 hexes (6 if Regular) and has a Leadership rating of 'C'. A General or Sub-

General (Divisional Leader) can give orders to units within 15 (18 if Regular) and 10 (12 if Regular) hexes respectively. I.e. One with a Leadership rating of 'A' the other 'B'.

Leaders have no penalty cost in action points for changes in direction given it is not a formed body.

Legionaries:
- Legionary units are Roman Heavy & Light Heavy Infantry only.
- Legionaries may attempt to build emplacements referred hence forth as "Palisades". The act of constructing palisades is known as "digging-in". "Digging-in" requires all the initial action points each turn it is attempted and the unit must be in Line formation. A Legionary unit has a one-in-six chance of succeeding each turn it is "digging-in". Once successful, the owning player chooses which palisade graphic appears on the battlefield. Palisades reduce the effective fire on units in such a hex and assist in defence. Typically, the Roman army would construct palisades when creating a 'night' camp during its march through enemy territory. The Legionary unit must have strength of 50 or more to construct a palisade on one hex side, more than 100 to construct on 2 hex sides at once and more than 200 to construct palisades on 3 sides at the same time. Palisades can not be constructed in close terrain or hexes containing streams, hedges, walls or gullies. Palisades can not be constructed in sand or snow terrain.
- A Legionary unit can build small wood bridges to cross streams and gullies but not rivers or lakes. Building a bridge uses the same procedure as that to construct palisades except when the "Build Bridge" command is triggered the Legionary unit must be facing the hex side where the stream is located. A Legionary unit has a one-in-three chance of succeeding each turn it is "bridge building".
- Legionary units may destroy small hex-side bridges but not full-hex length bridges. The Legionary unit must be located on the same hex as the bridge and will need all the initial action points to destroy the bridge. This is deemed to be successful at the start of the player's next turn by use of axes carried by the Legionary unit. There is no limit to the number of bridges a Legionary unit can destroy. To destroy a small bridge activate the unit then go to menu – Units – Legionaries – Destroy Bridge and click. The unit will be assigned the action which is conducted during the Events Phase.
- Legionaries may replace units in the front line of combat, a tactic well developed by the Roman Army. During the Command Phase a player may apply the "Fall Back" command to a Roman Regular HI unit in combat. This command takes all the unit's action points. This will result in the Legionary unit falling back one hex whilst still facing the same way. The same player may then instruct a fresh HI unit to move in to the hex presently occupied by the retiring unit thereby replenishing the front line with fresh troops without giving ground. To replace a unit in the front line, activate the unit then go to menu – Units – Legionaries – Fall Back and click. The unit will be assigned the action that is conducted during the Events Phase. Note – If the unit conducts a Reaction Test during the Events Phase it is always possible it will not follow the assigned order.

Hoplites:
- Hoplite units are MI or HI armed with the 8 - 12 ft spear.
- Spartan Hoplites were well drilled and veteran or elite hoplites were able to 'Wheel' under command while still maintaining a solid wall of spear points at the enemy.

Phalangites:
- Phalangites are MI or HI armed with the 16 - 24 ft pike.
- Macedonian phalangites were well drilled and veteran or elite pikemen were able to 'Fall Back' under command while still maintaining a solid wall of spear points at the enemy. During the Command Phase a player may apply the "Pikemen 'Fall Back'" command to a Macedonian Regular veteran or elite MI unit in combat. This command takes all the unit's action points. This will result in the phalangite unit falling back one hex whilst still facing the same way. Note – If the unit conducts a Reaction Test during the Events Phase it is always possible it will not follow the assigned order.

Artillery:
- Captured artillery can not be used by the captor's side.
- Artillery units overrun are automatically destroyed.
- The cost for unlimbered artillery to change direction is for a bolt shooting engine- 30, for a stone throwing engine - 60 action points per directional change.
- Artillery strength is given as the number of pieces not the number of men manning the device.
- Artillery when shooting at enemy occupying a building or village may set the building/village on fire (1 in 20 chance). If this occurs then the enemy unit(s) will be forced to retreat from the hex.

Wagons: Wagons represent an army's baggage train. Wagons cost no points when building an army in the Scenario Editor. However, any army in possession of wagons must protect them as any losses will result in a victory point loss of 25 per wagon for Regular armies and 15 points per wagon for Irregular armies. Wagons can not defend themselves and if occupying a hex alone can be overrun by an enemy unit of 50 men or more.

Civilians:
Civilians represent the untrained, non-armed population. These units combat with no sword, no missile weapon, no shield and as irregular levies. They move as a massed body and at the pace of heavy infantry. Therefore they have an action point level of only 60 points and can stack to a limit of 400 people in a Clear hex. Any losses will result in a victory point loss of 1 point per casualty.

Camelry:
Camel units operate in the same manner as LC.

Fortifications & Siege Warfare:

Fortified hexes are not hexes containing palisades. Palisades are temporary night camp defences. Fortified hexes are either permanent military bases or fortified / walled towns.

A fortification is considered 'Close' terrain and equivalent to one unit for stacking purposes. This means that no more than 2 different units can be on the same hex as a fortification. Fortified hexes / assault towers can not be made during a battle and only exist as part of the scenario created by the scenario designer.
The only siege equipment in the game is stone throwing engines, assault towers, battering rams, assault ladders and mantlets. Mining operations, tunnelling and other techniques are not included in a game where one turn is equivalent to only 15 minutes.

Fortified hexes have a defense (strength) value of up to 200. This strength value is only known to the occupying player and can be seen by clicking the menu – Display – Flyby Box and moving the cursor over the fortified hex

Ranged fire -
1 – Firing from assault towers or fortified hexes – Units do not suffer an elevation modifier.
2 – Fire range extended by one hex when firing from an assault tower or fortified hex against enemy units on the same or lower ground elevation.
3 – When firing against units on an assault tower or fortified hex, modifier of minus two for cover.
4 – Stone throwing engines can create a hole in a fortification that will allow all units to pass through. Each hit reduces the strength of a fortified hex by a random number between 0 and 10. Once the strength of the fortified hex drops to zero or below the fortification is destroyed. Once a hole is created in the fortification, the graphic representing the fortified hex is removed from the map leaving the basic ground elevation appearance. Beware, stone throwing artillery are inaccurate and stones may land one hex in any direction from the intended target hex. This is known as the scatter effect.

