GAME MANUAL

MATRIX GAMES

BK wargames

CONTENTS

INTRODUCTION

"Krushchev asked me: 'Comrade Chuikov, how do you interpret your task?'

I had not expected to have to answer such a question, but I did not have to think for long—everything was clear.

'We cannot surrender the city to the enemy,' I replied, 'because it is extremely valuable to us, to the whole Soviet people. The loss of it would undermine the nation's morale. All possible measures will be taken to prevent the city from falling... I will stand firm. We will defend the city or die in the attempt.'"

– Marshal Vasili Ivanovich Chuikov

OVERVIEW

WEGO WW2:Stalingrad is an operational level, ground-centric wargame series that recreates the decisive battles fought between the Axis and Allies during the Second World War.

The game uses stylized maps of the operational area over which a hexagonal grid system has been superimposed. This grid is employed to help regulate unit placement, movement, and combat. Ground, air, and sea forces can also be brought to bear during play.

In many board and computer wargames, one side will move its units and resolve combat, followed by the other side repeating the process. This game mechanic is known as IGOUGO ("I GO YOU GO"). WEGO WW2 is different. WEGO by its nature is about the Player's ability to plan for and manage chaos; to find solutions to perceived challenges and accomplish the mission with the tools at hand—despite the fog of war, against a thinking opponent.

In a nutshell, a WEGO wargame is one in which the opposing players plot their moves and attacks for the next turn. The computer then resolves the attacks and reconciles the simultaneous movement of the player units. After the turn has been reconciled, an animated film of the actual attacks and moves is provided to both players. The film allows the players to see how their plans were carried out—or not—and displays the location and movements of any enemy forces contacted or detected in the previous turn. The film ends by displaying the starting situation for the next game turn. Players repeat this process until the number of assigned turns in the scenario has been achieved. At the end of the game, the winning side is revealed and both players are provided with a final film that shows all the moves and combats for the entire game with Fog of War turned off.

GAME SCALES

GROUND SCALES

There are two ground scales in the game series—operational and tactical. The operational maps use 2500 meters (~1.5 miles) per hex. The tactical level maps use 500 meters per hex. These maps are used when the scale of the operational map fails to capture the granularity of the historical battle.

TIME SCALE

The number of turns per day varies between two to five depending on the time of year and the ground scale of the scenario. For example, scenarios taking place in mid-Summer may have five game turns per day. Game turns 1 through 4 are considered day turns (each ~five hours long); game turn 5 is a night turn (~four hours long). Scenarios in winter range from two to three turns (one or two day turns and a night turn). Scenarios that have a ground scale of 500 meters per hex have two turns per day (one day and one night).

GROUND UNIT SCALE

Individual ground units range in size from company to regiment/brigade level and are represented on the game map using counters with stylized or NATO icons to display unit types.

ASSET SCALE

Air, Naval, and Ground Assets are off-map capabilities that can be brought into play when the owning player sees fit. Air assets represent air groups (~40 aircraft) that can conduct counter-air, interdiction, bombardment and ground support missions. Air recce assets can collect information about the location and type of enemy ground units on the map. Naval Assets represent individual ships, flotillas, or squadrons that are able to provide bombardment and ground support missions. Lastly, there are off-map Ground Assets that provide additional capabilities that can influence on-map battles. Ground Assets include electronic warfare assets, command and control (C2) activities, logistics, and Special Events.

STARTING A WEGO WW2 SERIES GAME

On launching the game, the player will be presented with the game's Main Menu. There are eight menu items to choose from:

- **Play Introductory Scenario.** This starts the introductory scenario against the Axis AI.
- **Play Game.** Select this item if you wish to play a new scenario.
- **Editor.** This button will launch the scenario editor program.
- **Campaign Editor.** This button will launch the campaign game editor program.
- **Quick Start Guide.** Pressing this button will launch a 14-page .pdf containing a quick overview of game-playing essentials.
- **Manual.** Pressing this button will launch the full game manual which contains a detailed description of the game elements.
- **Options.** This displays the various game options available to the player.
- **Exit.** Press to exit the game and return to computer desktop.

START / RESUME GAME

Select Play from the Main Menu to start.

You can then choose whether to start or resume a game one of the following types of game:

- **HotSeat** game against a person on the same computer.
- **Computer Opponent** game against the AI.

- **Multiplayer** game against someone over the internet using Matrix Games PBEM++ server.

When New Game is selected, you can then choose your side, the game scenario, and the Fog of War setting.

Press **Play** to start the game.

COMPUTER OPPONENT

For the Computer Opponent, there are two more options.

AI BONUS

Here you can choose to give the AI a bonus.

+ bonus means that the AI has unlimited supplies and is not affected by Fog of War. Therefore, if Fog of War is on, you will not be able to see the AI's units, but the AI will be able to see your units.

- bonus means that the AI starts with no supplies and receives no supplies. Neither type of AI bonus influences combat results.

AI VS AI

You can also select an option to let the AI play against itself.

Normally, the AI vs AI game will show the film after each turn, but if you select **Skip film in AI vs AI game** in the Main Screen's Options, the game will play all the way to the end and only then show the final film.

MULTIPLAYER TABS

To play multiplayer, you must be registered with the Matrix Games PBEM++ server.

If you already have an account, just login. Otherwise press the **Register Tab** and register your new account.

Once logged in, there are three options:

- **Games** – shows your current ongoing game.
- **Issue** – shows the challenges you have issued, but that have not been accepted by an opponent. Once an opponent accepts a challenge, the game will be listed **Game**'s Tab. Press **Play** to issue a new challenge.
- **Accept** – shows the challenges that other players have issued. Once you **Accept** an opponent's challenge, the game will be listed in the **Game**'s Tab.

MULTIPLAYER EMAILS

You will receive the following email notifications:

- **Challenge Started** – sent when a challenge has been accepted by your opponent.
- **Turn Update** – sent when your opponent has taken his or her turn.
- **Game Over** – sent when the game is over.

MULTIPLAYER GAME OPTIONS

When creating a new game there are three Multiplayer game options as list below. These options correspond to the three icons that will be show in the **Accept** tab.

?	Fog of War – game will be played with Fog of War on. If this is not present in the Accept Tab, then there is no Fog of War.
	Paired – a paired game means that there are two games created, one in which you play the allies, and one in which you play the Axis, but which use the same scenario.
	Password – creates a game that someone can only accept if they know the password that was entered when the game was created. Use this option if you want to play against a specific person and then send that person the password. Only that person will be able to accept the game.

OPTIONS SCREEN

- **Autosave game.**
- **Auto-scroll map.** Check this box to have game auto-scroll; when selected the cursor will cause the map to move left, right, up or down when moved to the edge of the play area. Use Hotkey-X to change this in-game.
- **Full Screen (vs window play).** Check this box to play in Full Screen mode. Uncheck to play in Windows mode.
- **Show unused assets dialog.** Check this box to show a dialog when there are Air, Ground, Naval or Logistics assets that have not been assigned missions.
- **Show confirm supply dialog.** Check this box to show a confirm supply changes dialog when exiting the Supply window after changing a HQ's supply level.
- **Show current Phase dialog.** Check this box to show the phase when entering a new phase.
- **Show proceed to next turn dialog.** Check this box to show a dialog box before proceeding to next turn.
- **Skip film in AI vs AI game.** Check this box to play an AI vs AI game all the way until the end without pausing each turn to view the film. This AI vs AI game will only stop running when it reaches the Victory Phase. WARNING: The more turns there are in a scenario, the longer it will take for the AI to finish running the game.
- **Set music volume.** This setting determines the volume of the background music.
- **Set sound volume.** This setting determines the volume of the sound effects and background battle sounds.

MAIN GAME SCREEN

The main game screen is where the bulk of the game activity will take place. It consists of five areas: Top Tool Bar, Left Tool Bar, Info Panel, Film Controls and the Game Map.

CURSORS

The game cursor may change to reflect the actions that can be taken on / with a unit.

	A friendly unit is under the cursor and can (usually) be moved.
	A friendly ground unit has been selected and can be moved to its destination.
	The selected destination hex for this unit is invalid.
	Naval / air / artillery attack missions can be ordered on enemy units.
	Defensive naval / air / artillery missions can be ordered on friendly units.
	A Recon (reconnaissance) mission can be ordered against this hex.
	The currently selected unit can attack in a Set-Piece' battle. See Combat chapter for the difference between 'Set-Piece' and 'Ad-hoc' attacks
	An air transport mission can be ordered to fly to this hex.
	A Logistics Asset can be assigned to this hex.

TOP TOOL BAR

The top tool bar contains five information boxes and two action buttons. If you hover your cursor over each box a tooltip will pop-up display.

	Time Indicator. This display shows the time of day for the scenario. The number of boxes displayed on this indicator equals the number of turns in a day.
	Current Phase. This display shows the current game phase.
	Next Phase. This button concludes the Planning Phase for a player's side. Select this button ONLY if you have completed planning all ground, air, and naval operations for your side. This will pass control of the game to your human or AI opponent. Once pressed, you can't go back.
	Turn Indicator. The number to the left of the slash indicates the current turn. The number to the right of the slash indicates the total number of turns in the scenario.
	Counter-air Allocation. This display shows the current number of Air Assets dedicated to the Counter-air mission by the Phasing Player.
	Interdiction Allocation. This display shows the current number of Air Assets dedicated to the Interdiction mission by the Phasing Player.
	Right Info Panel Toggle. Turn the right info panel on/off.

MAP BUTTONS

	**Turn Information.** View Air Results/Reinforcements/Withdrawals. Game status shows the results of counter-air and interdiction missions; it also shows the arrival of reinforcements and departure turn of withdrawing units and assets. Show Statistics. Press this button to view current game statistics. The statistics that are being tracked are Victory Points, Ammo consumption and Fuel consumption over time. The end film will compare all these factors for both sides.
	**Battle Summary Table.** This button opens the battle summary table. This table contains the combat results of each engagement that occurred in the previous turn. This table is best viewed after the film has played.

Set Move Type (Hotkey-M). This button cycles through the three movement modes:	
	Move and Defend. Units will move and stop if they encounter enemy units. They will attempt to overrun if they have the odds but will not attack.
	Move and Attack. Units will move and attack any enemy unit blocking its path to its destination hex. They will attempt to overrun before they attack.
	Road Movement. Units must have Move+ supply to use Road Movement. Units use the low road movement rate but are subject to ambush if they move adjacent to enemy units. **Note:** Pressing the Alt-key and dragging a unit or stack will plot a move that ignores the presence of enemy units or their Zones of Control. This is useful to get units forward if you believe the enemy is about to withdraw from a hex.
 	**Show HQ Buttons**: Open Supply Allocation panel. Open Reassign HQs. Open HQ Hierarchy. Only Show HQs on map.
 	**Show Unit Display Buttons**: Remove armies from map. Show moved units as transparent (Hotkey: J). Show Night-capable units. Toggle Picture / NATO unit icons (Hotkey: N). Shift-M – Show all moves. Shift-O – Show orders on map. Show units at their start / destination (Hotkey: D).
 	**Show Hex Content Buttons**: Display Zones of Control (Axis, Allies) on map. Show Anti-Aircraft ranges (Axis, Allies) on map. Show intelligence strength / range on map. Show lines of communication on the map (Hotkey: L). Show Supply levels (Hotkey: S). Show unit shock level. Show unit Quality. Show unit Readiness. Show unit Strength. Show unit dug-in state. Toggle victory hexes on / off (Hotkey: V). Show map hexside effects (Hotkey: E): Black – Impassable Red – Affects combat Blue – Affects movement

	**Open AI assist**: CTRL + Drag: (when using Drag'n'drop movement) Move all the units in an organization to the same destination. Immediate Actions: CTRL-B. Assign ground attacks now. CTRL-A. Assign artillery strikes now. CTRL-P. Assign command actions/air strikes now. Turn start assist: Automatically assign ground attacks. Automatically assign artillery strikes. Automatically assign command actions/air strikes.
	**Information Button #1**. Click to open / collapse the buttons below.
	View Scenario Briefing. Press this button to review the scenario description, player missions, etc.
	View Quick Start Manual. Press this button to open the Quick Start Guide .pdf file.
	Show Statistics. Press this button to view current game statistics. The statistics that are being tracked are Victory Points, Ammo, Fuel. Personnel and Equipment consumption over time. The end film will compare all these factors for both sides.
	**Information Button #2**. Click this button to open / collapse the buttons below.
	View Ground CRT. Select this button to view the Ground Combat Results Table.
	View Anti-aircraft CRT. Select this button to view the Anti-aircraft Combat Results Table.
	View Bombardment CRT. Select this button to view the Bombardment Combat Results Table.
	View Terrain Effects Chart. Select this button to view the Terrain Effects Chart.
	**Set Display Options**. Selecting this button will allow the player to select what type of unit will be placed at the top of a stack, set the various map and hex overlays, set the various unit border colors, or set the various army display options.

	**Open Sound Options**: Enable Autosave game. Enable Auto-scroll map. Enable Show unused assets dialog. Enable Show confirm supply dialog. Enable Show current Phase dialog. Enable Show proceed to next turn dialog. Enable Skip film in AI vs AI game. Set sound volume. Set music volume. Save Game. Exit Game.
	**Allocate Recon, Attack, and Transport Air Assets**. Click on this button to view the air assets panel. Click it again to close it. If this button has a red ring, it means you still have air assets available for tasking. If it is green, it means you have tasked all your air assets.
	**Allocate Naval Assets**. Click on this button to view the naval assets panel. Click it again to close it. If this button has a red ring, it means you still have naval assets available for tasking. If it is green, it means you have tasked all your naval assets.
	**Allocate Intelligence, Command, Logistics, and Special Events Assets**. Click on this button to view the Ground assets panel. Click it again to close it. If this button has a red ring, it means you still have assets available for tasking. If it is green, it means you have tasked all your assets.
	**Next Phase**. This button ends the current phase. If in the Film Phase, then the Move Phase will start. If in any other Phase, then the current players turn will end.

INFORMATION PANEL

OVERVIEW PANEL

This panel displays the current turn and time and date of the scenario. It also includes a small jump map. Clicking on the jump map will center the main map on the selected position.

Display Victory Data.

This panel shows points awarded to both sides for destroying enemy units and/or occupying Victory Point locations. Clicking on a victory location on the right-hand pane will center the map on that location.

Clicking this button or pressing **Hotkey-V** will display the victory location markers to the map.

In this mode, victory location pop ups will also appear when the cursor is over a victory location.

Cycle Attack/Defense Orders.

This button changes the defensive orders for all units in a hex, or the offensive orders for a battle.

To use this button, press **Hotkey-F** (or single click) when the cursor is over the units whose orders you wish to change. Pressing **Hotkey-O will show all orders when not over a unit. It will change orders of all units in a stack when over a stack.**

Ground Unit Attack Orders. Attack order assignments apply to **all** attacking units by default. However, you can assign different orders to different attacking units or different attacking stacks using the battle assignment display. To access this display, right click on the red Assault/Attack arrow.


Assault, increased battle intensity


Attack, normal intensity


Attack, no advance

Ground Unit Defense Orders. Defense order assignments apply to **all** units in the hex; you cannot assign different orders to different units in a hex.


Hold (normal defense)


Hold at all costs (take casualties instead of retreating). Higher quality units and/or units with good readiness have a greater chance of holding.


Withdraw instead of taking casualties. Higher quality units and/or units with good readiness have a greater chance of withdrawing successfully.

Cycle Stacking Order. Pressing this button will change the stacking order of the hex. To use it, first press **Hotkey-F** when the cursor is over a hex. Then press this button to move the unit at the bottom of the stack to the top. This is the same as pressing **Hotkey-C** when the cursor is over a stack.

You can also move a unit to the top of the stack by left clicking its counter.

UNIT DETAILS AREA

This displays information about the units in the hex under the cursor.

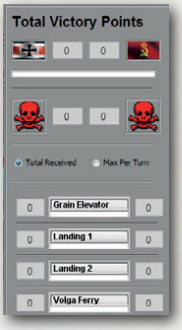
Each ground unit has its own panel that displays current status and various unit attributes. This section displays all the unit panels contained in a single hex.

To see what the icons on the display mean, press **Hotkey-F or left click the stack** to select a stack of units; then move the cursor over the icons to see the tool tips.

After **Hotkey-F** is pressed, left clicking on a unit's picture will select or deselect that unit. This allows the player to move or attack with only a portion of a stack.

Right clicking on the Unit Details will display more information about the unit in the same way as right clicking on the unit counter on the map.

VICTORY DETAILS PANEL



When this display is open, the victory hexes are highlighted on the map. Moving the cursor over a victory hex will display a victory details pop up.

At the top, the total victory points are shown.

Beside the skulls, the victory points for destroying enemy units is shown.

Then a list of all the victory locations is shown, with the points obtained by each side for controlling this location.

Pressing one the victory location names will center the map on that location.

Total Received. When this is selected, the numbers are the total victory points each side has received for that location during the game.

Max Per Turn. When this is selected, the numbers are victory points each side would receive for occupying that location.

GAME MAP

- Left clicking on a hex will center the map on that hex. Move the cursor to the edge of the map to scroll in that direction. Or use the Arrow keys to move the map left, right, up or down or move the cursor in the direction you want the map to scroll.
- Right clicking on a unit, hex, or battle will display detailed information on that unit, hex, or battle.
- The currently selected map center is the hex with a yellow border.
- Depending on the map size, there are several map zoom levels. Scroll the mouse wheel to the rear to zoom out from the map; scroll the mouse wheel forward to zoom in. As an alternative use the + or – keys.
- A unit can be moved by selecting the unit with the left mouse button, and selecting its destination by left clicking on the map. To move a stack of units (all or some of the units in a hex), use either the "F" button on the move screen, or the Hotkey-F (see Moving Units).

HEX DETAILS POPUP

Use Hotkey-K to turn on/off the Hex Details popup. This pane will open after the cursor is left over a hex for a few seconds.

Note: This pane will not display if the Victory Details Panel is open.

This panel displays the following information about units in the currently selected hex:

This pane displays the hex coordinates and then data for the Axis : Allies. This hex data includes:

- The average quality of the hex's units.
- The effective Attack and effective Defense values.
- The Attack and Defense Shock values.
- The anti-aircraft (AA) values. Heavy AA units can affect adjacent hexes.

- The ZOC values.
- The stacking points of the units in this hex (and the max stacking allowed).
- Total Personnel in the hex.
- Total Vehicles in the hex.
- Total Guns in the hex.

See **Shock** for more information on the Shock Value.

UNIT STACKING POPUP

Press **Hotkey-T** to turn on the unit popups. This shows the contents of a stack. The unit currently under the cursor is enlarged.

MAP ICONS

There are two sets of map icons used to assist the player during game play; one is a set for the Planning Phase and the other, a set for the Execution Phase.

PLANNING PHASE MAP ICONS

The following icons are used on the game map during the Planning Phase to assist the player in seeing/understanding his current plan:

	Indicates an artillery unit has been ordered to fire a Ground Support or Bombardment mission.
	Indicates the currently selected artillery unit has been ordered to fire a Ground Support or Bombardment mission.
	Indicates that a Bombardment mission has been planned on the enemy ground units in the hex indicated.

	Indicates that a Bombardment mission has been planned on enemy ground units by the currently selected artillery unit.
	Represents a planned Naval Attack mission on enemy ground units in the hex indicated.
	Represents a planned Naval Attack mission on enemy units in the hex indicated by the currently selected naval asset.
	Represents a planned Ground Support or Bombardment air mission on enemy ground units in the hex indicated.
	Represents a planned Ground Support or Bombardment air mission on enemy ground units by the currently selected air asset.
	Indicates that a Defensive Ground Support air mission has been planned in this hex.
	Indicates that a Defensive Ground Support air mission has been planned in the indicated hex for the currently selected air asset.
	Indicates that an Air Reconnaissance or Electronic Warfare mission has been planned for this hex
	Indicates than an Air Reconnaissance or Electronic Warfare mission has been planned for this hex by the currently selected unit.
	Indicates an Attack on enemy units in this hex.
	Indicates an Attack on enemy units in this hex by the currently selected unit.
	Indicates an air transport supply mission in a hex containing a friendly airfield or drop zone.
	Indicates an air transport supply mission in a hex by the currently selected air transport asset.

EXECUTION (FILM) PHASE MAP ICONS

The following icons are used on the game map during the Execution Phase to assist the player in seeing/understanding the execution of the plans made by both sides for the previous turn:

	Axis Anti-Air attacking Allies Air asset.
	Allies Anti-Air attacking Axis Air asset.
	Axis attacking Allies.
	Allies attacking Axis.
	Meeting Engagement.
	Axis ambushing Allies.
	Allies ambushing Axis.
	Axis Overrunning Allies.
	Allies Overrunning Axis.

GAME PLAYING BASICS

SEQUENCE OF PLAY

The following sequence of play is used only for the purposes of describing the unique activities involved in a player's turn. The player is free to follow any sequence he wishes—he can plot a ground movement, then an air mission, allocate supplies, plot a Bombardment—whatever. The only thing that is in a sequence is the film—it always plays first.

AXIS PLANNING PHASE

VIEW FILM

The film shows the movements and attacks of the previous turn's Execution Phase. The film will appear automatically at the start of each new turn (beginning on Turn 2). The controls for the film work like those on a VCR or DVD player. Clicking on the progress bar will also move the film back/forward. Select the play button to start the film. You can review the film as many times as you wish.

When done hit the Next Phase button.

HQS SUPPLY ALLOCATION

Press the Supply allocation button to set HQ supply.

All HQs default to **Basic** Supply Level at the start of each planning phase. Change the supply levels for selected HQs by selecting the Supply button on the top left of the game screen, or by right clicking a unit and pressing the supply button. Select **Move+**, **Combat+**, or both. Changing supply levels will cost fuel or ammo points.

Supply cannot be set during the Set-up Phase.

GROUND UNIT MOVEMENT

Select a ground unit by left clicking on the unit. You can select all the units in the hex by using the **Hotkey**-F. Click on the destination hex to move the unit to that hex (see Moving Units).

GROUND UNIT COMBAT

Select a ground unit or stack of ground units and drag to any adjacent enemy-occupied hex. To try and move units to an adjacent enemy occupied hex without engaging in combat, press ALT while dragging the unit.

ASSIGN GROUND ASSETS

- Allocate Command Assets to Ground Support land unit Attacks/ Defenses.
- Allocate Intel Assets to Ground Reconnaissance missions.
- Allocate Logistics Assets to Supply Missions.
- Allocate Special Events to Interdiction/Counter-air missions.

AIR ASSET ASSIGNMENT

- Allocate Air Assets to Bombardment.
- Allocate Air Assets to Ground Support.
- Allocate Air Assets to Interdiction.
- Allocate Air Assets to Counter-air.
- Allocate Air Assets to Air Reconnaissance.
- Allocate Air Transport to Supply Missions.

NAVAL ASSET ASSIGNMENT

- Allocate Naval Asset to Bombardment.
- Allocate Naval Asset to Ground Support.
- Allocate Naval Asset to Counter-air.
- Allocate Naval Asset to Interdiction.

UNDO ACTION

To undo the actions of a specific unit, place the cursor over the unit and press either **Hotkey-U**. Pressing **Hotkey-U** when the cursor is over a battle will completely remove the battle.

END PHASE

When the phasing player (Axis) is satisfied with all his planning activities, select the 'End Phase' button. This passes control of the game to the next phasing player (Allies).

ALLIES PLANNING PHASE

Repeat phase sequence outlined above.

EXECUTION PHASE

This phase is conducted automatically by the computer. Each player's moves and attacks are compared and resolved as necessary. A "film" file is created which is provided to both players as a record of what happened in the previous turn and to set the stage for the beginning of the planning phase.

FRACTIONS

As a general rule, all fractions are retained. Right click on a unit to see actual attack and defense strengths.

GAME PHASES

The game is split up into several phases.

SETUP PHASE

Each army sets up its units. Units can be moved to valid hexes. Units may have different setup zones. These zones are highlighted by different colored hexes. Units that can set up in the same zone will have the same colored triangle on the counter's bottom right.

PLANNING PHASE

Each side orders their units to move/attack.

When the **Dest** button is turned on, units are displayed at the destination of any move orders. This is the default setting. When the Dest button is off, units are shown at their start positions and any moves will be shown if the cursor is placed over the unit.

Only units that start the turn adjacent to an enemy unit can conduct a set-piece attack. Ad-hoc Attacks can occur between non-adjacent opposing forces as the result of *Move* and *Attack* orders.

EXECUTION/FILM PHASE

The previous turn's actual moves/battles are shown—subject, of course, to the Fog of War settings.

VICTORY PHASE

The Victory Phase is the last phase of a scenario where the victory result is displayed to both players. Victory results can be an Axis Win, Allies Win, or Draw. Victory is achieved by accumulating more Victory Points (VPs) than your opponent. VPs are awarded for capturing and holding Victory Locations. VPs are also awarded for destroying enemy units.

MAP TERRAIN

There is a variety of different types of terrain. Terrain affects movement, and attack and defense values.

For Terrain Effects Chart (TEC) see Appendix A.

Or in game, click the TEC button under the Information Button #2 for detailed terrain information.

MAP TERRAIN POPUP

Right Click on a map hex and this will display the Terrain popup.

This popup shows the move costs and attack modifiers. If the direction is grayed out, then movement / attacks are not allowed across that hexside. Some hexes (e.g. towns) have different defense modifiers for armor and infantry. In the example below, the defense of infantry units is doubled, but the defense of armor units is halved.

Movement costs less than one, indicate the *Road Movement* value to enter the hex. It is only used if the unit's HQ has Move+ supply and the unit's movement order is *Road Movement*.

Any other terrain in the hex is shown as a small picture in the top right. In the example below, the terrain contains a road, escarpment, and a ridge. Move the cursor over the picture for more information on that terrain.

Other hex contents can be displayed by selecting one or more of the buttons located at the bottom of the panel.

HEX SIDES (HOTKEY-E)

To help the player see the impacts of terrain on movement and combat, press **Hotkey-E** to display a color-coded hex side analysis. A blue edge means the hex side only affects movement. A red edge means the hex side effects combat. Black means the hex side is impassable. As it is possible that multiple conditions could apply, the hex side edge color is determined using the following priorities:

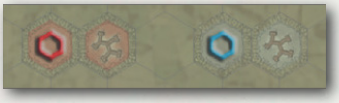
- Black – impassable
- Red – affects combat
- Blue – affects movement

FORTS / ENTRENCHMENTS

Forts and Entrenchments only provide benefit for the owning side.

If an enemy unit starts its turn in a Fort or Entrenchment, then Fort or Entrenchment will be destroyed and permanently removed from the map.

Forts and Entrenchments cannot be created by a player. These features could not be realistically created in the time span represented by the scenarios in **WEGO WW2 Series**.



In the picture on the left, Axis Forts and Entrenchments are on the left, Allied on the right.

Units will however automatically dig in when they do not move. This represents a basic form of unit defense, but this applies to a unit and not to the hex.

MINEFIELDS

Minefields are located on hex sides.

Minefields are placed by the scenario designer based upon historical records; the player cannot place additional minefields during game play.

Minefield penalties apply to both sides equally (attacking over your own minefield is as disruptive to an attack as attacking over an enemy minefield).

This shows a Combat Engineer before and after it has breached a minefield. Minefields are represented by red dots on the map.

Breached minefields are represented by the black dots with the green breach marker on the map.

The effects of minefields are as follows:

- They reduce the attack value of all units attacking across a minefield hex side by 75%. For example, units attacking across a minefield hex side with an attack value of 16 would be reduced to an attack value of 4.
- Units attacking across a minefield hex side lose any intrinsic Shock value they may have. Units defending against an attack across a minefield hex side retain their Shock value.
- Units moving across a minefield hex side expend their entire movement allowance. Therefore, to cross a minefield the unit must start adjacent to the minefield.
- HQs cannot trace lines of communications across minefields; minefields block supplies.
- ZOCs do not extend across minefield hex sides.
- Combat engineer units can breach minefields—establish lanes through the mines so friendly units and supplies can pass through safely. Breached minefields remain in place but at reduced effect. See Combat Engineers for more information.
- The effects of a breached minefield are as follows:
- The attack value of all units attacking across a breached minefield hex side is reduced by 50%.
- Units can cross a breached minefield at a cost of 3 Movement Points.
- HQs can trace lines of communications to subordinate units across a breached minefield hex side; breached minefields do not block supply.
- ZOCs extend across breached minefield hex sides.

GROUND UNITS

Ground units are the central "playing pieces" of the game. Ground combat units can range in size from platoon to regiment/brigade level. These units are under the control of headquarters units that span from regimental/brigade level to theater level. Each ground unit is assigned an Attack Value, Defense

Value, and a Movement Value. These basic values are modified based upon various situations that determine the **Effective Attack** and **Defense Values**.

When one ground unit attacks another, the attack odds are found by dividing the attacker's Final Attack Value by the defender's Final Defense Value. See Battles for more information.

UNIT COUNTERS

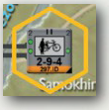
The Axis player controls the following units as below.

Counter	Army	Color (Counter & Unit Icon)
	German Army Units	Grey with Light Gray center
	German Luftwaffe Units	Grey with Blue center
	Croatian Army Units	Grey with Red center
	Italian Army Units	Light Gray with Pale Yellow center
	Romanian Army Units	Light Blue with Yellow center

The Allies player controls the following units:

Counter	Army	Color
	Soviet Army Units	Brown with Tan center
	Soviet Guards Units	Brown with Red center
	Soviet NKVD Units	Brown with Blue center
	Soviet Naval Infantry Units	Brown with Black center

Note: A colored triangle will appear in the lower left corner of a unit's counter to indicate its Setup Zone. This indicator will only appear during the Setup Phase.



If a unit is ordered to Wait (**Hotkey-W**), then a dark triangle will appear in the lower right of the counter.

UNIT DETAILS POP UP

Right clicking on a unit will open the Ground Unit Popup. Right clicking again on the same unit will close the pop up. Alternatively, close the pop-up by clicking the X in the top right of the display or pressing the SPACEBAR.

Moving the cursor over the icons will display more information about that icon. For example, when moving the cursor over the Anti-Aircraft gun on the top left of the armor brigade counter, the display will update with a description of what this icon means.

GROUND UNIT SIZES

Unit Size is illustrated on the top of the counter by one of the following:

- XXXXX: Army Group/Front (500,000+ men)
- XXXX: Army (100,000+ men)
- XXX: Corps (~ 20,000 – 50,000 men)
- XX: Division (~10,000 – 15,000 men)
- X: Brigade (~ 5,000 men)
- III: Regiment (~ 2,000 – 2,500 men)
- II: Battalion (~ 300 – 1,000 men)
- I: Company/Battery (~ 100 – 300 men)

If a number is displayed instead of the Size, then this number is the Regiment/ Brigade / Battalion / Company ID.

The information on a unit depends on the zoom level. At highest zoom level, the unit counter has the following data. All numbers are effective values.

STACKING LIMITS

The maximum stacking limit for a hex is nine stacking points. However, the stacking for city/factory hexes is doubled, and halved in mountain hexes. Each ground unit is assigned several Stacking Points (SPs) based on the unit's size. These stacking points are as follows:

Unit Stacking Points	
Unit Size	**# of Stacking Points**
Platoon	1
Company/Battery	1
Battalion	2
Regiment	4
Brigade	4
Division HQs	1
Corps HQs	1
Army & Front HQs	1

Stacking limits always apply during game play so be careful how you plan your movements. If a hex is at maximum stacking limit, you cannot move units into it or through it.