Melee -
1 – When attacking in to a fortified hex, a modifier of minus one occurs unless on an assault tower.
2 – Other than troops on assault towers, only infantry and foot leaders with assault ladders can attack into a fortified hex.
3 – If a friendly unit is in an assault tower and one or more enemy units are adjacent to the tower then the friendly unit can not fire missiles. It is assumed that part of the friendly unit is at ground level fighting the enemy.
4 – Battering rams can attack a fortified hex but only in the direction the battering ram is pointing and not any other adjacent hex.
5– Battering rams can create a hole in a fortification that will allow all units to pass through. However, the success of the battering ram is time dependant and on the structure of the fortified hex.
The strength of the fortified hex falls as the battering ram attacks the hex. A battering ram automatically attacks during the Events Phase any fortified hex it is adjacent to and pointing towards.
Each battering ram reduces the strength of an adjacent fortified hex by 20 plus a random number between 0 and 10. A battering ram can only make one attack per turn.
6 – Battering rams can attack a fortified hex even if friendly unit(s) is in the same hex attacking the fortified hex.
7 – Battering rams must not be disordered to attack a fort wall.
8 - Infantry can attack one fortification hex from another without ladders.
9 – Infantry with ladders, on a fortification hex or on an assault tower can only combat with the sword and not any other weapon they may normally carry.

Movement –
1 – Only infantry and foot leaders can move in to a fortified hex. Movement in to a fortified hex costs 30 action points. Any unit that moves in to a fortification hex is disrupted. A unit that is in a fortification has the castle symbol at the bottom of the Unit Information box.
2 – When moving from an assault tower in to a fortified hex, movement can only occur in the direction the assault tower is pointing and not any other adjacent hex.

3 – Only infantry and foot leaders can use assault towers. Non infantry units in the same hex as an assault tower are assumed to be alongside the tower not in the tower.

4 – To climb up an assault tower costs 20 action points and is achieved by highlighting the unit then using the menu – Units – Climb Assault Tower. A unit that is in an assault tower has the assault tower symbol at the bottom of the Unit Information box. Any unit in an assault tower is disrupted. A unit that has just climbed an assault tower has its action points reduced to zero. A unit must start in Line formation before climbing a tower.

5 – The number of men on an assault tower is dependent on the stacking limits. An assault tower is equivalent to 200 HI.

6 – Infantry moving with assault ladders have an additional cost of 10 action points per hex.

7 – Infantry and foot leaders can be on an assault tower, on a fortification or carrying ladders. They can only be in one of these states at any one time. E.g. Units which have been attacking a fortification using assault ladders and move in to the fortification hex loose their 'carrying ladders' status. They do not regain their ladders until they make more ladders and can only do so when not on a fortification hex.

8 – A Zone of Control does not extend in to or beyond a fortified hex. Units in a fortified hex do not exert a ZOC on any adjacent hex.

9 – A unit on a fortification can not go in to an uncontrolled advance.

Destruction of assault towers and battering rams.

Destruction can occur in one of three ways.

1 – The tower or battering ram is hit by a stone throwing engine. This occurs during the Events Phase. If the tower is occupied when hit then the unit remains and the tower is removed from play.

2– The hex is occupied by enemy forces. If this occurs then the tower or battering ram is automatically destroyed in the same manner as an overrun.

3 – The tower or battering ram is not supported by friendly troops in the same hex and is attacked by enemy unit(s).

Note – An enemy unit can not occupy a hex containing an assault tower when friendly forces occupy the tower. It is assumed that part of the friendly unit is at ground level fighting the enemy.

Fortifications have no victory points but a fortified hex can be assigned as a victory hex by the scenario designer if desired.

Make Ladders:

1 - Any non-disrupted / non-attacking infantry unit in Line formation or Foot Leader can make assault ladders during the game. Select the unit then click menu – Units – Make Assault Ladders. A unit requires all its initial action points to undertake this action. A unit with assault ladders has a ladder icon in the Unit Information Box and can attack a fortification hex.

2 – Any unit with assault ladders in combat and forced to recoil or retreat looses its ladders and will need to make more before returning to assault a fortification. Similarly, a charging unit will loose its ladders.

3 – Only units with ladders or on an assault tower may move on to an enemy fortification hex.

4 – Any unit with ladders can choose to destroy / loose the ladders and this has no action point penalty.

5 – Any unit with ladders can only combat with the sword and this reduces their effective combat ability when they could otherwise use a spear.

Other Fortification Rules:

1 – Infantry units on a fortification hex can not combine but one unit can split into two units.

2 – Disrupted units can not recover from disruption in a fortified hex or on an assault tower.

3 – Units may not retreat, recoil or rout in to a fortified hex.

4 – A fortified hex blocks the Line-of-Sight.

5 – Units will not suffer an 'Uncontrolled Advance' reaction test result when on a Fortification hex.

Caltrops, pits and Stakes:

These hinder the movement of units and potentially cause casualties when passing through the terrain. Stakes are impenetrable to all but infantry units and foot leaders. Caltrops cause a strength loss of 2 to any infantry, cavalry or chariot unit entering the hex.

Units passing through stakes suffer a loss of 2 each time the terrain is entered by a unit.

How to Win: Victory is determined by the number of Victory Points your side has scored at the end of the scenario OR as a result of an army routing from the field.

An army will rout from the field when its overall morale falls below 33% (40% for the Thracian army) and the other side has an overall morale of over 43%.