Tip: Use the Wait Command (**Hotkey-W**) to help deconflict potential stacking limit issues that may occur during movement.

QUALITY

Units have one of the following values:

- Conscript
- Green
- Regular
- Veteran
- Elite

A unit's quality is displayed on the right-hand pane's unit details, and by right clicking a unit to open the unit information pop up. To see the quality of all units, you can use the Display Options and select "Display unit quality" from the "Unit border options" menu.

Quality affects:

- the rate of readiness recovery.
- battle odds: which are shifted by the quality difference between attacker/defender.
- battle damage: higher quality units receive less battle damage than lower quality units.
- the chance of Holding / Withdrawing.
- overruns: only Regular or higher quality units can overrun.

Note: Quality is reduced by one level if a unit's HQ is destroyed.

EFFECTIVE ATTACK AND DEFENSE VALUES

Units have Attack and Defense values which increase / decrease for a variety of reasons. This altered value is the effective Attack / Defense value. The Final Attack and Defense values used to resolve combat depend upon several factors such as:

- **Reduced Strength**
- **Reduced Readiness**
- **Supply Allocation** (Combat+ supply)
- **Lines of Communication** state
- **Artillery Target's Intelligence Level**
- **Organizational Integrity**
- **Dug-in Status**
- **Terrain Effects**

Movement values can change because of:

- **Reduced Readiness**
- **Lines of Communication** state
- **Supply Allocation** (Move+ supply)

STRENGTH

Strength represents the number of tanks, soldiers, and guns in a unit.

If a unit is at half strength, then its effective Attack / Defense Strengths will be half of the maximum. Movement Points remain the same. Strength can be reduced by casualties in battle and the reductions are permanent.

Strength can change due to:

- Casualties caused in battle.
- Reductions due to being **Encircled**.

READINESS

Readiness represents how fresh/rested a unit is. This is reduced by unit actions (moving, attacking etc.).

Low Readiness reduces the Effectiveness of the Attack / Defense / Movement values. At 0% readiness, effective Attack will be reduced by 66%, and effective Defense / Movement points reduced by 50%.

When a unit loses readiness from a battle or from being **Encircled**, losses are first taken from Readiness, then Strength.

Unlike reduced Strength, Readiness increases when a unit rests.

READINESS RECOVERY – RESTING

Ground Units. If a ground unit does not move and is **Supported** (see Lines of Communication) then its readiness % is increased as follows every turn these conditions exist:

- Elite: 28%
- Veteran: 24%
- Regular: 20%
- Green: 16%
- Conscript: 12%

If the unit is in an enemy ZOC, then these values are decreased by the ZOC level multiplied by 2, up to a max value of 10.

For example:

- if a unit is in enemy ZOC of 3, then its readiness increase will be reduced by 6 (3 * 2).
- if a unit is in enemy ZOC of 8, then its readiness increase will be reduced by 10 (8 * 2 = 16, but max is 10).

Air and Ground Assets. These assets recover readiness at the same rate as ground units (see above). Assets with random availability continue to recover readiness while waiting to reappear as reinforcements. Readiness recovery is increased when resting at night.

DEFENDER READINESS

Defending units will recover readiness, though reduced by any damage sustained in an attack.

For example, if a Regular Quality unit is resting and not in an enemy ZOC then it should increase its readiness by 20 per turn. If it is attacked and sustains 3 damage to strength and 8 to Readiness, then it will only increase its readiness by 9 (max readiness increase of – damaged sustained): 20 – (3+8) = 9.

If you right click on a ground unit, the pop-up Unit Details pane shows the number of turns till the unit's readiness reaches 100% if it rests or reaches 0% readiness for encircled units.

ENCIRCLED READINESS

If unit does not move and is Encircled, then every turn:

- Readiness decreases by 15 if not in an enemy ZOC.
- Readiness decreases by 15 plus the enemy ZOC level multiplied by 2, up to a max value of 10.

MOVE READINESS

If a unit moves, then Readiness changes due to movement:

- Decrease by 10 if uses its full movement points.
- Rounded up percentage of full movement used (i.e. if use 50% of movement points, then decrease by 5).

DUG-IN STATUS

Ground units that remain inactive for one turn will automatically assume dug-in status. Dug-in units increase their defense factors by 25%. For example, a unit with a defense factor of 8 with increase its defense factor to 10 if it is dug-in. When a unit moves, dug-in benefits are lost. If a unit attacks (or is attacked) but does not move, it remains dug-in.

BREAKDOWN/COMBINE UNITS

Breakdown/build-up during game play consumes a unit's entire movement allowance. However, during the set-up phase, units can breakdown and combine immediately at no cost. It cannot carry out any other action if breaking down or combining. A unit can breakdown into three smaller units, or three smaller units can combine into one large unit. The only echelons of command that can breakdown/build-up are regiments, brigades and battalions. The only types of units that can breakdown/build-up are infantry, motorized, mechanized, and armor, recce, artillery, antitank, heavy antitank, antiaircraft, and heavy antiaircraft. Only one level of breakdown is allowed. For example, if a unit starts the scenario as a regiment then it can be broken down into battalions; if it starts the scenario as a battalion then it can break down into companies.

Regiments and brigades break down into three battalion-sized units. Battalions break down into three company/battery-sized units. The three breakdown elements will have a name set that adds 1, 2, 3 to the parent Name (e.g. 3.Mot Inf Regt breaks down to 3.Mot Inf Regt-1, 3.Mot Inf Regt-2, and 3.Mot Inf Regt-3). Each breakdown unit will be the same type (e.g. inf) as its parent and will have exactly 33.3% of its parent's current attack / defense values. Each breakdown unit will have the same defense orders, readiness level and dug-in status of the hex.

A unit cannot breakdown if it would create an over-stacking situation. A unit cannot breakdown if the attack or defense factor is less than three. A unit cannot breakdown if its %strength is 25% or less.

Three battalions of the same regiment can combine into one regiment-sized unit; three companies of same battalion can combine into one battalion-sized unit. Combining units must start the planning phase stacked in the same hex. A combined unit will be assigned normal defense orders, the average readiness level of the combining subordinate units, and the dug-in status of the hex.

ORGANIZATIONAL INTEGRITY

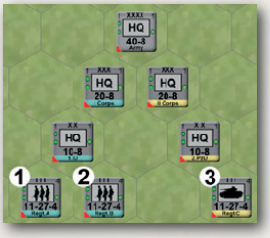
Whenever ground units subordinate to different HQs attack or defend together—it is possible that penalties will be imposed on the final attack and/or defense value. This reflects a nation's capability to conduct — and its ability to coordinate —- combined arms operations.

See table below. The number of HQs "jumps" required to find a common Higher HQs (HHQs) is used to calculate the penalty.

Organizational Integrity – ATTACKER				
		Attack with Others – Coordinating HQs		
Nation	**Attack Alone**	**Same HHQ**	**HHQ 1st Removed**	**HHQ 2nd Removed**
Germany	100%	100%	90%	80%
Italy	100%	80%	65%	50%
Romania	100%	80%	65%	50%
USSR	100%	80%	65%	50%
Minor Axis*	100%	80%	65%	50%

Organizational Integrity – DEFENDER				
		Defend with Others – Coordinating HQs		
Nation	**Defend Alone**	**Same HHQ**	**HHQ 1st Removed**	**HHQ 2nd Removed**
Germany	100%	115%	95%	90%
Italy	100%	100%	80%	75%
Romania	100%	110%	90%	85%
USSR	100%	105%	85%	80%
Minor Axis*	100%	105%	85%	80%

* Minor Allies Nations: Croat



In the picture below, units 1 and 2 have a HHQ of 0 (they have the same HQ). They are German units, they will attack together at 100% and defend at 115%.

Unit 3 has a HHQ of 2 from units 1 and 2. This means there are 2 jumps from 3's HQ to a higher HQ that it shares with units 1 and 2

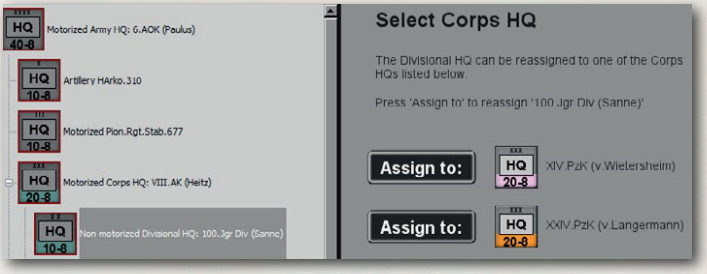
(i.e. 1ID HQ -> I Corps HQ -> Army HQ). Note that the harshest penalty is always applied, so if unit 3 was Italian, then all 3 units would attack at 50% and defend at 75%. This penalty is applied regardless of the relative strengths of the units involved.

CHANGE HQS ASSIGNMENTS (TASK ORGANIZATION)

Players can task organize their corps commands. Division HQs can be reassigned to from one Corp-level HQ to another Corp-level HQ, as long as both Corps-level organizations are part of the same army.

HQs can only be reassigned during the Planning Phase.

To reassign a HQ, first select one of the highlighted Divisional HQs. Press "Assign to;" to complete the transfer.



FIXED UNITS

Some units are fixed in place and cannot move. These units will have an 'F' on their counter and 'FIXED' on their unit details in the Info Panel.

If the 'F' is red, then the unit cannot move.

If the 'F' is green, then the unit can move within a restricted area.

This may only last for a certain number of turns or until an enemy unit moves adjacent. Right click on the Fixed unit and move the cursor over the 'F' icon for more information.

If a unit is fixed, but it is forced to retreat outside its fixed area, then it becomes unfixed.

HEADQUARTERS UNITS

HQs Units affect:

- Organization Integrity (bonus/penalty for units of different HQs attacking/defending together).
- Lines of Communication State.

HQ organization is the assignment of subordinate ground units to a headquarters. This is set by the scenario designer; it cannot be changed by the player during game play.

To view what units belong to the same organization, press **Hotkey-H** to turn the display of HQ Chain of Command lines on/off. The color of the lines reflects the Supply State of the LOC Lines of Communication (LOC) state between the unit and its HQs:

- Green = Supported
- Yellow = Extended Support
- Red = Isolated
- Black = Encircled

To view the HQ range, press Hotkey-R when the cursor is over the HQ. Hexes in Supported range will be green, those in Extended Support range will be yellow.

RECONNAISSANCE (RECCE) UNITS

A recce unit's primary function is to gain battlefield intelligence; to observe and report on the strength, activity, location and disposition of enemy forces. Generally, they will attempt to avoid direct-fire contact with enemy forces. For this reason, unless explicitly ordered to do so, recce units will not enter enemy ZOCs, and will automatically withdraw from enemy ZOCs if friendly or enemy movement places them in this position. This only applies to ZOCs

exerted by non-recce enemy units; friendly recce units will not automatically withdraw from enemy recce units ZOCs.

Specific recce rules are as follows:

- A recce unit without **Hold, No Retreat** orders will withdraw from the hex it occupies if a non-recce enemy unit moves adjacent to it. The recce unit will attempt to withdraw to an adjacent hex not in an enemy ZOC.
- Unless under **Move** and **Attack** orders, a friendly recce unit will never move into the ZOC of an enemy non-Recce unit.
- Recce units have a greater intelligence range than any other ground unit (see Fog of War).
- Recce can move once before a battle occurs. In other words, they can move out of the hex they occupy at the start of the turn—before an enemy attack on that hex occurs.
- Recce units will always try to **Withdraw** from a battle (even when they do not have **Withdraw** orders), unless they have **Hold, No Retreat** orders.
- Recce units have a higher chance to **Withdraw** from combat than other units.

ARTILLERY UNITS

Artillery units that do not move can defend friendly units or attack enemy units from a distance using bombardment.

The effectiveness of the artillery fire depends on the intelligence level of the target hex.

Artillery is most effective when combined with ground unit attacks. To use artillery, press **Hotkey-R** when the cursor is over an artillery unit to enter **Artillery Fire Mode**. All hexes within range of the artillery unit will be highlighted in Green.

Place the arrow cursor over an enemy unit that is in range and the cursor will change to a crosshair (shown below). Click on the enemy unit and that will order the artillery unit to fire by itself or in conjunction with other friendly forces attacking the same hex. If you put the arrow cursor over a friendly unit that is in range, the cursor will change to a shield (shown below on the right). Click on the friendly unit and that will order the artillery unit to fire in support of that unit should it be attacked by the enemy.


When this cursor is shown, artillery attacks will be ordered on enemy units.


When this cursor is shown, defensive artillery fire will be ordered on friendly units.

When selected, the firing artillery unit(s) have a blue border as below and will be highlighted in the right-hand pane.

Pressing **Hotkey-R** again, or clicking on the map, will deselect the artillery unit.

Alternatively, artillery units can attack by dragging and dropping them onto the target.

Hotkey ALT-R will select ALL artillery units in a hex in fire mode. When a target is selected, all units will be assigned to attack/defend that target.

Hotkey SHIFT-R will select the next available artillery unit in fire mode. The map will center on the unit's hex, the unit will be put at the top of the stack, and the unit's range will be displayed.

An artillery unit providing Offensive Support has its attack value added to the attack factors of all other friendly units involved in an attack against an enemy occupied hex.

An artillery unit providing Defensive Support to a friendly occupied hex (other than their own hex) will have their attack factor added to the defensive total of that hex. Artillery units defending in a hex that is under attack by the enemy will use their defense factor.

If an artillery unit had orders to provide Defensive Support to an allied unit which was not attacked will rest and recover readiness as if it had no orders.

ARTILLERY TARGET'S INTELLIGENCE LEVEL

Artillery (and Air and Naval) attack strengths can be reduced or increased based on the level of intelligence acquired about enemy units in the target hex (see Fog of War). Attack factors of artillery units, and naval and air assets* being used to attack enemy unit(s) in a hex are modified as follows:

Average Intelligence Level of Hex	Artillery /Naval /Air Attack Factor Multiplier
0	No Fire
1	0.15
2	0.35
3	0.75
4	1.00
5	1.10

Round fractions down for the average intelligence in a hex; however, they cannot be reduced to below one. Defensive artillery and naval fire have an Attack Factor Multiplier of 1.

ARTILLERY ONLY ATTACKS (BOMBARDMENT)

When artillery, naval, and/or air support are attacking enemy units on their own, they are using bombardment. Bombardment Points are determined by totaling all artillery, naval, and air support attack factors allocated to bombard an enemy occupied hex. The program determines the Terrain Type in the bombardment hex, indexes the Bombardment Points with the Terrain Type and rolls a D10. The resulting number on the Bombardment Result Table is the % of Readiness lost in the bombardment hex.

Protection from Bombardment. Ground units occupying certain types of terrain can reduce the effects of artillery, air and naval asset bombardment attacks. There are three categories of protection: Good, Medium and None.

Here is a list of the terrain types and their Bombardment Protection Ratings:

- Good Terrain (-2 Shifts): Mountain, Peak, City, Town, Entrenchment, Fort, Rough
- Medium Terrain (-1 Shifts): Rolling Steppe, Woods, Dug-in

Attacks by artillery only use low Battle Intensity and thus inflict lower casualties.

If a battle has more artillery than ground units, then its Battle Intensity is reduced by 1 level (to a minimum of low).

If a battle has 2 times more artillery than ground units, then its Battle Intensity is reduced by 2 levels (to a minimum of low).

The above conditions will never reduce a Battle Intensity to below low.

ANTI-AIRCRAFT (AA) UNITS

When an Air asset attacks a ground unit, the Air asset is subjected to an Anti-Aircraft (AA) attack **BEFORE** the ground unit attack takes place. The result of the AA attack may affect the subsequent ground support of the Air asset(s).