When one side routs from the field the game is over immediately. The winner is the opposing side irrespective of the game turn reached, ground occupied or men lost during the scenario. If this situation arises a 'Game End' box will appear on which there is a 'Continue Game' button. A player may choose to press this to progress the game to the allotted number of turns in the scenario. This button option only works if a player is playing against the computer.

Victory Points are scored in 4 basic ways:

1) Control of Objectives – Certain hexes on the map are deemed important enough that the side that controls them at scenario end gains the Victory Points specified on the Victory Hex and in the process denies them to his opponent. The Victory status dialog shows the accumulated Victory Hex point score for the player designated as being the first side. To view the objective markers use the game menu.

   Control of an objective is awarded to the player who has a unit on that hex at the end of each 'Events Phase'. Leaders, wagons, mantlets, battering rams, assault towers, civilians and routed units can not claim control of an objective on their own.

   Additional points are scored for holding these objective hexes during the game. See 'Occupying Victory Hexes' below.

2) Elimination of enemy units. Victory points are scored for every 10 men eliminated from the opponent's army. To view the current number of VPs scored due to elimination of the enemy; select "Victory.." from the "Status" pop-down menu or press the short-cut key 'V'. The number in the 'Total Point Loss' window is the number of VPs scored in this manner. For a more precise breakdown of the exact type of losses inflicted select "Strength" from the "Status" pop-down menu or press the short-cut key 'S'. The windows on the right hand side of the dialog list the losses.

3) Exit Objectives – An objective hex showing a value of "0" is an 'exit objective' for the side corresponding to the colour of the objective. Each unit of that side exited from the map at such an objective hex scores victory points for that side equivalent to their (strength x victory point value per 10 men).
4) 'Looting' hexes – Units on a 'looting' hex score 10 victory points at the end of each full turn.

Occupying Victory Hexes (Objectives): During the game, points are scored depending on the number of players in the game and how far in to the game length not on the hex value displayed. The hex value only counts at the end of the game.

If the game turn is less than half the game length then each Victory Hex occupied scores 2 points if only 1 human player; 1 point if 2 or more players.

If the game turn is more than half the game length and lower than three turns from the game length then each Victory Hex occupied scores 5 points if 1 human player; 2 points if 2 or more players.

If the game turn is less than three turns from the game length then each Victory Hex occupied scores 10 points if 1 human player; 5 points if 2 or more players.

These points are added to the opposing side Total Point Loss.

Looting (Objectives): An objective hex with a value of "10" is a 'Looting' hex.

Any unit except Leaders, wagons, battering rams, assault towers, civilians and routed units can loot an objective hex if it is assigned as a 'Looting' hex. Normally such hexes would be a camp, fortification or building. To score points, a unit must be on the hex in question at the end of the 'Events Phase', a player scores 10 points for every 'Looting' hex he occupies. These points are added to the opposing side Total Point Loss.

Exit Hexes: An objective hex with a value of "0" is an 'exit objective' for the side corresponding to the colour of the objective. I.e. Orange for Carthaginian, Purple for Spartan, Brown/Tan for Theban, Light Green for Persian, blue for other Greek States and ski blue for Athenian. Each unit of that side exited from such an objective is worth victory points to that player corresponding to the strength of the unit and its victory point value. To exit a unit from the map at an exit objective hex follow the instructions to 'Remove Units from Map'. Victory points gained from exiting units from the map are added to the total points for enemy losses when viewed on the 'Victory' dialog.

The objectives' values when added to the casualties inflicted in the scenario determine the level of victory for each army.

A scenario does not end when one side achieves a Major Victory (or Major defeat); the level of victory may change during the course of play as casualties occur and Objectives change hands. Only the level that exists at the end of the scenario applies for determination of the winner.

Note – Any units routed off the map are counted against the owning player as victory points lost.

Any of five levels of "Victory" are possible:
- A **Major Defeat** is declared if the point total is less than or equal to the total listed for "Major Defeat" in the Victory Dialog.

- A **Minor Defeat** is declared if the point total is greater than the total listed for "Major Defeat" but is less than or equal to the total listed for "Minor Defeat" in the Victory Dialog.
- A **Draw** is declared if the point total is greater than the total listed for "Minor Defeat" but is less than the total listed for "Minor Victory" in the Victory Dialog.
- A **Minor Victory** is declared if the point total is greater than or equal to the total listed for "Minor Victory" but is less than the total listed for "Major Victory" in the Victory Dialog.
- A **Major Victory** is declared if the point total is greater than or equal to the total listed for "Major Victory" in the Victory Dialog.

Multi – Player PBEM System

1 – The first player to commence the game will specify 'Multi-Player' mode then the number of players in the game using the dialog boxes.

2 – The first player will also specify the FOW, stop clock and command control options as normal.

3 – The game opens and the first player must go to the menu – Turn – Multi-Player Game. This opens a large box used to assign groups of units to each player. Place the names of the players on the Wing / Commander boxes on the left hand side then click 'Finished'. Until groups are assigned to the players, the first player will not be able to place any commands on any units.

4 – Once all groups are assigned to the different players on the first side, the first player places commands as normal. Note – the first player will only be able to place commands on those groups assigned to the first player once the 'Assign Groups' option is toggled off. As previously, the player places commands on one nationality then clicks on 'Next Turn' to release other groups under his control of the next nationality.

5 – The first player then clicks the 'Next Turn' toolbar button and the game moves on to the next player on the same side. The next player can now place commands on those groups assigned to the next player.

Note – only one password exists for each side – all players on the same side must use the same password. The password is set up by the first player for each side.

6 – At the end of each phase for each player, a dialog box appears asking if there are any other players on the same side (Co-Commanders) who have yet to place commands on his units. If so, the game stays with the same side, if not the game moves over to the other side.

7 – The first player of the other side now clicks on the menu – Turn – Multi-Player Game. The same large box appears but this time all groups associated with the other side are listed to be allocated to players of the other side. Place the names of the players on the Wing / Commander boxes on the left hand side then click 'Finished'. The second side first player now assigns groups to each player of his side using the 'Assign Groups 'option. Once complete the player toggles off the 'Assign Groups' option, then assigns his commands and clicks 'Next Turn'.

8 – Only the first player for a side may re-allocate a group of units from one player to another.

10 – Given the sequential manner of the game and the fact that at certain points during a turn, a saved file for e-mailing may contain the result of the action phase and the commands that follow from co-commanders on your side – the PBEM file can be very large. It is therefore essential that you zip-up (compress) the file before sending over the Internet.

How to use the 'Multi-Player Game – Assign Groups' option :-
To use the 'Assign Groups' menu option – when clicked on the option, a dialog box will appear and the player clicks the radio button alongside the player name to whom the groups are to be allocated. Then click the OK button. The dialog box disappears. Left click on any friendly unit on the map and it and its whole group will be allocated to the chosen player. The group will automatically be highlighted as do all units assigned to that player. Once you wish to stop assigning groups to this player, return to the menu and toggle OFF the 'Assign Groups' option. To change to assigning units to a different player you need to toggle the 'Assign Groups' option ON again and choose the player.
To help you recognise which player is which on your side during the group allocation process, it is best to first open the Group Table and fill in the Player Name boxes then press the 'Finished' button. These names will be shown in the 'Assign Groups' box.

How to use the 'Multi-Player Game – Group Table' box :-
1 – Name the players on your side in the left hand boxes available. This makes assigning the groups easier to understand.
2 – Choose the number of the player to start assigning groups to – place after the words 'Allocate to Player Number' then press the 'Confirm Player' button to the right.
3 – Choose a group by left clicking and highlighting the group under the 'Group and Leader' heading then press the 'Assign' button.
4 – Once the 'Assign' button is pressed, you will see the 'Group Allocated' box register that group and the 'Total Troop Allocation' box add the strength of all units in that group to the line associated with the player number in use.
5 – To determine where a group is located on the map, left click the group under 'Group and Leader' then press the 'Locate' button. This box disappears and the map moves to the first unit in that group. The red hot-spot then flashes on the unit in question. To return to the 'Multi-Player Game' box go again through menu – Turn – Multi-Player Game.
6 – To re-assign a group from one player and another player, first left click the group number in the 'Group and Leader' box, use the 'Confirm Player' button then press the 'Assign' key. The 'Group Allocated' box will update and so will the 'Total Troop Allocation' box.
7 – When all groups have been assigned to your satisfaction, press the 'Finished' button and the box disappears. It is essential that all groups are assigned to a player otherwise no player will be able to place commands on the group.
8 – The 'Group Table' box can be called and viewed by any player but only the first player on each side can make the changes.
9 – The name of each nationality is not given before a listing of each group associated with the nationality. It is therefore helpful to remember that the first lot of groups is associated with the lowest Nationality number present in the scenario.
10 – If any groups are not assigned to a 'wing' then they are defaulted to the first wing / commander.

Advantages of the PBEM Multi-Player system created –
1 – When one side has finished its turn of assigning commands copies of the file can be sent to all players on the opponent's side. If the next phase is the 'action phase only' before returning the file to the other side then all players can see the action simultaneously and only one player has to send the file back to the other side.

2 – Any player can take over the turn of 'First Player' for his side given the password is the same for all players on the same side. This allows the game to progress in the absence of some of the team members.

3 – One team member can play more than one player's turn on the same side as long as the players are in sequential order as assigned by the 'First Player' at the start of the game. This allows for the absence of some players or the pull-out of a player before the game is over. To do this simply save the file as normal, close the game then re-start the game loading the saved file.

4 – Any one player on a side can be allocated groups from as many nationalities as there are in the scenario for that side.

5 – Up to 6 players can be assigned to each side. As few as one player can represent one side.

Multiple Commander Option

The Multiple Commander option is designed to more accurately reflect historical situations. However, it does add another level of complexity to the game and players may feel this is unnecessary.

The Multiple Commander option is activated on the New Scenario options dialog box and once activated is in effect for the whole game. The facility to assign groups to form 'Wings' is the same facility provided to those playing a multi-player PBEM game where groups are assigned to players. However, assigning groups is only permitted on turn 1 unless in a multi-player PBEM game. A player must assign all groups to the 'wings' before the end of turn 1. Any not assigned will not be able to receive commands in the following turns.

Once groups are assigned as 'Wings' in the army, a morale check is undertaken at the end of each turn. Any 'Wing' with its morale less than 33% of its start morale will automatically rout and all units assigned to that 'Wing' will rout. Rout recovery is done per unit and as such is unlikely to succeed once a 'Wing' has routed.

Note – Elite and Fanatic units, Leaders, artillery, wagons and siege equipment do not rout. Heavy Chariots are abandoned and as such are considered eliminated.

This option adds a new dimension to the game where a major component of an army (i.e. a 'Wing') may rout but still leave the rest of the army intact and able to continue the battle. Note, the overall army morale is still checked but the game is **not** over if the overall army morale falls below 33%.

Each side is allowed to split their forces into a maximum of 6 segments ('Wings'). Each segment is assigned a commander by typing a name into the Group Table found from the menu – **Turn – Multi-Player Game – Group Table**. Once the commanders are named click the 'Finished' button and use the menu – **Turn – Multi-Player Game – Assign Group** facility to nominate a commander to whom groups will be assigned. Then, by left clicking a unit in a group on the map all units in that group are highlighted and assigned to the commander just nominated.

Note – The game defaults all units under the first named commander / wing. Therefore, only the second and subsequent 'wings' need to have units assigned to them.

The 'Multiple Commander Option' can be used in non-multi-player PBEM play, hot seat and against the A.I. When playing against the A.I., the A.I. will also split its army in to segments.

You can check on the morale state of each 'Wing' (segment) by clicking the menu – **Turn - Multi-Player Game – Morale Status** option. The dialog box that appears also gives you the opportunity to highlight all units associated with a 'Wing'.