- Ground units have an intrinsic AA strength equal to their stacking point value.
- **Light Anti-Aircraft** units have an AA strength x3 their stacking point value.
- **Heavy Anti-Aircraft** units have an AA strength x4 their stacking point value. This value extends into adjacent hexes.

Air assets assigned to Defensive Ground Support will also suffer AA attacks. However, the AA value is halved (excluding Heavy AA units which remain at full AA Strength).

The AA strengths of each hex can be seen by pressing **Hotkey-A**. First press will show the Axis (Side 0's) AA Strength. Second press will show the Allies (Side 1's) AA Strength. The "redder" the hex color, the higher the AA strength covering the hex.

The total air AA strength of a hex is compared to each Air asset's Defense strength to determine the AA Attack Ratio. As with Ground Attacks, the difference in quality of the units shifts the odds.

See 'Anti-Aircraft (AA) Attacks' for more information.

COMBAT ENGINEER UNITS

If attacking a hex containing a fort, town, or city, Combat Engineers add a +1 shift to the Attackers odds. This benefit is only available if the Combat Engineers have an effective attack value of at least 30% of its maximum attack value. Two Combat Engineer units add +2 shifts. The maximum shift is +2. Combat Engineers do not add odds shifts for defenders.

Combat Engineers can also breach Minefields. When adjacent to a minefield, Combat Engineers can be ordered to attempt a breach. Press **Hotkey-B** or right click on the unit counter and then press the breach button to turn on/off a breach order. The order will remain in effect over subsequent turns unless the unit is given subsequent orders, or all adjacent minefields are breached. Combat Engineers have a **50% chance of breaching each adjacent hex-side** containing minefields.

BRIDGING ENGINEERS

Bridging Engineers can destroy bridges, repair bridges, and create pontoon bridges. Place the cursor over the bridging engineer units and either press **Hotkey-B** or right click the unit and press the action button. Only buttons for valid actions will be displayed (i.e. to destroy a bridge you must be beside the bridge hexside).

If in a hex beside a bridge, a bridging engineer has the option to destroy it. If in a hex beside a destroyed bridge, a bridging engineer has the option to repair it. If in a hex beside a major/minor river, a bridging engineer has the option to create a pontoon bridge. They can only do one of these actions in a hex. For example, you can't create a pontoon in a game hex that already has a bridge hexside. The right click button will only be present if the hex is valid

(i.e. only get the choice to repair bridge if there's a destroyed bridge present). Note: Combat engineers cannot perform any bridging tasks.

When applicable, the hexside on the map will display an icon that indicates which of these engineer actions applies (destroy bridge, repair bridge, create pontoon, clear mines).

The probabilities to repair / destroy / create bridges:

- Repair/Destroy a Major bridge – 20% / 40% respectively.
- Repair/Destroy a Minor bridge – 40% / 80% respectively.
- Build a pontoon bridge – it takes two turns for bridging engineers to create a pontoon over a major river and one turn over a minor river.

Pontoon Bridges. When ordered (a button on the right click pop up unit menu), a bridging engineer unit that is adjacent to a river creates a pontoon that crosses every adjacent river hexside.

A pontoon bridge is removed from the map if at the end of a turn:

- No bridging engineer is in the hex (doesn't have to be the same one that built it, and it happens at the end of a turn, so that means a bridging engineer can move over its own bridge).
- Enemy Adjacent to the bridging engineer (i.e. the enemy is on the other end of the pontoon).

AIR ASSETS

Air assets can be accessed by pressing the Air button on the left toolbar bar. If this button has a red ring, then air assets are available for missions. If it is green, then all assets have been assigned missions. There are three types of air assets in WEGO WW2 Series:

- **Attack Assets:** These units can attack enemy ground units, provide offensive and defensive ground support to friendly ground units, counter enemy air capabilities, and interdict movement of enemy forces and supplies.
- **Air Reconnaissance Assets:** These units can carry out reconnaissance missions against any hex on the map to try and find and identify enemy units.
- **Air Transport Assets:** These units can provide supplies to isolated units.

The status of individual air assets can be determined by right clicking on the air asset image in the air asset display.

Attack Air assets have a Ground Support factor, a Bombardment factor, and a Defense factor.

- Ground Support Factor. This is used when assisting a ground unit attack or defense.
- Bombardment Factor. This is used during air-only attack (or in conjunction with artillery or Naval assets).
- Defense Factor. This represents the Air Assets ability to withstand damage from anti-aircraft fire; there is no direct "air-to-air" represented in the game.

Air Asset Quality affects Readiness increase in exactly the same way as for ground units, i.e. conscript increase by 12%, Med by 20%, Elite by 28% per turn.

Quality and defense against ground AA fire. See 'Anti-Aircraft (AA) Attacks'. Air Asset Quality does NOT affect the Ground Support / Bombardments.

For more information on a unit, either right click the unit button to open the unit details pane or examine the tooltips.

AIR PLANNING PANEL

This panel is displayed when the Air Asset button is pressed.

Different air assets can be selected by pressing the asset button. The four fields on the air asset button represent the following (from left to right):

The numbers displayed on the air asset button vary based on the air asset type (from left to right):

Recon. Intel Range, Intel Strength, Mission Orders, #Turns before next use.

Attack. Ground Support shifts, Bombardment, Mission Orders, #Turns before next use.

Transport. Mission Orders.

Mission Order Types. Mission orders can be one the following values:

- R – Recon
- A – Ground Attack
- S – Offensive Ground Support
- D – Defensive Ground Support
- I – Interdiction
- C – Counter Air

Assets may be delayed before becoming available after use. A 'Delay 2 (+ / -2) turns' means the unit could be returned anytime after one to four turns.

The green and yellow bars under the values are the readiness and strength indicators of the asset.

For more information, either right click the asset button to open the asset details pane or examine the tooltips.

AIR RECON ASSETS

Air Recon assets can only conduct Air Reconnaissance missions.

ATTACK ASSETS

Ground Support assets can fly four types of missions: Ground Support, Bombardment, Counter-Air, and Interdiction. An air asset can be assigned only one mission per turn. Assets performing a mission will suffer a decrease in readiness and potential loss of strength due to anti-aircraft fire.

AIR TRANSPORT

A Player with Air Transport assets has the capability to transport supplies to a hex containing a friendly-controlled airfield or drop zone. An airfield or drop zone is considered a supply source if an Air Transport asset has been assigned to it.

- Air Transport missions cannot be flown if the enemy has more air assets flying counter-air mission than friendly.
- Air Transport missions cannot be flown into an airfield hex that is within an enemy anti-aircraft zone of control.

NIGHT CAPABILITY

Air assets with Night Capability can fly missions during night turns. Air missions that can be flown at night are Bombardment, Interdiction, and Counter-air. Ground Support may not be flown at night. Air assets without night capability cannot fly any missions during night turns.

AIR ASSET MISSIONS

Air assets can be allocated the following missions:

- Allocate Air Assets to Bombardments. Air assets can attack enemy ground units on their own.

- Allocate Air Assets to Ground Support. Air assets with the capability to provide ground support can assist ground unit attacks/defense by shifting the attack or defense odds for the hex they are assigned to support.
- Allocate Air Assets to Interdiction. Air assets allocated to interdiction will destroy fuel and ammo points, slow movement of enemy grounds units, and reduce the supply range of enemy HQs.
- Allocate Air Assets to Counter-air. Air assets allocated to counter-air will reduce the effectiveness of enemy air assets.
- Allocate Air Assets to Air Reconnaissance. Air reconnaissance assets can provide information about the location and movement of enemy ground forces.

GROUND SUPPORT MISSION

Ground Support mission increase / decrease the odds of a ground unit attack/ defense.

This mission is used when an Air asset supports a ground unit attack. This mission is subject to enemy Counter-Air and Anti-Aircraft attacks prior to its execution. The ground unit attack odds are increased by the Air asset's Ground Support value. Few Air assets have this capability early in the war as it required special training. However, as the war proceeded more and more squadrons gained this capability.

Ground Support effectiveness decreases with the number of units added. The strongest air asset attacks using 100% of its ground support value. The next strongest air asset supports at 50% effectiveness. The next attacks at 33% effectiveness. The next attacks at 25% effectiveness, etc.

The Ground Support mission is subject to enemy Counter-Air and Anti-Aircraft attacks prior to its execution. Ground Support units can also defend friendly units. The Ground Support value reduces the attacker's odds.

BOMBARDMENT MISSION

Bombardment missions are air-only attacks that do not assist ground unit attacks. These missions are the same as those performed by artillery or naval attacks. This mission is flown by air assets that attack enemy ground units without any assistance from friendly, non-artillery ground units. The air bombardment mission can be combined with artillery units and naval assets performing bombardment.

If a Bombardment mission is ordered against an enemy unit and subsequently a ground unit is also ordered to attack that enemy, then the Bombardment mission becomes a Ground Support mission. If the air asset cannot perform Ground Support missions (I.e it does not have a Ground Support factor), then during execution the bombardment mission will be canceled.

As with Ground Support missions, Air Bombardment effectiveness is reduced with the number of air assets employed, and they are subject to Anti-Aircraft attacks.

COUNTER-AIR MISSION

Counter-Air represents all actions taken to gain and maintain air superiority. These actions include bombing airfields to destroy aircraft on the ground, crater airfields, destroy airmen, ground crew, fuel and ammo dumps, maintenance facilities, disrupt air command and control, destroy/disrupt radar, etc. Counter-Air also includes combat air patrols, bomber escort, interception and fighter sweeps. Therefore, both bombers and fighters can participate in the counter-air mission. Counter-Air will influence all types of enemy air missions.

To assign a Counter-Air Mission to an Air asset go to the Air Planning Panel, click on the Air asset button of an already selected unit.

Note: If Readiness or Strength of a unit is less than 50%, the unit cannot be assigned to Counter-Air.

A friendly air asset assigned to Counter-Air adds "anti-aircraft points" to the Anti-Aircraft value of every single hex attacked by enemy aircraft. Each air asset assigned to Counter-Air will add one (1) anti-aircraft point to every friendly occupied hex that is attacked by an enemy air asset during a single turn. But every enemy air asset assigned to Counter-Air will counteract one friendly unit assigned to Counter-Air.

For example, if the Axis player assigns 2 air assets to Counter-Air and the Allies player assigns 3 air assets to Counter-Air, then the Axis player gets no anti-aircraft plus up, but the Allies player gets +1 added to the anti-aircraft strength of ALL his unit stacks. If no Axis air assets were assigned to Counter-Air in this example, then the Allies would get +3 added to the anti-aircraft strength of ALL his unit stacks.

Air Superiority Values. Each side in a scenario is assigned an Air Superiority value. One side will always be assigned an Air Superiority value of 0. The other side will have an Air Superiority value between 0 and 5. This value can range from 0 to 5:

0 = Air Parity. Both sides are relatively equal.

1 thru 4 = Air Superiority. One side has the advantage over the other side to varying degree.

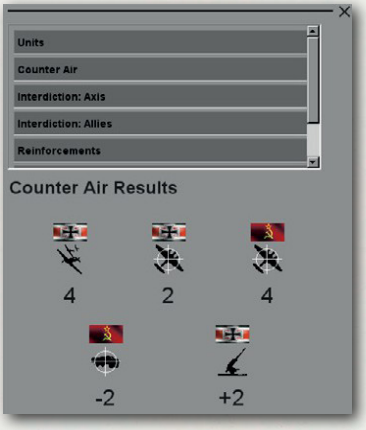
5 = Air Supremacy. One side completely dominates the other side with its air power.

The Air Superiority rating means that even with no Air assets manually assigned to Counter-Air, a side can still have a Counter-Air value.

The Air Superiority value represents the effects of the following factors on counter-air operations:

- Number of aircraft.
- RADAR availability, quality, and how well it is integrated into counter-air operations.

- Sortie rates versus those of the opposing side. This factor represents the effects of proximity of friendly airfields to the battlefield (i.e. time of flight to target area vs loiter time vs rearm turn-around time).
- Operational Readiness of available aircraft. This factor represents the availability of repair parts, tool kits, trained technicians, and the technologies necessary to overcome the impacts of a harsh operational environment on aircraft.



COUNTER-AIR RESULTS

Open the Turn Information to see the effects of Counter-Air missions.

The Counter Air results panel shows the results of the previous turn's Counter Air missions.

In the example shown above, the Axis has six counter air missions (four assigned counter-air missions plus for Air Superiority rating) and the allies have assigned four counter-air missions.

This means the Axis have a Counter-Air advantage of +2. This results in any Allied Interdiction missions being reduced by 2, and all Axis AA defense being increased by 2.

INTERDICTION MISSIONS

Interdiction Air Missions are those which attempt to disrupt enemy ground operations, by reducing enemy movement, HQs ranges, and the amount of ammo and fuel points received each turn.

To assign an Interdiction Air Mission to an Air asset, click twice on the air asset button of an already selected unit.

Note: If Readiness or Strength of a unit is less than 50%, the unit cannot be assigned to an Interdiction Mission.

Determining the Number of Interdiction:

- Players allocate air assets to the Interdiction mission at any time during their planning phase.
- The number of Interdiction Units is reduced by the number of enemy Counter-Air assets. Enemy Counter-Air missions can result in friendly Interdiction missions being aborted.
- If the number remaining is equal to one or more, then that number is indexed in the table below and the results are applied.

Interdiction Results Table

# of Air assets on Interdiction	Fuel Points Lost	Ammo Points Lost	Personnel Points Lost	Equipment Points Lost	Div HQ & Above LOC Range Decrease
1	6	4	2	2	5%
2	8	5.5	3	5	10%
3	10	7	5	7	15%
4	12	8.5	6	9	20%
5	14	10	8	11	25%
6	16	11.5	9	13	30%
7	18	13	11	16	35%
8	20	14.5	12	18	40%
9	22	16	14	20	45%
10+	24	17.5	15	22	50%

For example: The Axis player allocates 2 air assets to Counter-Air. The Allies player allocates 4 air assets to interdiction. Subtract 2 (Axis count-air assets) from 4 (Allies interdiction units) = 2 remaining Allies air assets on an interdiction mission.

Indexing two on the interdiction table shows that:

- The turn's Axis Fuel increase is reduced by 8 points.
- The turn's Axis Ammo increase is reduced by 5 points, with a 50% chance of an additional point being destroyed.

- The turn's Axis Personnel increase is reduced by 3 points.
- The turn's Axis Equipment increase is reduced by 5 points.
- The range of Axis division and higher HQs supply ranges are reduced 10% (round up). In other words, if the normal range of division and Higher HQs is 24, so 10% of 24 = 2.4 rounded up to 3. Therefore, Axis supply range is decreased from 24 to 21.
- The movement factors of ALL Axis units are reduced by 10% (rounded up). An Axis tank battalion with a movement factor of 16 would be reduced to 14, (16 x 10% = 1.6 rounded up to 2).

INTERDICTION RESULTS

Open the Turn Information to see the effects of enemy interdiction.

Interdiction affects the arrival of supply, enemy movement, and HQ LOC as shown here in the Turn Information panel.

Air, Naval, and Special Events assets can be ordered to interdict supply. These can be countered by assigning friendly assets to Counter-Air missions.

In the example here, the Allies have assigned 2 assets to interdiction, but the Axis have a Counter -Air advantage of 1, so the Allied interdiction missions are reduced to 1.

This reduced Allied Ammo by 6 and Fuel by 4.

Total new Axis supply this turn was 16 and 4, so reducing those by 6 and 4 gives new supply of 10 Ammo and 0 Fuel.

The interdiction also reduced HQ Lines of Communication by 5% and all unit's movement points by 5%.

AIR RECONNAISSANCE

Air Recon assets can conduct Air Reconnaissance missions against hexes. Air Recon assets have two values:

- **Recon Range:** The hex radius from the target hex over which this asset can collect intelligence.