Campaign Play

The Campaign feature only operates against the A.I.

The player must choose the army (side) specified in the Campaign battle description and can not change sides during the campaign.

To play a campaign, a player chooses the 'New Campaign' button on the Start-up Screen. Once chosen a pop-up dialog box will list all battles available as Campaign battles. The example used to describe the functions below is the battle "Crossing the Jaxartes".
All campaign battles are designated with a file extension of ".cmp".

For the first battle of a campaign all units including the player's side are placed on the map. A player uses the campaign features given in the **menu – Campaign** pop-down window to prepare for game turn 1 in the battle.
For the first battle there is no 'campaign army' to load in to the battle as all the player's units are already on the map. Likewise, replacements are not available on the first battle of the campaign. The player therefore clicks the 'Initial Set Up' option to move his units within the permitted set-up zone.

Initial Set Up :-
On loading up the battle and clicking **menu – Campaign – Initial Set Up,** the player will see all hexes are shaded except certain region(s) known as the Set-up Zone(s). A player may move his units at will before play commences within the Set-up Zone and where the terrain is passable for the unit type and the stacking limit is not exceeded.
Movement of a player's unit is achieved by clicking the **menu – Campaign – Initial Set Up** option ON then activating a unit. Once a unit is activated it can be moved by dragging the unit using the right mouse button to the destination hex. There is no limit to the number of times a unit or units can be moved.
The **menu – Campaign – Initial Set Up** option can also be toggled on and off using the toolbar button 'Initial Set Up' found near the middle of the toolbar (8th button from the left).

Rotate Unit in Campaign Set Up :-
This can be used whilst the 'Initial Set Up' option is activated or not activated. Click the **menu – Campaign - Rotate Unit in Campaign Set Up** option ON. Then left click a unit and both the unit information box and the 'Change Face' dialog will appear. By clicking on the desired button the unit will change its direction to suit. There is no limit to the number of times a unit or units can be rotated.

Once a player is satisfied all units are in the correct position and facing the correct direction then play can begin. Click the **menu – Campaign – Campaign Set-up Complete** option. Once this is done no further movement or rotation of a player's units can occur prior to commencing the battle.

A player can now commence normal assignment of orders / instructions.

At the end of the battle the usual End – Game report is followed by a Campaign Report. After every battle the player receives Campaign Points and Replacement Points based on the level of success in the battle.

Battle Result	Campaign Points
Major Defeat	0
Minor Defeat	1
Draw	2
Minor Victory	3
Major Victory	4

Note – If a player looses 4-8 wagon strength points in a battle then the army supplies for the campaign are affected and the player looses 1 Campaign Point. If the player looses >8 wagon strength points the player looses 2 Campaign Points.

After 3 battles if the player has not earned 4 or more Campaign Points then the campaign is over and the player has lost. The number of battles available depends on the scenarios created. Once a player has earned 10 or more points he is the victor.

Once the Campaign report is closed the state of a player's units is saved on a ".cob" file. (cob = campaign order of battle). This file is to be used as the file on the following battle with the "Load Campaign Army" option.

Replacement points earned are based on the accumulated Campaign points at the start of a new battle.

Accumulated Campaign Points	Replacement Points earned per battle
1, 2 or 3	1,000
4, 5 or 6	2,000
7, 8 or 9	3,000

From battle 2 onwards, once a player loads the battle the "Load Campaign Army" facility can be used. When clicking the **menu –Campaign – Load Campaign Army** option a player opens a Load file dialog box and can select the previously saved .cob file. Once selected, all units in the saved file will be placed within the non-shaded Set-up Zone.

Once all units are on the map a player should seek to upgrade the strength of these units using replacement points available. Replacement points can be saved for future battles.

Campaign reports may differ from individual battle results. The following table applies –

Accumulated Campaign Points	Battles Fought	Campaign Result
1, 2 or 3	>2	Major Defeat
1, 2 or 3	=2	Minor Defeat
1, 2 or 3	=1	Draw
4, 5 or 6	Any number	Draw
7, 8 or 9	Any number	Minor Victory
>9	>3	Major Victory
>9	=3	Major Victory

Note - Only the initial campaign game where both forces are available on the map can be converted to a standard scenario and this requires the file extension to be re-named as '.scn'. before the file is loaded into the game.

Tournament Play

Sequence required to establish a tournament battle :-

Step 1 - Creation of a Tournament scenario –

Either Player:

1 – Start Scenario Editor and open standard map (*.map) file of your choice.

2 – Choose menu – Army – Nations in Scenario and click the opposing armies. Now select menu – Army – *name of army* for which the first set up zone will be made.

3 – Choose menu – Scenario - Campaign Set Up Zone. You'll see two options, Continue Zoning and Re-Start Zoning. Choose the latter. The screen should then show a darkened overlay. Then left-click hexes to set up the deployment zone for army just chosen.
--*Note: Make the Zones big enough to handle the Army's size but not too big. The hexes don't have to be contiguous.*

4 – Once the zone(s) for the first army is/are complete, choose menu – Army – *name of army* for the second army and proceed to create new Set Up zone(s) for the second army. If there is a third army progress in the same manner and so on.

4 – You're making a scenario here so be sure to complete the Scenario - Header, Description, & Weather boxes and allocate any Victory Hexes on the map. Very important here to remember which side is First. Make a note! You can do so in the Scenario description. This datum will determine how the entire tournament is set up.

5 – Do not place any units on the map. Not yet!

6--Save the file as a Scenario file (*.scn).

Step 2 – Creation of a 'Standard' army for regular use –

This step can be done at any time. Both Players:

1 – Start Scenario Editor and open Training Camp map file.

2 – Choose menu – Army – Nations in Scenario and mark which armies are going to be in play. Then:

3 – Choose menu – Army –and select the name of the particular army you're going to create. You can create only one side here even though you just picked two.
.
4 – Use Editor as normal to place units on map and build up army to a set points level. For quick play with a reasonable number of units it is recommended that you limit a 'Standard' army to 2000 points. Certainly no more than 5000 points. If you don't know how to find the number of points you've used, refer to the abundant documentation. *Hint: Menu, Status, Army Points.*

5 – Save the army you've created as a Troop file (*.oob). You can edit this army later on and save it for future battles and improve it over time. To do so just open up the Training Camp map, tick the army you wish to load and load the .oob then make your changes! (Start Editor. Open Training Camp Map. Click menu – Army – *army to load*. Use menu – Units – Add Training Camp Army.) You can keep this army "on tap" and ready for any challenge that may come along. That's the whole idea of tournament play!

Step 3 – Creation of a Tournament battle

This step begins with the *First* Player. Who's that??

Any tournament scenario created in AW must identify the first player as part of its basic file, and it must also identify who the opposing army is. Opposing armies can be easily changed in the Scenario Editor, but a different opposing Army means a different scenario. Confusing at the outset, but not so tough once you get a little experience with the editor.

Example: Let's say you've created a tournament scenario pitting a Macedonian Army against a Greek army. The First Side is the Macedonians, and you've got a guy who wants to play the Greeks. He's got an equivalent point Greek .oob file that he thinks can beat your Macedonians. So he's the Second Player here. Thus:

1. Put the Tournament map (.scn file) into your Scenario sub-folder and start the main game executable file '…..exe'.
2. Click play by e-mail mode
3. Then choose the "Tournament" option on the opening screen.
4. Open the tournament scenario created in Step 1 above. The Macedonian player now clicks "Macedonian Army" on the Game Status box then choose menu – Tournament – Load Tournament Army. Here you select your pre-saved and carefully constructed army. It's now on the map!
5. Click menu – Tournament – Initial Set Up and move your units within the Set Up zones as desired. The Scenario map already created will determine which zones a particular army is allowed to use. To move a unit from one highlighted hex to another, right click the unit and drag to the desired hex.
6. Once the positions are acceptable, use the menu – Tournament – Rotate Unit in Tournament Set Up - to orientate each unit in the desired direction.
7. Now save the file and pass it to your opponent for his set up. Click menu – Tournament – Save Tournament File. This saves the file as a .scn file.
8. The First Player passes the saved file to the second player who places the file in his game Scenario sub-folder.
9. The second player now starts the main game in Play by E-Mail mode and selects Tournament and clicks on the file the Macedonian player just sent him. He then loads his army in the same fashion as the first player choosing "Greek Army" in the Game Status box. The second player can then move his units to the desired location within the Set Up zones permitted and orientate their direction. Once complete he clicks menu – Tournament – Tournament Set Up Complete.
10. Finally he clicks menu – Tournament – Save Tournament File. This triggers normal mode and when the game file is passed back to you (the first player), you open the file using the "New Battle" button and place commands for turn 1 before saving the game and passing the file to your opponent. Use menu – File – Save As – to save as a PBEM (.emb) file.
11 – Play battle as normal e-mail battle.

Step 4 – Playing a Tournament Battle

1 – Once Step 3 above is complete, on starting the next game turn, a player should click the 'Existing Battle' button and load the *.emb file battle as normal. The Tournament button is only used to set up the battle.

TroubleShooting: If a battle will not load, check the 'Settings.dat' file exists. If this file is not in the 'Scenarios' sub-folder, a new file can be generated through the Scenario Editor pop-down menu. Click 'File' then 'Save Viewer Settings' this will create a dialog box allowing the preferred view settings to be set. This file is updated every time a player saves or exits from the game.

For further answers to commonly asked questions and issues see the FAQ document included with the game.

Credits

Publisher: Scott Hamilton

Developer: Paul Bruffell

Unit Graphics: Joseph Beres, Dean Beecham, Lee Harrison

Terrain Graphics: Magnus Pettersson

Music: Tom Hook, Jerry Huntsinger

Punic Wars 300 - 200 BC
Project Coordinator: Rich Hamilton
Scenario Designers: Al Amos, Rich White & Paul Bruffell
Playtesters: Atle Jenssen, Dean Beecham, Glyn Hargreaves, Mike Cox

Gallic Wars 100 - 50 BC
Scenario Designers: Glyn Hargreaves, Rich White & Paul Bruffell
Playtesters: Arnaud Dessjamaux**,** Atle Jenssen, Glyn Hargreaves, Rich White, Dean Beecham

Alexandrian Wars 400 - 300 BC
Scenario Designers: Glyn Hargreaves, Rich White, PeterDawson & Paul Bruffell
Playtesters: Arnaud Desjumaux**,** Glyn Hargreaves, Rich White, Dean Beecham, Peter Dawson, Klaus Kuhlman and Atle Jenssen.

Greek Wars 500 - 400 BC
Scenario Designers: Glyn Hargreaves, Rich White, Peter Dawson & Paul Bruffell
Playtesters: Arnaud Desjumaux**,** Glyn Hargreaves, Rich White, Tim Delaney, Dean Beecham, Peter Dawson, Klaus Kuhlman and Atle Jenssen.

Roman Civil Wars 50 BC – 10 AD
Scenario Designers: Rich White, Glyn Hargreaves, Peter Dawson & Paul Bruffell
Playtesters: Rich White, Tim Delaney, Peter Dawson, Klaus Kuhlman, Atle Jenssen and Glyn Hargreaves.