- **Recon FOW Level:** The FOW level of intelligence gathered. FOW Level decreases the further one gets from the target Hex.

These missions are not subject to Anti-Aircraft attacks. See Fog of War for more info.

NAVAL ASSETS

Naval assets can be accessed by pressing the Naval button on the left toolbar bar.

Naval assets are considered "floating artillery" in the WEGO WW2 Series. Like artillery units, Naval assets can provide Offensive and Defensive Ground Support to friendly ground units that are within its range; the range being the Naval assets distance from designated Volga River hexes. Naval assets may also conduct bombardment of enemy ground units.

NAVAL PLANNING PANEL

This is displayed when the Naval Asset button is pressed.

Once a Naval asset is used, it may disappear for the remainder of the scenario, or return after a few turns. The availability of this capability should be noted in a scenario's description.

For more information about an asset, either right click the asset button to open the asset details pane or examine the tooltips.

NAVAL ASSET MISSIONS

Naval assets can be allocated the following missions:

- Allocate Naval Assets to Bombardment. Naval assets by themselves can attack enemy ground units within range of the sea.
- Allocate Naval Assets to perform counter-air or interdiction missions. These missions represent the capability of naval assets to provide anti-aircraft coverage to river transport on the Volga, or provide harassment and interdiction fires on enemy movements and logistics activities.

GROUND ASSETS

Ground assets can be accessed by pressing the Ground button on the left toolbar bar.

There are four types of ground assets in the WEGO WW2 Series:

- **Intelligence Assets:** These assets conduct reconnaissance missions.
- **Command Assets:** These assets perform Ground Support missions.
- **Logistics Assets:** These assets perform Move+, Combat+, and Replacement+ supply missions.
- **Special Events:** These assets can perform counter-air or interdiction missions.

GROUND ASSET MISSIONS

Ground Assets can be allocated the following missions:

- Allocate Intelligence and Electronic Warfare (EW) Assets. EW assets can provide information about the location and movement of enemy ground forces.

- Allocate Command assets (Main Effort/Surprise and/or Maneuver, etc.) to Ground Support. These assets provide odds shifts to the attacks/defenses they support.
- Allocate Special Events Assets. These assets can perform counter-air or interdiction missions.

SHOCK

A major impact of armored and mechanized forces on the enemy is mental—shock effect. Armored forces use rapid mobility, firepower, and shock effect to close with and destroy the enemy. The movement factor covers mobility (or lack of it), and firepower is covered by the attack factor versus the defense factor. That leaves the shock effect to be accounted for in some way.

What creates the shock effect of armored forces? The speed and/or the direction of an attack (especially in the flank and/or rear—and having the mobility to get there) with overwhelming firepower quickly brought to bear at the point of attack that destroys (kills, captures, and/or causes to cower) units within the enemy's command...which in turn reduces, eliminates, or frustrates the options available to the enemy commander—that's shock effect. So, a player attaching an armor battalion to a slow foot-slogging infantry division with a low attack value will be punished.

SHOCK – GENERAL RULES

Some units have a Shock Value which results in Shifts to Combat Odds.

This means, the more units participating in a battle with a Shock Value, the higher the percentage of Shock that is used to calculate odds shifts. Mobile ground units like armor and mechanized infantry have a Shock Value. Less mobile units like foot-mobile infantry have no Shock value.

Note: A unit with a Shock Value of 0 is still considered a Shock unit.

So, an armored battalion attacking with a much bigger infantry division will only use a small percentage of its Shock Value. But the same armored battalion supported by other mobile units will use its entire Shock Value.

Shock values are displayed in the Unit Details Panel.

Shock is only applicable for attacks against an enemy in open terrain (i.e. the hex itself has no defensive bonus).

Units that are attacking over a terrain hexside (e.g. a gully) have No Shock. Shock values are halved if the unit has:

- Readiness less than 30%
- Strength less than 30%
- Lines of Communications State of Encircled or Isolated Shock values are 0 if the unit has:
- Readiness less than 10%
- Strength less than 10%

Possible Shock values are shown below:

Shock Types	
Icon	**Description**
	Shock Value of 4
	Shock Value of 2 when Attacking.
	Shock Value of 2 when Attacking. Shock Value equal to attacker when defending.
	Shock Value of 0 when Attacking. Shock Value equal to attacker when defending up to a max value of 2.
	Shock Value of 0 when Attacking.
	No Shock Value. This unit will reduce the total Shock of a stack if this unit attacks/defends with units that have Shock.

Shock shifts the odds of an Attack by the Shock value. A side's Shock is the maximum Shock value of any of its engaged unit, reduced by the percentage of units that have no shock. The percentage is calculated on units' stacking sizes.

If only half (measured by Stacking Size) of the units have Shock, then only half the maximum Shock Value is used.

The Shock value is calculated for the Attacker and Defender. The Final Shock is Attacker Shock – Defender Shock. If the result is negative, then the odds are reduced by that number of shifts.

Example 1:

If attack consists of:

- an Armored (Shock 4) unit of Stacking size 4
- a motorized (Shock 0) unit of stacking size 2
- an infantry (no Shock) unit of stacking size 2

Then the basic (maximum) shock of any unit (from the Armored unit) = 4. The stacking size of shock units (the Armored and Motorized unit) = 6 The total stacking size of all units = 8

So percentage of Shock units = 75% (6 as a percentage of 8). So 75% of max shock of 4 = 3

Final Attacker Shock = 3 (defender has no Shock).

If the enemy has no shock values, then battle odds will then be shifted by 3 in favor of the attacker.

Example 2:

If an attack consists of:

- an Armored (Shock 4) unit of Stacking size 1
- a larger infantry (no Shock) unit of stacking size 3

Then the final Shock = 1 (25% of attacking stack has Shock, 25% of the max shock 4 = 1).

Example 3:

If an attack consists of:

- 2 Armored (Shock 4) units of Stacking size 1
- 1 of the 2 units is attacking over a gully hexside.

Then the final Shock = 2 (50% of attacking stack has Shock – the unit attacking over the gully is considered to have No Shock. 50% of the max shock 4 = 2).

SHOCK AND ANTITANK UNITS

Antitank units are normally defensive. They neutralize an attacker's Shock but normally do not have an Attack shock greater than 0.

However, German AT/AA (so called Heavy AT units)—units equipped with 76mm or 88mm guns—attack with a Shock of 2. For an AT/AA weapon to be used offensively against tanks (not against infantry), it must be able to shoot substantially farther than any tank it is advancing against in order to cover the movement forward of another friendly AT unit.

ZONES OF CONTROL

Each ground unit (friendly and enemy) exerts influence into the hexes adjacent to the one it occupies. This area of influence is called the Zone of Control (ZOC). It costs no Move Points to leave an enemy ZOC, but it does cost to enter one.

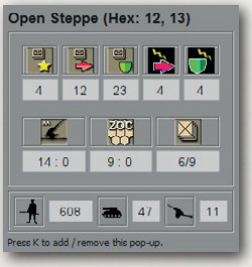
ZOC Value. The ZOC for a hex is expressed as a value. This value is equal to the stacking size of all friendly units located in—or adjacent to—the hex in question. This value will be adjusted if the following conditions apply:

- Friendly Conscript ground units exert a ZOC Value equal to their stacking size minus one (-1).
- Friendly Elite units exert a ZOC Value equal to their stacking size plus one (+1).

- Encircled/Isolated units have their ZOC Value reduced by 1.
- The ZOC value is halved at night.

Note: A Friendly Conscript unit with a stacking size of one has no ZOC.

ZOC VALUE DISPLAY



To see the ZOC values of a hex, press **Hotkey-K** to display the Hex Details Popup.

For the selected hex, the pane shows the Axis ZOC Value on the left of the colon, and the Allies ZOC Value on the right. If a unit occupies a Hex, then it will show a dash "-" for that side.

ZOCs can also be shown on the game map by pressing **Hotkey-Z**. Press once and it will show the Axis ZOCs. Press a second time and it will display the Allies ZOCs.

On the game map, ZOCs are shown in a range of colors from yellow (low ZOC Values) to orange (mid-range ZOC Values) to red (high ZOC Values).

MOVEMENT POINT COSTS

A hex's ZOC value is the cost in additional Move Points that an enemy unit must expend to enter that hex. For example, if a hex has a ZOC Value of 4, then it will cost an enemy unit 4 Move Points to enter that hex plus the cost of terrain. The maximum cost to enter a hex in an enemy ZOC (EZOC) equals the cost of the terrain plus 10 MPs. If the hex in question is occupied by a stationary friendly unit then the only cost to enter the hex is that of the terrain alone—i.e. the EZOC cost is 0.

MOVEMENT POINT ADJUSTMENTS

The Move Point costs dictated by the ZOC Value of a hex are adjusted based on the Quality of the unit exiting the enemy ZOC. Move Point costs are adjusted as follows:

- Elite Quality: -2
- Veteran Quality: -1
- Regular Quality: 0
- Green & Conscript Quality: +2
- Recce: -2**

** If you wish to have a recce unit enter an enemy ZOC you must use the *Move and Attack* order.

For example, if a hex has an enemy ZOC Value of 4, to enter the hex it will cost:

- Elite Quality Units: 2 Move Points (4 minus 2)
- Veteran Quality Units: 3 Move Points (4 minus 1)
- Regular Quality Units: 4 Move Points (4 minus 0)
- Green & Conscript Quality Units: 6 Move Points (4 plus 2)
- Elite Recce Unit: 0 Move Points (4 minus 2 minus 2)

Note that:

- A unit moving with *Road Movement* will stop on entering an enemy ZOC and will be ambushed.
- Regardless of the enemy ZOC Values, a unit can always move one (1) hex.
- A unit can move from one enemy ZOC to another if it has enough movement points to do so.

MOVING UNITS

Units are moved by selecting the unit with the left mouse button. This will display the Move Panel as below:

This will show the options available for this unit. The top part shows the options for this unit, for example setting supply, or displaying more information about this unit. Move the cursor over the info symbol above each button for a short description about that button. On the top right, supply data is displayed. Move the cursor over these icons for more information.

The lower, larger buttons are for ordering Actions on the unit. For example, setting the defensive orders, opening the battle order panel etc. Press the 'i' on the right for information. This will display a Help screen as below:

Finally, the smaller panel on the right is for selecting units in the stack. Left click on a unit to change selection. Pressing the F button (or Hotkey-F) selects all units. Clicking a unit will toggle unit selection so that, for example, 2 of 3 units can be selected. This panel also shows the attack / defense etc of all selected units. Moving the cursor over these icons will display more information. To select an entire organization (i.e. all the units commanded by the same HQ), press the Group Move button (see Action buttons help above).

The accessible hexes that the unit(s) to which the unit can move are unshaded. Inaccessible hexes are shaded, and hexes that the unit(s) can move to if not for the presence of enemy units are colored amber.

Move the selection unit(s) to its destination by left-clicking on the map.

Waypoints: You can move a unit multiple times when giving movement orders; this allows you set "waypoints" for the units to follow en route to its destination.

GENERAL MOVEMENT TYPE

The General Movement Type is the type of movement a unit will try to use when selected.

There are 3 Movement Types:

Move and Attack

Move and Defend

Road Movement

Units can only use one Movement type per turn (one cannot use *Move and Defend* for half the move, and then *Road Movement*). To change the **General Movement Type**, press the Movement Button or **Hotkey-M**.

For example, if the **General Movement Type** is *Road Movement*, then when selecting a unit, it will try to use *Road Movement*. If, however, the unit cannot use *Road Movement* (e.g. if it already used a different move type or is adjacent to an enemy unit or does not have Move+ supply) then it will use another *Move and Defend* instead.

Move and *Attack* and *Move and Defend* units do not use *Road Movement* value (i.e. road costs that are less than 1 MP). The minimum movement cost to enter a hex will be 1. Note that the roads still have a benefit; if entering a hex normally costs 2 Move Points to enter, then if a unit enters it along a road, the cost will only be 1.

MOVE AND ATTACK

Units using the *Move and Attack* order will move and attack any enemy unit blocking its path to its destination hex. They will attempt to overrun before they attack.

An attack involves all units trying to move into the enemy hex at the same time. Hence, units moving together as a stack will attack together. Units

moving one after another may end up attacking one after another.

Defending units may be attacked multiple times if units using *Move and Attack* arrive at different times during a move phase.

Defending Artillery / Air attacks will be used in every battle. Attacking Artillery / Air attacks do not occur in *Move and Attack* battles.

Move and Attack battles are resolved as a normal battle, except they have a lower intensity. Intensity is reduced by one level; i.e. what would be a High Intensity planned battle will be a Medium Intensity *Move and Attack* battle (see Battle Intensity). This is deliberate as an attack should be less organized and intense if it's happening on the move.

As with *Move and Defend*, the minimum movement point cost to enter a hex is one.

MOVE AND DEFEND

Units using *Move and Defend* move and stop if they encounter enemy units. They will attempt to overrun if they have the odds but will not attack.

If the enemy unit blocking its path moves, the friendly unit will continue to move, though it may not move its full move allowance.

In a single turn, you cannot order a unit to move to a hex and then defend with no retreat or to withdraw if attacked. It can only get those orders in the next turn, after it's in the hex.

ROAD MOVEMENT

To use *Road Movement* a unit must:

- have its HQ in Move+ supply.
- when selected, have the **General Movement Type** set to *Road Movement.*
- not start its turn adjacent to an enemy unit.
- not mix different move types. It must start and end its entire move using *Road Movement*.

Units using *Road Movement* have an increased number of Movement Points available. Multiply the unit's normal movement point value by the Unit Type's *Road Movement* Multiplier from the following table.

For example, a German Panzer battalion normally has 16 Movement Points. If it uses *Road Movement*, it will use the Armored Modifier from the *Road Movement* Table (i.e. x1). Therefore, 16 MPs x .96 = 14 MPs available for the Panzer battalion to conduct *Road Movement*.

Road Movement Table		
Unit Type	**Road Movement Multiplier 2500m/hex**	**Road Movement Multiplier 500m/hex**
Armored	1	.1
Infantry	.5	.05
Recce	0.8	.08
Mechanized	1	.1
Motorized	1	.1
Artillery	1	.1
Anti-tank	1	.1
Heavy Anti-tank	1	.1
Combat Engineers	1	.1
Anti-Aircraft	1	.1
Heavy Anti-Aircraft	1	.1
Headquarters	1	.1
Ski Troops	1	.1
Bridging Engineers	1	.1
Partisans	.5	.05
Security Unit	.5	.05

Units using *Road Movement* can also use the road movement values (i.e. 0.25 for a highway and 0.5 for a track).

If a unit using *Road Movement* enters an enemy ZOC, then the enemy unit gets a free attack on the moving unit—an Ambush attack. As the target of an ambush, the road-moving Defending unit will receive damage to its strength and readiness. The Attacking unit (the ambusher) receives no damage.

Note: There's a "congestion charge" on the roads. The more units that use a stretch of road, the higher the movement cost for that road. Every unit that passes along a hex increases the movement cost for that hex by 0.1 MP. This helps reduce the chance of units getting stuck in traffic jams. If lots of units have been planned to move along a road, then later units should automatically plan to move along adjacent to the road. At 0.25 MPs for road movement along a highway, that means (with Road movement) the 11th unit moving through that highway will find it easier to move though a desert hex (i.e. desert hex movement = 1.25 and that road will now be 1.35 MP).

SELECTING UNITS

Individual units or stacks of units can be selected by left clicking on the unit counter or stack. In addition, you can press the Hotkey-F select all units in a hex. A stack of selected units can all be moved together. De-select a unit or stack by left clicking anywhere on the map.

When a stack of units is selected, a unit can be selected / unselected by clicking on its picture in the Info Panel.

You can also cycle the bottom unit in a stack to the top by pressing Hotkey-C.

WAIT

The player can delay the start of a planned move for a ground unit. The Wait command can be issued by pressing Hotkey-W. This will cause a ground unit to wait for one (1) Movement Point before executing its move. A wait command can only be ordered if a unit has not yet moved. The Wait command can be useful in synchronizing movements of units to coordinate Ad-hoc attacks or to give priority of movement to certain units in a cluttered area where over stacking could interfere with planned moves.

When a unit is ordered to Wait, a dark triangle will appear in the lower right of the counter.

Play Tip: Sometimes units don't end up where you ordered them to go. Three things could be the cause. One—they ran into the enemy before they got to

the destination hex. Two—their readiness level is very low and thus subject to the Command and Control delay rules. Or three—the traffic jam.

To avoid traffic jams, try to get the "big picture" of what you want to happen in a sector of the map. Then look to see where bottlenecks might occur given your desired moves. Move units that need to go the furthest first. Then use the W key (wait) to keep units that only have a short way to go from stopping and thus blocking a hex with their stacking points. Alternatively, plot movement paths to avoid each other by NOT using the default path identified by the computer as "the way" to get to your destination. Exercise more control where your plan is going to create a dog pile.

COMMAND AND CONTROL EFFECTS ON MOVEMENT

The command and control status of a unit creates a chance that it will not carry out all its planned moves. A single move event for a unit is defined as the act of leaving one hex to enter another. The Command and Control Delay Value (CCV) provides the base probability that a unit will move as ordered. In the WEGO WW2 Series, the CCV is between -20 and -40 depending on the scenario and side. This information is also located in the briefing for each scenario. A unit's Quality, Readiness, and Lines of Communication (LOC) status will affect this delay probability. For example:

	Quality	CCV	Readiness	LOC	Result
ELITE	+60	-20	+100	+40	100%
HIGH	+40	-20	+100	+40	100%
MEDIUM	+20	-20	+100	+40	100%
LOW	0	-20	+100	+40	100%
CONSCRIPT	-20	-20	+100	+40	100%

If at supported range:

	Quality	CCV	Readiness	LOC	Result
ELITE	+60	-20	+100	0	100%
HIGH	+40	-20	+100	0	100%
MEDIUM	+20	-20	+100	0	100%
LOW	0	-20	+100	0	80%
CONSCRIPT	-20	-20	+100	0	60%

If at extended support range:

	Quality	CCV	Readiness	LOC	Result
ELITE	+60	-20	+100	-40	100%
HIGH	+40	-20	+100	-40	80%
MEDIUM	+20	-20	+100	-40	60%
LOW	0	-20	+100	-40	40%
CONSCRIPT	-20	-20	+100	-40	20%

If isolated or encircled:

	Quality	CCV	Readiness	LOC	Result
ELITE	+60	-20	+50	-40	50%
HIGH	+40	-20	+50	-40	30%
MEDIUM	+20	-20	+50	-40	10%
LOW	0	-20	+50	-40	10%
CONSCRIPT	-20	-20	+50	-40	10%

By way of comparison, a unit at 50% readiness suffers a severe loss of command and control:

With a CCV = -25%, a Quality rating of conscript, and a readiness of 30% then the delay results is 50%. This means there's a 50% chance a unit will be delayed by at least one move, a further 25% chance it will be delayed by more than two, etc.

If a unit is delayed due to a failed Command and Control check, this fact will be displayed during the film phase. The number shown in the clock icon represents the number of moves by which the unit was delayed.

UNIT STACK ORDERS

The player can issue defensive and offensive orders to his units.

Orders apply to stacks. For the purpose of this rule, a stack is one or more units located in a hex. Orders for that hex's units can then also be changed by pressing the **Hotkey-O**.

Stack Orders are displayed on the Overview Panel. They can also be displayed on top of the stacks by selecting **Hotkey Shift-O**.

OFFENSIVE ORDERS

Orders that can be set during a set-piece battle. These orders apply to all attacking units. If units attack from different hexes, all attacking units will have the same offensive orders (i.e. some units cannot have "Attack, no advance" orders while others have "Attack, normal casualties" orders.

Unless the attackers have "Attack, no advance" orders, if the defender is destroyed or retreats/withdraws, the attacker may advance into the vacated hex. If the attack was from multiple hexes, then the units in the hex with the largest attack values will advance. If, after advancing, there is room for more units, other units not in enemy ZOC will also advance.

	Attack, normal intensity
	Assault increases the battle intensity by 1 level.
	Attack, no advance

DEFENSIVE ORDERS

Defense order assignments apply to **all** units in the hex; you cannot assign different orders to different units in a hex.

	Hold (normal defense)
	Hold at all costs (take casualties instead of retreating). Higher quality units and/or units with good readiness have a greater chance of holding.
	Withdraw instead of taking casualties. Higher quality units and/or units with good readiness have a greater chance of withdrawing successfully.

COMBAT

GROUND COMBAT

Combat can be planned during Planned Phase and its execution will be shown during the Film Phase.

Unlike other IGOUGO games, in a WEGO game, moving a unit onto an enemy unit does not result in an attack, it results in a planned attack.

A battle always occurs when units from one side try to occupy a hex containing enemy units.

There are two main types of ground attacks, set piece or ad-hoc.

SET-PIECE (DELIBERATE) ATTACKS

These attacks are deliberate and planned in advance, and can benefit from friendly artillery, naval, and ground support. The player can also affect the intensity of a set-piece battles by changing the Offensive Orders.

To create a set-piece battle, drag and drop units onto adjacent enemy units.

Units attacking enemy units in a set-piece attack will not attempt to Overrun the enemy prior to the attack.

AD-HOC (HASTY) ATTACKS

These attacks are unplanned.

Examples are Overruns, Ambushes, and battles resulting from units moving with Move and Attack orders encountering enemy units.

BATTLE TYPES

There are several different types of battles.

NORMAL BATTLE

This is a battle that results from a set-piece attack.

AMBUSH

An ambush occurs when a unit using *Road Movement* moves adjacent to an enemy unit. In an ambush, the battle is resolved as normal, but the attacker (the ambusher) takes no casualties.

MOVE BATTLE

A move Battle is one in which the moving unit(s) have Move and Attack orders. See Move and Attack.

This battle is the same as a set-piece battle except its intensity is lower, attacker artillery/naval and ground support is not included, and the units will attempt an overrun prior to attacking.

MEETING ENGAGEMENTS

If unit(s) with Move and Attack try to move into a hex in which all the defenders have moved, then the resulting battle is a Meeting Engagement. All units of both sides must be moving for a meeting engagement.

A Meeting Engagement differs from a normal battle as follows:

- No terrain is considered in a meeting engagement. This is because both forces are trying to enter the same hex (the terrain effects are neutral, i.e. both side's terrain effects cancel each other out).
- Quality shift difference is doubled. This is because the better trained forces will always act faster than those who are less trained, and fast can equal decisive action in a Meeting Engagement.

OVERRUNS

An overrun occurs during the Move Phase whenever ground units attempt to move into a hex that is occupied by enemy units. An overrun represents an overwhelming attack where the moving units

immediately attack and destroy enemy units.

This overrun icon appears on the map when an overrun occurs.

An overrun attack is not ordered. Only moving units will attempt an overrun.

If moving units can perform an Overrun, it will occur. To attempt an overrun, plot one or more units' moves over an enemy unit's hex. Units engaging in a set-piece attack against a hex will not attempt an overrun

An overrun will occur if:

- The odds are greater than 10:1. The odds are calculated in the same way as for a planned battle.
- The Defender is in an Open hex (i.e. the hex itself has no defensive bonus).
- The Defender is not only Recce unit(s). Units that can participate in an Overrun must:
- Have a Quality of Regular or higher.
- Have a Readiness of greater than 33%.
- Not use *Road Movement*.
- Be moving over a hex side that has no defensive bonus (e.g. units cannot conduct an overrun across a Gully hex side).

Units performing an overrun pay the following costs:

- 20% of its Movement Points to overrun (minimum cost of 1 Move Point). This is on top of the normal movement cost to enter the hex.
- 5% of its Readiness.

The effects of Artillery, Naval, and Air Ground Support are not used in an overrun attack.

All battle odds shifts are used when determining the 10:1 odds requirement for an overrun attack (e.g. Quality, Flanking, Shock shifts, etc. are considered to determine the final odds for the battle).

All units that are plotted to move into a hex will take part in an overrun attack.

Units moving with *Move and Defend* orders will wait until enough units arrive in the targeted hex to generate the 10:1 odds requirement for an overrun attack.

Units creating the 10:1 odds advantage do not have to start from the same hex nor do the units involved have to be moving into the target hex at the same time in the movement sequence.

An overrun attack will occur if the force ratio of all moving units is 10:1 or greater, regardless of multiple hex sides of entry into the overrun hex, and regardless of multiple timings of entry into the overrun hex (e.g. if one unit with *Move and Defend* orders tries to move over an enemy unit but is too weak to conduct the overrun attack, then there will be no overrun attack. If later in the turn another unit tries to move over that same enemy unit, then both friendly units will attempt an overrun attack together). In other words, the 10:1 odds advantage does not have to come from the same hex nor at the same time in the movement sequence. If a force ratio of all moving units is 10:1 or greater — regardless of multiple hexsides of entry into the overrun hex — and regardless of multiple timings of entry into the overrun hex — an overrun combat will occur.

If units are ordered to set-piece attack an enemy hex, then an Overrun will not be attempted beforehand. If a unit wishes to attempt an overrun and only attack if the overrun is not possible, then it should plot a move onto the enemy hex with Move and Attack orders.

BATTLE RESOLUTION

When a set-piece battle has been planned, its basic information is displayed in the Ground Attack popup

Highest odds battles are resolved first; lowest odds battles are resolved last.

To see the battle odds, move the cursor over the battle and the Ground Attack Popup will display.

This shows, the odds, the intensity, integrity and any odds shifts. Note that when Fog of War is on, these values may be incorrect.

Artillery, Air, Naval and Ground Asset's Command Ground Support can be added to the attack.

Adding support to a friendly unit will provide defensive support if this unit is attacked. If the unit is not attacked and the Artillery/Ground support is therefore unused, the Artillery/Ground Support unit will recover Readiness instead.

Ground Asset's Command and Air Ground Support change the odds of the battle. For example, if a Ground Support of 1 is added to a 2:1 attack, then it will be resolved at 3:1.

Artillery and Naval attacks are added to the attack factors as if the unit were a ground unit. For example, if 10 ground factors attack, then an Artillery unit with an attack of 2 will be added to the 10, giving an attack of 12.

For more information, right click the battle to open the Battle Details pop up as below.

On the top left of the popup, the basic battle data is shown, the attack's flag and the attacker's orders and the defender's flag and orders, and the odds calculation. To see more information about the Odds or Shocks Shifts, move the cursor over that text.

To the right is the basic odds panel which contains, from top to bottom, are the final attack / defense values, the integrity of each side, the raw attack / defense values, the attacker / defender artillery factors, and final the attack / defender naval factors.

To the right is the result panes for each side. These only contain information after the battle has been executed in the film phase.

The picture of any Air / Ground Asset / Naval assets involved will be shown as illustrated.

Also shown is the units engaged in the battle, and the Shock values of each.

BATTLE ODDS SHIFTS

Battle odds can be shifted for the following reasons.

QUALITY MODIFIER

This difference between the average quality of the attacker versus the average quality of the defender.

The quality of a stack of units depends on the attack factors of each unit. A strong unit will influence the quality of a stack far more than a weak one.

SHOCK MODIFIER

Shock can modify battle odds in favor of the Attacker and/or the Defender. See Shock.

FLANK ATTACK MODIFIER

If attacking from more than one direction, the odds are shifted by one in favor of the attacker. If attacking from the rear, the odds are shifted by two in favor of the attacker.

GROUND SUPPORT MODIFIER

Ground Assets Command or Air Ground Support increase the odds by shifting the odds by the air asset's tactical air value. Defending air strikes reduce the odds by shift the odds similarly. See Air assets.

COMBAT ENGINEERS MODIFIER

Applies if Combat Engineers are attacking a Town, Fort or City/Factory. See Combat Engineers.

BATTLE INTENSITY

The Battle Intensity is determined by the average Unit Quality and Readiness of the attackers. The higher the average, the higher the Battle Intensity. The higher the Battle Intensity, the more casualties are inflicted/suffered by both sides.

Artillery only attacks have a Low battle intensity. If there is more artillery than ground units in a battle, the intensity is also reduced.

For Meeting Engagements (Move and Attack) the intensity of a battle is reduced by 1.

There are 5 levels of Intensity:

- Very low
- Low
- Medium
- High
- Extreme

Players can influence the intensity of a set-piece attacks by changing its Offensive Orders.

COMBAT RESULTS

To resolve ground combat, a die is rolled by the computer and the results indexed with the final battle odds to obtain the combat result. The die roll is a number between 1 and 6. A die roll of 1 is more favorable for the Defender. A die roll of 6 is more favorable for the Attacker.

Damage received by a combat result affects Readiness first, and then Strength. As readiness declines, the proportion of damage taken from readiness also

declines. For example, if readiness is 90%, then 90% of damage will be taken from Readiness and 10% from Strength. At 50%, the half damage is taken from Readiness and half from Strength.

Press the CRT info button to see the Combat Results Charts.

DESTROYING UNITS

Higher quality ground units receive less battle damage compared to lower quality units:

- Elite Units are destroyed if readiness and strength are both < 5%.
- Veteran Units destroyed if readiness and strength are both < 10%.
- Regular Units destroyed if readiness and strength are both < 15%.
- Green Units destroyed if readiness and strength are both < 20%.
- Conscript Units destroyed if readiness and strength are both < 25%.

OVERALL BATTLE RESULTS

After the combat results have been calculated, the overall result is determined. Defenders may hold their position, retreat or withdraw.

Attacks may hold their position or advance.

ADVANCE

If the defender is destroyed or retreats/withdraws from a hex, the attacker may advance into this vacated hex. If the attack was launched from multiple hexes, then the units in the hex with the largest attack values will advance first. If there is still room in the hex, other units not in an enemy ZOC will also attempt to advance (up to the stacking limit).

RETREAT

If the attacker inflicts enough damage on the defenders, they will be forced to retreat one or two hexes. The retreat result applies to all units in a hex.

A retreat is unplanned, and units retreating will suffer more casualties than those withdrawing. Units that cannot retreat receive further heavy casualties.

Units retreating/withdrawing cannot move into a hex:

- That is being attacked.
- That is adjacent to an attacker.
- That is in an enemy ZOC (unless the hex is occupied by friendly unit). If a unit retreats, it loses all its planned moves.

Units will retreat 2 hexes if their average post combat readiness is less than 20%.

Units may retreat 1 hex if their average post combat readiness is less than 40%. The chance of retreating depends on the average quality of the units, the damage inflicted during the battle, and the average readiness.

WITHDRAW

Defending units can withdraw from a battle to reduce casualties.

To withdraw, the unit must have Withdraw orders. Exception: if all defending units are Recce units then they will automatically try to withdraw.

Normally, there is a 100% chance of units withdrawing.

The difference between the attacker's quality and defender's quality can increase/decrease this by 33% per difference in quality.

If the average readiness is less than 50% then the withdraw chance is also reduced.

For example, if an Elite unit attacks a Green unit, there is a difference in quality of 3 levels so the withdraw chance is reduced by 100% (3 * 33%) to 0.

And if a Green unit attacks an Elite unit, the withdraw chance is increased by 100% to 200%. Therefore, even a unit with very low readiness will be able to retreat if it has higher quality than its attacker.

Recce will automatically withdraw if they are the only units in a hex. Exceptions:

- Recce units will not withdraw if their orders are Hold, No Retreat.
- Recce units will not withdraw if attacked by other recce, artillery, or combat engineers.
- Recce ignore the Quality influence above, and reduction to withdraw chance for units with readiness less than 50% is half of that of other types of units.