Diodochoi Wars 323 – 275 BC
Scenario Designers: Rich White, Peter Dawson & Paul Bruffell
Playtesters: Rich White, Peter Dawson, Atle Jenssen, Joseph Beres, Paul Bruffell

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Battle Charts

Weapon Range :

Weapon	Range in Hexes
Light Hand hurled weapons	2
Slings	5
Mounted archers / Foot archers small bow	6
Lead-Shot Slings	7
Foot archers composite bow	9
Bolt shooting engine	14
Stone throwing engine	20

Missile Weapon Effectiveness :

Defending Unit type	Attacking unit type				
	Light hand hurled weapons	Slings and composite bows	Mounted archers / small bows	Bolt shooting engines	Stone throwing engines
EHC	3	1	0	5	5
HC	4	2	2	5	5
MC	6	4	3	5	5
LC	5	3	3	4	4
HI/LHI	3	1	0	4	5
MI/LMI	4	2	2	4	5
LI/Art	4	2	2	3	4
El.	4	1	1	4	5
LCh	4	1	1	3	3
HCh	5	2	1	5	5

Melee Effectiveness:　　　Losses Factor

Defending Unit Type :- Attacking Unit Type & Weapon	Ranks	SHC	EHC	HC	MC	LC	SHI	HI/LHI	MI/LMI	LI/Art	El.	LCh	HCh
Cavalry with 12' kontos / xyston during 1st melee period	1	2	3	4	5	5	4	4	4	5	0	0	4
Cavalry with light spears during the 1st, 2nd or 3rd melee period	1	1	2	2	4	6	2	3	4	6	1	2	1
Other cavalry	1	0	1	1	2	2	1	2	3	6	0	0	0
Infantry with 15' to 24' pike not forced to recoil	3	4	4	5	5	4	3	3	4	5	2	4	4
Infantry with 8' to 12' spear not forced to recoil	2	2	2	4	4	3	2	2	3	3	0	2	3
Infantry with heavy throwing weapon during 1st contact turn	1 + 1/2	2	2	2	2	2	3	4	5	3	2	2	2
Infantry with lighter spears during 1st contact turn	1 + 1/2	1	1	2	4	3	2	3	4	4	2	2	1
Infantry with long thrusting, lighter spear or throwing weapon in conditions other than above or with sword only	1	1	1	2	3	3	1	2	3	3	1	0	1
Infantry with sword & axe, rhomphaia or 2-handed axe or 2-handed sword	1	5	5	5	5	4	3	5	5	3	1	1	1
Pike men who have been forced to recoil, archers, slingers & artillery men	1	0	0	0	1	1	0	1	2	2	1	0	1
Elephants	1	3	3	3	4	1	5	5	5	2	2	5	2
Light Chariots	1	0	1	1	2	2	2	3	4	2	0	3	2
Heavy Chariots	1	2	2	2	2	2	4	4	4	1	0	4	2

COMBAT LOSSES

Losses Factor	No. of troops attacking per hex				
	1-11	12-20	21-30	31-40	>40
<-3	0	0	0	0	0
-3	0	0	0	1	1
-2	0	0	1	2	2
-1	0	1	1	2	2
0	1	1	1	2	3
1	1	1	2	2	3
2	1	1	3	4	5
3	1	2	3	5	6
4	2	2	4	6	8
5	2	3	5	8	10
6	2	3	6	9	13
7	3	4	8	12	16
8	3	5	10	15	20
9	4	6	13	19	25
10	4	8	16	24	32
11	5	10	20	30	40
>11	6	13	25	38	50

Maximum stacking in 1 hex is 400 men except for pikes at 512 men
Elephants and chariots count as x4 the number for 'No. of troops attacking'.
Bolt shooting engines count as x3 the number for 'No. of troops attacking'.
Stone throwing engines count as x5 the number for 'No. of troops attacking'.
Losses on elephants and assault towers and battering rams are divided by 4 and rounded down.
Losses on Light and Heavy Chariots are divided by 2 and rounded down.

Initial Troop Action Points :

Unit Type	Initial Action Points	Action Points when charging at the start of the turn	Action Point multiplier for charging
LC/ Horse Leader	160	240	1.5
HC,MC,LCh	120	180	1.5
EHC	100	150	1.5
LMI,LHI,El, HCh	80	100	1.25
HI,MI, Foot leader	60	80	1.5
Art./Wagon	60	-	-
LI	90	-	-
Battering Ram, Mantlets	40	-	-
Assault Tower	20	-	-

Shooting costs 30 action points for each volley on foot and 60 action points for mounted troops.

Artillery can not move unless limbered but can change direction.

Bolt shooting engines shoot at 30 action points per volley, stone throwing engines at 60 action points per volley.

Formation and Facing Change Costs: (Action Point Cost)

Unit Type	Change in Formation	Action Point Cost
LI / Leaders / Civilians	About turn or 1 change of face	0
LMI / LHI	About turn or 1 change of face	5
All none light infantry	About turn or 1 change of face	10
All Cavalry	About turn or 1 change of face	15
Chariots / Elephants	1 change of face	15
Bolt shooting engine	1 change of face	30/20 if limbered
Stone throwing engine	1 change of face	60/40 if limbered
Wagons	1 change of face	25
Battering Ram / Assault Tower	1 change of face	Can only wheel to adjacent hex
Mantlet	1 change of face	20
MI, HI, MC, HC	Wedge (Elite & Veteran Regulars only)	½ initial total
EHC,HC,MC,LC,HI, MI, LMI, LHI	Hollow square / Column / Line	For irregulars & militia - All of initial total. For regular units other than militia – ½ initial total.
LC	Cantabrian Circle	For irregulars & militia - All of initial total. For regular units other than militia – ½ initial total.
Infantry in square formation	About turn or 1 change of face	0

Terrain Costs: (Action Point Cost for Line movement over various types of terrain)
Sea and Deep Water movement costs are the same as Lake costs.
Large Rocks movement costs are the same as Forest costs.
Fortification movement costs are the same as building costs.
Movement cost through tents is the same as Clear terrain for infantry but not passable by other units.
NP = Not Passable