HOLD AT ALL COSTS

Defending units can Hold and take extra casualties instead of retreating.

To Hold, the unit must have Hold At All Cost orders.

The chance of Holding depends on the quality and readiness of the units and the retreat distance. If the retreat distance is 2, the chance of holding is halved.

Holding at all costs increases casualties by 20%.

ANTI-AIRCRAFT (AA) ATTACKS

When air assets attack enemy units, they are first subject to an Anti-Aircraft (AA) attack from the ground units. The air attack on the ground unit occurs after the AA attack. If enough damage is inflicted on the attacking air asset, the air attack will be aborted.

When an air asset attacks compare:

- the total air AA strength of all the ground units in the hex
- the Air Asset's Defense strength.

This gives the AA Attack Ratio. Then the difference in quality of the attack / defender is found. This difference shifts the odds.

If several air assets attack, the AA attacks are resolved independently (i.e. the air asset's Defensive strengths are not combined). The combined ground AA fire attacks each air asset one at a time. Therefore, the stacking of a Green quality ground unit with a Veteran quality one will reduce the quality of

the AA attack, whereas if a Green quality air asset attacking with a Veteran quality one will have no effect on the Veteran quality unit's AA defense.

For example:

- 2 attacking Air assets: one with Defense of 10 and the other with a Defense of 5.
- 2 defending ground units: a Heavy Anti-Aircraft Unit (2 stacking points) and an Armor unit (2 stacking points).

Then:

- The AA strength is: Heavy AA (2 stacking points x 4 for heavy AA attack strength = 8) + Armor (2 stacking points x1 AA attack strength) = 10.
- First Air asset with Defense of 10 is attacked at odds 1:1 (10:10) and the AA attack resolved.
- Second Air asset with Defense of 5 is attacked at odds 2:1 (10:5) and the AA attack resolved.
- If any Air asset survived the AA attack, it will then attack the ground units. See 'Anti-Aircraft (AA) Units' for more information on how AA strength is calculated.

Air defense combat is resolved before any air attacks take place in a hex. The possible results for AA attacks are:

- No effect.
- Air attack halved.
- Air attack aborted.

AA attack battle details are shown left.

Right click an Anti-Aircraft Attack hex to show the AA result details.

This will show the details of each AA attack. Click the air asset to show its AA attack details. Move the cursor over the icons for further information. Press the i2 info button to see the AA Combat Results Charts.

	1:5	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1
⚀	H - 10	H - 15	A - 15	A - 15	A - 15	A - 20	A - 20	A - 25	A - 30
⚁	- 10	- 10	H - 15	H - 15	H - 15	H - 20	A - 20	A - 25	A - 30
⚂	- 5	- 10	- 10	- 15	- 15	- 15	H - 20	A - 20	A - 25
⚃	- 5	- 5	- 5	- 10	- 10	- 15	H - 15	H - 20	H - 25
⚄	- 5	- 5	- 5	- 5	- 5	- 10	- 15	H - 15	H - 20
⚅	- 5	- 5	- 5	- 5	- 5	- 5	- 10	- 15	- 15

FOG OF WAR (FOW)

When Fog of War is selected from the game options, then only certain information about enemy units can be seen, depending on the intelligence that side has on the target hex.

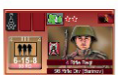
- FOW Level 0 = No intelligence
- FOW Level 1 = Enemy presence
- FOW Level 2 = Low
- FOW Level 3 = Medium
- FOW Level 4 = High
- FOW Level 5 = Extreme

The FOW level is shown by the cloud icon on the Info Panel.

Current FOW Levels can be seen on the map by pressing **Hotkey-I**. This displays the hexes intelligence strength of each hex. The greener the color, the more recon strength is being exerted; the more yellow, the less. This display helps to identify the holes in your battlefield reconnaissance. You can see the exact recon strength values with the **Hotkey-K** pop up.

FOW Level 5 is only available when an enemy unit is adjacent to a friendly unit.

Note: To achieve FOW Level 5 intelligence it often requires an attack by friendly ground forces on the adjacent enemy.

	Unit Counter		Unit Panel	
FOW Level	**Counter**	**Data Revealed**	**Picture**	**Data Revealed**
0 No info	None	None	None	None
1 Presence		Location		None
2 Low info 		Nationality Echelon Type (Type may be incorrect)		Nationality Echelon Type (Type may be incorrect)
3 Medium info 		Name Combat Values (Combat Values may be incorrect)		Name Combat Values (Combat Values may be incorrect)
4 High info 		Correct Combat Values		Correct Combat Values Supply Status Dug-in State
5 Max info 		Strength Readiness		Strength Readiness Max Combat Factors

FOW Level 2 can misidentify a unit's type, but type will be similar (e.g. A mobile unit type [Armor, Motorized, Recce, and Mechanized] may be incorrectly portrayed as another Mobile unit type. A combat engineer unit may be incorrectly identified as infantry unit (but infantry units are never misidentified). A "gun" unit type (artillery / antitank / heavy antitank) may be incorrectly identified as another "gun" unit type.

INTELLIGENCE COLLECTION

Intelligence collection has two parts:

- **Intelligence Range:** The distance in hexes that a Unit can 'see'.
- **Intelligence Strength:** The amount of information about enemy units discovered. This strength ranges from 1 (minimal information provided) to 5 (all information about enemy unit is provided).

The **Intelligence Range** and **Intelligence Strength** assigned to a unit varies based on the unit's type:

Unit Type	Intelligence Range	Intelligence Strength
Recce	4	4
Armor	3	1
Mechanized	3	2
Motorized	2	2
Infantry	1	2
Artillery	1	1
Combat Engineers	1	1
Others	1	1

Every unit gathers intelligence on the hexes around it. The Quality rating of an enemy target unit will increase or decrease the amount of intelligence you can collect. The better the quality of the enemy unit, the less information can be acquired. Conversely, the poorer the quality the more information can be gained about the enemy. Adjacent hexes will provide the highest level of intelligence. Intelligence level detail decreases by 1 per hex distance (i.e. an adjacent hex may provide FOW Level 5 information, but at two hexes, the FOW Level equals four, and at three hexes, the FOW Level equals three, etc. However, the FOW Level will not be reduced to zero if a unit has intelligence range remaining; i.e. the FOW level will be one.

Air Recce and Electronic Warfare (EW) assets can also gather intelligence. These assets have their own intelligence values:

Asset Type	Intelligence Range	Intelligence Strength
Intel Estimate	6	3
Air Recce	2	2
Air Recce (photo)	3	2
EW Intercept	2	4
EW Direction Finding	4	2

Ground and Air reconnaissance and EW assets will display enemy units that move through their reconnaissance zones. Enemy units that move out of a reconnaissance zone will disappear.

NIGHT TURNS

Every third, fourth or fifth turn of a scenario is considered a night turn in scenarios where the ground scale is 2,500 meters per hex. The actual night turn depends on the time of year the scenario takes place. The following represents the amount of daylight per day in the vicinity of Stalingrad.

- Jul-Aug 1942: 5 turns per day (four day, one night).
- Sep-Oct 1942: 4 turns per day (three day, one night).
- Nov 1942-Feb 1943: 3 turns per day (two day, one night).

In scenarios where the ground scale is 500 meters per hex there are two turns per day—one day and one night.

The map is darkened to indicate to the Player that a night turn is in effect.

NIGHT CAPABILITY

Night Capability is an attribute that is assigned to some ground units, ground assets, and air assets. A night capable unit or asset can perform any task it could perform during a daylight turn if its readiness level is 80% or greater.

Non-night Capable. As a general rule, non-night ground, air or naval assets cannot perform any tasks at night.

EFFECT OF NIGHT ON GROUND UNITS

The Intel Range of all ground units is reduced to one during night turns—except infantry (leg, motorized, mechanized), combat engineers recce and ski units.

Combat engineers and infantry (leg, motorized, mechanized) intelligence range is increased by one—if they remain stationary. This represents night

patrolling (mounted and dismounted) in their "local vicinity" from an established patrol base. Intelligence is gleaned from ground and obstacle reconnaissance, surveillance, and/or capturing prisoners for interrogation.

Infiltration. The cost to enter a hex in an enemy ZOC is halved at night for leg infantry, combat engineers, and ski units.

Battle Intensity. Night Battle Intensity should be an additional +1 at least when determining final battle intensity. This increases the incentive to attack if other conditions are favorable (good odds, good intelligence, fresh units, etc.). The higher the intensity, the higher chance for obtaining a favorable decision from the night combat. Higher intensity should also increase the loss of readiness by both sides fighting at night.

HQ Integrity. For Axis units, subtract 20% from HQ Integrity for both attacking and defending during night combat. Coordination of things no one can see because it's dark—is problematic. No change for USSR...their low HQ Integrity during night combat is already "baked into the cake"...which in turn does not dissuade the Soviets from using night attacks.

Readiness Loss. Moving at night increases the readiness loss rate.

Readiness Recovery. Unit readiness recovery is increased at night. Units should rest at night whenever possible.

Command and Control Delay Value (CCV). Reduce a side's starting CCV level by 20 during night turns. Chance of movement delays and screw-ups are higher at night.

EFFECT OF NIGHT ON AIR ASSETS

Only Night (N) capable air assets can fly night missions.

N Air assets suffer increased readiness loss when flying night missions. N Air assets can fly day missions.

Air Recce Assets use their normal assigned intelligence range if used to fly day recce missions—but is reduced to a range of one if flying at night.

EFFECT OF NIGHT ON GROUND ASSETS

EW Assets increase intelligence strength by one during night turns. Rationale: At night, units generally stop to rest, issue new orders, perform maintenance, re-arm, re-fuel and re-supply…the bringing forward of supplies at night generates all kinds of radio traffic as the logisticians try and link up with their counterparts in the combat units. This is a Golden opportunity for EW types to do their best work.

EFFECT OF NIGHT ON NAVAL ASSETS

Naval Assets (Riverine Assets on the Volga/Major Rivers) can only perform Bombardment/ground support missions at night. Historically, this is how it was done most often at Stalingrad—at night.

SUPPLY

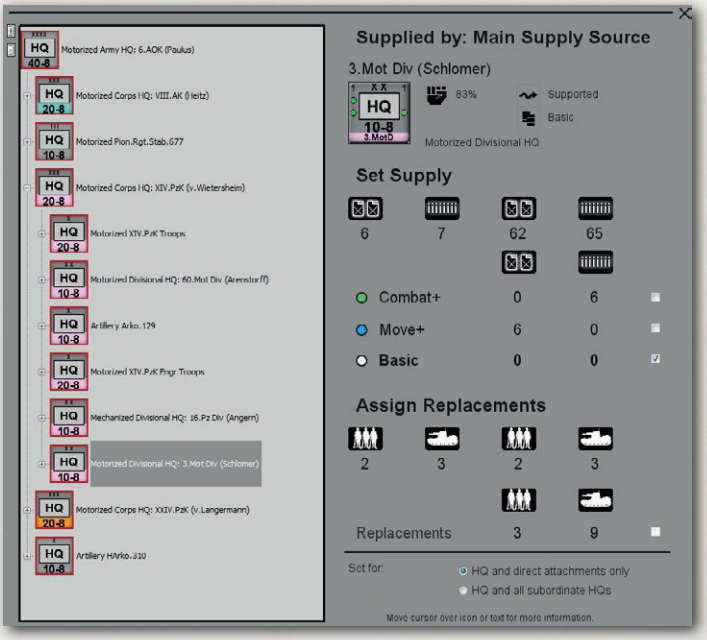
Introduction. Supply in WEGO WW2 Series is intended to be "handled by exception"; if the player is satisfied with being on the defensive, he doesn't have to make any supply decisions at all. If the player wants to go on the offensive or make long distance moves, then with a few simple steps he is ready to go— "bean counting" is minimized.

Press the Supply button to open the Supply Allocation Panel illustrated below.

This allows the player to set the supply for HQs.

From the Supply Allocation Panel, supply can be allocated to either a single HQ or to a HQ and all its subordinate HQs. This allocates extra ammunition or fuel to that HQ.

Each turn, new supply (ammunition or fuel) arrives, though this can be reduced by enemy interdiction.



Supply is distributed from Supply Sources to HQs and from HQs to their units. The paths from the Supply Sources to the HQs and from HQs to their units are called Lines of Communication.

Allocating this supply can increase either the effective Attack values (Combat+ supply) or the effective Movement Points (Move+ supply) of a HQ's units.

Note that once extra supply is allocated, it's a case of Use It or Lose It—i.e. if Move+ supply is allocated and no units move, then the fuel is still lost. It is therefore important to properly plan supply allocation – if a player wastes his supply, he will quickly run out and not have it when it's needed most.

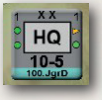
The supply system in consists of these major components:

- Supply Distribution Activities
- Supply Points
- Consumers
- Lines of Communications (LOCs)
- LOC States
- Supply Allocation
- Supply Costs

SUPPLY DISTRIBUTION ACTIVITIES

Supply Distribution Activities (SDAs) provide supply to HQs units and ground units that are within HQ range. There are currently two different SDAs in WEGO WW2 Series:

- Supply Sources. Each side—Axis and Allies—will have at least one Supply Source (sources for each side are distinguished by the hex outline color – in the example shown, the source is allied as it has a blue outline). Supply Sources are placed on the scenario map by the scenario designer. These Supply Sources are generally placed in hexes at one or more of the edges of the scenario map—though they may also be found in port cities or other locations that historically contained major supply depots; it all depends on the scenario. Supply Sources represent the numerous on-map and off-map logistics activities that exist to store and move supplies, equipment and/or personnel to the units in the theater of operations. These Supply Source activities are not managed in any way by the player; they are autonomous.
- Headquarters/Supply Source Units. Headquarters/Supply Source Units are the nodes through which supplies flow to ground units. Each side will have a Root Headquarters which, in historical terms, represent the "Supreme Headquarters" or highest headquarters for each side. **Lines of Communications** (LOC) start at a Supply Source and are tracked down



through the levels of command from the "Supreme Headquarters" to the subordinate HQs and then to the actual combat units. Players can move most HQs units during game play to insure the highest level of support for their ground forces. Note: There are a few occasions where some HQs units may be fixed in place for the entire scenario or portions of it depending on the historical situation.

- Supply Depots. HQs can draw supplies from Supply Depots if they have no access to the main supply source through their chain of command. The maximum level of supply that can be acquired by tracing to a supply depot is extended supply.
- Airfields/Drop Zones. Act as an extended supply source/depot for the owing side. Airfields are assigned a range via the editor. Isolated or Unsupplied units within range of a supplied airfield are at extended supply range.

LINES OF COMMUNICATION (LOCS)

To receive supplies and replacements, a ground unit or HQs must be within the LOC range of its higher HQs or a friendly Supply Source. LOCs are the paths traced by HQs units from a Friendly Supply Source – through the echelons of command – to the ground combat units.

The LOC range is the number of movement points its supply trucks have when distributing supply when using *Road Movement*. These HQ LOC ranges are generally limited in size and are measured in movement points are usually:

- Front/Army Group = 60 MPs
- Army = 40 MPs
- Corps = 20 MPs
- Division = 10 MPs
- Brigade/Regiment = 10 MPs

LOCs cannot be traced through a hex containing an enemy unit or an enemy ZOC. However, LOCs can be traced through a hex containing an enemy ZOC if that hex is occupied by a friendly ground unit.

Note: A HQs can trace a line of communications directly to a supply source using its assigned LOC range; it does not have to trace through its higher HQs. If a ground unit is not within range of its owning HQs, but is within range of a friendly HQs, then ground unit will have Extended Support. However, a unit cannot trace a line of communications from a lower echelon HQ (e.g. a corps artillery unit cannot be supplied by a regiment HQ).