Unit Type	Field	Shallow Water	Lake/Sea/Deep water	Clear	Orchard	Rough	Swamp	Marsh	Major River	Village	vineyard	Woodland	Forest	Building
EHC	25	60	NP	20	25	NP	NP	NP	NP	NP	NP	NP	NP	NP
HC	25	40	NP	20	25	40	NP	NP	NP	NP	50	NP	NP	NP
MC	25	40	NP	20	25	40	NP	NP	NP	NP	50	50	NP	NP
LC	25	30	NP	20	25	30	50	50	160	20	40	40	NP	NP
HI	25	30	NP	20	25	30	NP	NP	NP	20	30	30	NP	30
MI	25	30	NP	20	25	30	NP	NP	NP	20	30	30	NP	30
LMI	25	30	NP	20	25	30	40	40	NP	20	30	30	40	30
LHI	25	30	NP	20	25	30	60	60	NP	20	30	30	60	30
LI	25	30	NP	20	25	30	40	40	80	20	30	30	40	30
El	25	30	NP	20	25	30	80	80	80	20	40	40	NP	NP
LCh	25	40	NP	20	25	NP	NP	NP	NP	NP	NP	NP	NP	NP
HCh	25	60	NP	20	25	NP	NP	NP	NP	NP	NP	NP	NP	NP
Artillery	20	60	NP	20	30	NP	NP	NP	NP	20	NP	NP	NP	NP
Wagon	30	60	NP	20	30	NP	NP	NP	NP	20	NP	NP	NP	NP
Mounted Leader	25	30	NP	20	25	30	50	50	160	20	40	40	40	40
Foot Leader	25	30	NP	20	25	30	50	50	60	20	40	40	40	40
BR, AT, Mantlets	20	NP	NP	20	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Civilians	25	30	NP	20	25	30	40	40	80	20	30	30	40	30

For Ancient Warfare scenarios all ground conditions are 'Firm' for troop movement.

Clear terrain includes ploughed fields and harvested fields.

Long bridges (full hex length) are considered as road movement for units in Column formation and as Clear terrain for other formations. Small (hex-side) bridges avoid hex-side terrain penalties for streams and gullies.

Units crossing over caltrops, pits and stakes expend 40 APs if the terrain is passable.

For every 10m elevation change a unit expends 10 APs.

Reaction Test Results:

		Troop Class and test result:			
Troops with active order(s)	**Troops with no orders**	**A**	**B**	**C**	**D**
Uncontrolled advance	Uncontrolled advance	Irr only >18	Irr only >17	>15	Irr >10 Reg>12
No Change	No change	Irr 8-18 Reg 8+	10 to 17	12 to 15	Irr 9 - 10 Reg 9 to 12
Disordered troops halt otherwise No Change	Halt immediately	4 to 7	4 to 9	6 to 11	7 to 8
Halt immediately except cavalry charging or units following up recoiling opponents	Halt immediately	0 to 3	2 to 3	3 to 5	4 to 6
Recoil if in melee otherwise retreat in disorder. Do not follow up recoiling opponents or pursue a rout. If in rout continue.		-5 to -1	-5 to 1	-3 to 2	Irr 0 to 3 Reg –1 to 3
If in rout, continue. Rout if in melee. Otherwise retreat in disorder.		<-5	<-5	<-3	Irr <0 Reg <-1

Points Value Calculation :

1 point per 10 infantrymen
5 points per 10 cavalrymen & horses

+1 for Regular infantry   +2 for Regular cavalry   0 for Irregulars

Civilians +0
LI   +1
MI   +3   LMI   +3
HI   +5   LHI   +6
LC   +3
MC   +5
HC   +7
EHC   +9
Leader +6 Foot, +3 mounted.

'L' stands for Loose / open formation. In every other respect the man is the same as a formed body soldier.

Training Levels:

Class	Regular Troops	Irregular Troops
A	Elite +4	Fanatics +5
B	Veteran +3	Bodyguard +4
C	Experienced +2	Warband +2
D	Militia +1	Levies +0

Shielded +1   No shield +0

Weapon Categories:
- Sword +0 (All units are assumed to have sword/dagger or equivalent)
- Light Spear +1
- Sword and axe +2
- 2-handed weapon +2
- 8-12ft Spear +2
- Pike +2 (Pike units have significant disadvantages in this game)
- Heavy Throwing weapon (Pilum) +2
- Kontos +2

Missile Weapons:
- Javelins +1   Sling +2   Bow +2

Leaders – cost per man

Class	Regular	Irregular
Legendary	+20	+30
Experienced	+10	+15
Mediocre	+5	+8

10 points per Mantlet
15 points per Light Chariot
21 points per Heavy Chariot / Scythed Chariot
25 points per Elephant
20 points per Bolt shooting engine + 20 points for irregular unit
40 points per Stone throwing engine + 20 points for irregular unit
80 points per Battering Ram
160 points per Assault Tower

'Hot Keys':

To reduce the number of clicks a player is required to make to obtain information on the game status; the following keyboard keys provide a shortcut:

Key	Function
F1	2D zoom-out view
F2	2D zoom-in view
F3	3D zoom-in view
1	Activate unit 1 (top unit)
2	Activate unit 2
3	Activate unit 3
M	Move
C	Charge
S	Skirmish
H	Hold
F	Forced March
P	Pause
T	Change Face
Q	Change Formation
Z	Activate the 'Group Command' (toggle on and off)
E	Erases the Group Command
K	Erases the Unit Command
L	Highlights Legendary Leaders
R	Rally and Reform
I	Activates the Unit Information Box on the map (toggle on and off)
Alt + F4	Closes pop-up dialog boxes
G	Assigns activated unit to new group
B	Battle Fatigue Level displayed on all units (toggle on and off)
O	Provides Hex Outlines on the map (toggle on and off)
J	Displays the Mini-Map (also known as the Jump-Map) (toggle on and off)
N	Next unit available to assign orders
A	Army Strength dialog
V	Level of Victory dialog
U	Activates Fly-by box to determine unit strength (toggle on and off)
Shift	Highlights friendly 'Fixed' units
Tab	Highlights friendly units who have received an order.
Arrow keys	Scrolls the map in the direction of the arrow.

Note:- If the keyboard command key does not work – left click on the unit on the map then try the keyboard again. This takes the focus away from the unit information box and returns it to the battlefield map.