LINES OF COMMUNICATIONS (LOC) STATES

A unit's LOC state depends on the distance (measured in movement points) from its HQ/Supply source. A HQs unit and/or ground unit will always have its LOC in one of the following states:

- Supported. A HQs unit and/or ground unit is supported if its immediate superior HQs can trace a path to its hex that is free of enemy units and/or ZOCs, and if the distance in movement points is **less than or equal to half** of the superior HQ's LOC range. HQs drawing supply directly from a Supply Source are considered Supported – even if they are outside the Supported range of their HQs. Supported organizations can be assigned Combat+, Repl+, and Move+ supply. Organizations that are Supported and have Move+ supply can use *Road Movement* mode.
- Extended Support. A HQs unit and/or ground unit is receiving extended support if its superior HQs can trace a path to its hex that is free of enemy units and/or enemy ZOCs, and the distance in movement points is **greater than half** of the superior HQ's LOC range. Organizations receiving extended supply can be assigned Combat+, Repl+, and Move+ supply. However, they cannot us *Road Movement* mode.

- Isolated. If a ground unit **is not within LOC range** of any HQs, it is considered isolated. A HQs and/or ground unit is isolated if it is outside its higher HQs assigned LOC range. Isolated units have their shock effects halved. Isolated HQs cannot be assigned Combat+, Move+, and Repl+ supply.
- Encircled. A HQs unit and/or ground unit is encircled if no supported HQs can trace a line of communications to the unit that is free of enemy units or enemy zones of control. Encircled units have their shock effects halved and lose readiness each turn. Encircled HQs cannot be assigned Move+, Combat+, or Repl+ supply.

To display these LOC states, use the following hotkeys:

- **Hotkey-L** will display the LOC state each unit by its outline color.
- **Hotkey-R** when over a HQ, will display the HQ's LOC range.
- **Hotkey-H** will show the dashed HQ LOC lines from the HQ to each of its superior HQ.

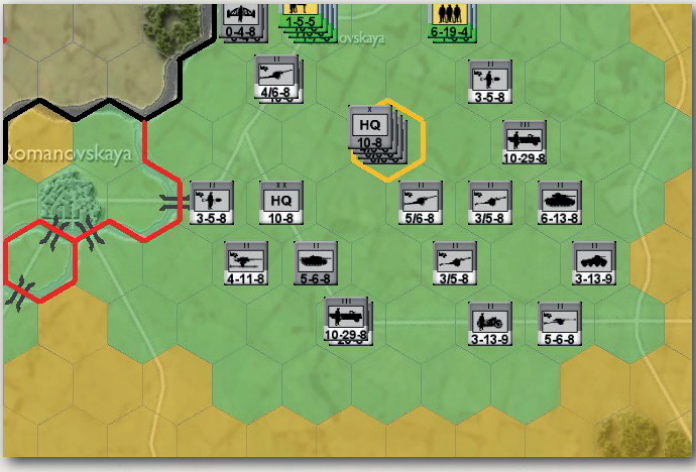
The color of displayed by these hotkeys illustrates the LOC state as follows:

- Green – Supported
- Yellow – Extended Support
- Red – Isolated
- Black – Encircled

For example, in the following illustration, if the **Hotkey-R** is pressed, when the cursor is over the highlighted brigade HQ, then the LOCs will be as shown. This HQ has values of 10-8, meaning its **HQ LOC range** is 10 movement points and its movement factor is 8.

Subordinate units in the green area will be **Supported**. Units in the yellow will have **Extended Support**. Units outside LOC range (i.e. no color) will be **Isolated**. And units that could not trace a LOC to its HQ regardless of the HQ's LOC range, are **Encircled**. These LOC states are also shown on the right-hand side of each subordinate unit counter as a circle with the relevant LOC state color.

Hotkey-E is used to highlight the LOC-influencing hexside terrain.



Note 1: Even if a unit is outside its HQ's LOC range, it may still be Supported/Extended Support if it can trace a LOC to either a Supply Source or to a higher HQ.

Note 2: Units cannot have a supply state higher than their higher HQs' supply state. For example, if a division HQs has Extended Support (i.e. it is at extended support distance from its Corp HQs) then all its subordinate units are considered to have Extended Support—even if these subordinate units are within Supported range of their corps HQs.

Note: See Readiness for the effects of the different states of supply on Readiness recovery.

SUPPLY POINTS

There are two types of supply points used in WEGO WW2 Series—Fuel and Ammo. These supply points are maintained in two separate pools.

Each side maintains its own set of supply points. Using supply points for an organization will increase its movement and/or combat capability.

REPLACEMENT POINTS

There are two types of replacement points—Personnel and Equipment. These replacement points are maintained in two separate pools. Each side maintains its own set of replacement points. Using supply points for an organization will increase its movement and/or combat capability.

SUPPLY AND REPLACEMENT POINT CONSUMERS

The primary consumers of supply and replacement points are ground units. To receive supplies and/or replacements, HQs units must trace a LOC from a supply source through a chain of headquarters to the terminus—the ground unit. Air, Naval, and Ground Assets do not consume supplies or replacements.

SUPPLY ALLOCATION

During the Planning Phase, the player can change HQs supply levels by selecting the Supply button on the bottom left side of the screen. This will bring up the HQs Supply Display. The player can select the checkbox next to the desired supply level. Alternatively, supply levels can be changed by right clicking on a ground unit and selecting the supply button at the lower right portion of the Info Panel panel.

There are three Supply Levels: Basic, Move Plus, and Combat Plus. Each HQs in play will always be at one or more of these levels —the default level is the Basic Supply Level—this is automatic. At the end of every Execution Phase, the supply level for all HQs reverts to Basic Supply Level automatically.

BASIC SUPPLY LEVEL

Units subordinate to HQs at **Basic Supply Level** have their movement factors cut in half. There is no effect on unit attack or defense factors. No *Road Movement* is allowed. Use this supply level when you wish to conserve fuel and ammo points. Generally used while on the defensive but it does allow probes and limited objective attacks/counterattacks.

MOVE PLUS (MOVE+)

Units subordinate to HQs at **Move+** Supply Level have normal movement factors (i.e. not halved as with Basic Supply). In addition, they can use *Road Movement*. Units using *Road Movement* have increased movement capability but are subject to ambush by enemy units. Use **Move+** for long administrative moves of reinforcements or quick lateral shifts of reserves behind your own front lines.

COMBAT PLUS (COMBAT+)

Units subordinate to HQs at **Combat+** Supply Level have their attack factor doubled (x2); artillery units have their attack factor quadrupled (x4). There is no effect on defense or movement factors. Use Combat+ to help generate increased combat power at critical points on the battlefield.

MOVE PLUS AND COMBAT PLUS

It is possible for a HQs to be assigned **Move+** and **Combat+** simultaneously.

REPLACEMENTS (REPL+)

The Player can increase a unit's strength up to 100% by using replacement points. These points can be used to increase the combat strength of an organization by 10% per turn. The Player starts a scenario with a pool of Personnel and Equipment points. In addition, the Player may receive additional quantities of these points every turn—depending on the scenario.

- To receive replacement points, a unit must be in full or extended supply and remain stationary throughout the turn.
- Isolated and unsupplied units can receive replacements if they are within range of a supplied airfield.
- All units subordinate to a HQs receiving replacements have their strength increased by 10%.
- No unit can be increased beyond 100% strength.
- Eliminated units cannot be resurrected using replacements; they are dead for the rest of the scenario.

Hotkey-S shows the Supply Level of all the player's units. The unit will be color coded as follows:

- Basic Supply – No overlay
- Move+ – Blue overlay
- Combat+ – Green overlay
- Combat+ / Move+ – Orange overlay

SUPPLY COSTS

To select a supply level other than the Basic Supply Level will cost fuel or ammo points. These points must be paid each turn to remain in Move+ and/or Combat+ status. There are no fuel or ammo costs for being at Basic Supply Level. Costs vary based on the echelon of the HQs (from brigade/regiment up to Army level), the type of HQs (Non-motorized, motorized, etc.), and the number of stacking points subordinate to the HQs. To place HQs in Move+ and/or Combat+ status, the costs are as follows:

	Move+ For every 10 SPs*		Combat+ For every 10 SPs*	
Type HQs	**Fuel**	**Ammo**	**Fuel**	**Ammo**
Non-Motorized HQs	1	0	0	1
Semi-Motorized HQs	4	0	0	2
Motorized HQs	2	0	0	2
Mechanized/Armored HQs	5	0	0	3
Artillery HQs	2	0	0	5
Additional Costs for Higher Headquarters:				
Division-level HQs	+1	0	0	+1
Corps-level HQs	+4	0	0	+2
Army-level HQs	+2	0	0	+2
* Round fractions up for number of SPs less than 10 SPs.				

REPLACEMENT COSTS

The Player can increase a unit's strength up to 100% by using replacement points. Replacement Points can be expended to increase the combat strength of an organization by 10% per turn.

There are two types of replacement points: Personnel and Equipment. Depending on the scenario, the Player may start with a pool of Personnel and Equipment points. In addition, the Player may receive additional points every turn—again as determined by the scenario.

To receive replacement points, a unit must be in full or extended supply and remain stationary throughout the turn. Isolated and unsupplied units can receive replacements if they are within range of a supplied airfield. All units that are subordinate to a HQs receiving replacements have their strength increased by 10%. Eliminated units cannot be resurrected using replacements; they are dead for the rest of the scenario.

Personnel and Equipment points can be affected by enemy interdiction type missions.

The replacement system uses the same mechanic as Fuel/Ammo and Move+/Combat+ for allocation. It's called Replacement+10% (or REPL+10%). Just click the REPL+10% button on the HQs unit's details display. If the Player doesn't have enough Personnel and Equipment points to pay the required REPL+10% costs, then no strength increase is allowed.

Type Regt/Bde Hqs REPL+10% FOR EVERY 10 SPS*	Personnel Points	Equipment Points
Non-Motorized Infantry HQs	6	1
Semi-Motorized Infantry HQs	5	2
Motorized Infantry HQs	4	4
Mechanized/Armored HQs	2	10
Artillery HQs	1	6
Division HQs	1	3
Corps HQs	2	4
Army HQs	3	6
*Round fractions up for number of SPs less than 10 SPs.		

A HQs' type is defined by the highest costing subordinate unit type directly subordinate to the HQs. For example, a HQs that has an armor unit directly subordinate to it is a mechanized/armored HQs and pays the Move+ and Combat+ supply costs for that type of HQs.

When assigning a Move+ or Combat+ supply level to an organization (a HQ plus its direct attachments or HQs and all its subordinates), the price in fuel/ammo points is calculated and decremented from the supply pools at the time of allocation; the points are actually spent when you hit the Next Phase button. The actual price paid will be for the units present on the map. Therefore, the stacking points for units from an organization that have not yet arrived on the map (i.e. reinforcements), units that have been withdrawn from the map, or units that have been destroyed are not counted in determining the actual supply cost for increasing a supply level.

SUPPLY COMBAT MODIFIERS

The attack and defense factors of ground units are modified based on their level of supply. The following table lists the various multipliers:

Attack/Defense Factor Multipliers	
LOC State	**Basic Supply Level & Move+ Supply Level Multipliers**
Supported	100%
Extended Support	75%
Isolated/Encircled	50%

ISOLATED / ENCIRCLED HQS

HQs that are isolated or encircled cannot be placed in at Combat+ or Move+ Supply. These HQs can only have Basic Supply.

ELIMINATED HQS

When a HQ unit is eliminated in combat, the following penalties are suffered by the HQ's subordinate units:

- Units that were subordinate to an eliminated HQ will now receive their supply from the next higher HQ.
- The Supply Level will have a maximum value of Extended Support.
- The Supply State cannot be changed from Basic Supply Level.
- Units suffer a reduction in Quality of one level.

SUPPLY INTERDICTION

Open Turn Information to see the effects of enemy interdiction. See Counter-Air Results for more information.

WEATHER TYPES

There are three weather types in the **WEGO WW2 series**: Good, Mud, and Frozen. The Good weather type is used in Stalingrad.

Good Weather. Good weather has no impact on the game; it is the default used for normal terrain effects.

Mud Weather. Mud weather reduces unit Movement Factors by 50%. In addition, Mud weather reduces readiness recovery rates for all land units, and Air and Ground Assets by 50%. **Note:** Mud weather represents rain, sleet, melting snow, and/or ground thaw that results in muddy terrain.

Frozen Weather. Except for ski units, Frozen weather reduces all land unit Movement Factors by 25%. In addition, Frozen weather reduces readiness recovery for all land units, and Air and Ground Assets by 50%. All Major and Minor River are considered frozen; their hexside movement restrictions are suspended during Frozen turns. **Note:** Frozen weather represents snow, ice storms, and/or ice-cold temperatures.

Daily Weather Indicator. The tooltip provides additional details about the effects of each weather condition.

CAMPAIGN GAME

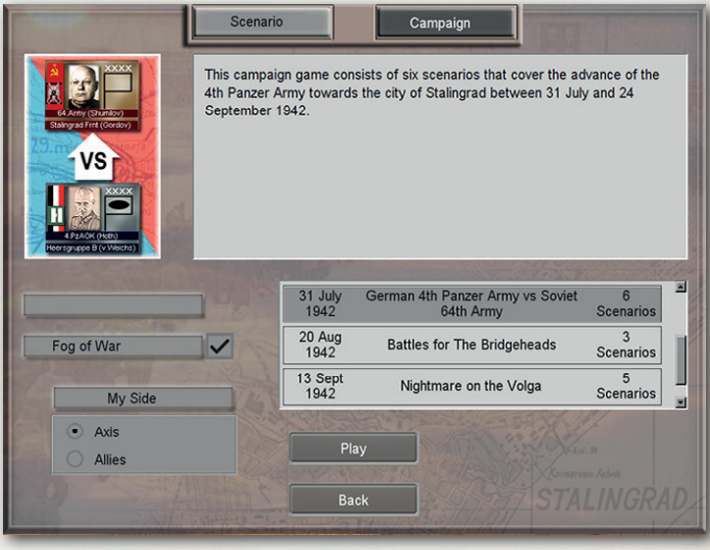
The campaign game in the **WEGO WW2 Series** consists of a series of linked scenarios that involve the units of the same command—typically a division or corps. The scenarios in a campaign are played sequentially by the Player. The results of one scenario are carried over to the next scenario in the series.

Battle Results Carryover. Command Data carried over from one scenario to the next are:

- Land unit strengths and readiness percentages.
- Victory Point Score.

- Any unused supply and replacement points.
- Air and Ground Asset data is not carried over. Each scenario has a new fresh set of these assets.

Campaign Game GUI .



VICTORY

The winner is the side which has most Victory Points at the end of the game. Victory Points (VPs) are awarded for destroying enemy ground units and occupying a victory point location. No victory points are awarded for damaged ground units. No points are awarded Air, Naval, or Ground Assets. The only way to achieve a draw is if both sides attain the same final score.

DESTROYING ENEMY UNITS

	1 + -	2 + -	3 + -	4 + -	5 + -
ARMOUR	1	1	1	2	3
INFANTRY	1	1	1	2	3
RECCE	1	1	1	2	3
MECH	1	1	1	2	3
MOTORIZED	1	1	1	2	3
ARTILLERY	2	2	2	3	3
ANTITANK	1	1	1	2	3
HEAVY_ANTITANK	2	2	2	3	3
ENGINEER	2	2	2	3	3
ANTIAIRCRAFT	1	1	1	2	3
HEAVY_ANTIAIRCRAFT	2	2	2	3	3
HQ	3	4	5	6	7
SKI	2	2	2	3	3
BRIDGE_ENGINEER	2	2	2	3	3
PARTISAN	1	1	1	2	3
SECURITY	1	1	1	2	3

Points award depend on unit type and unit quality. For example, armor and mechanized units are worth more than infantry etc. Elite units are worth more than conscript units, etc. Victory Points for destroying ground units are awarded at the time the unit is destroyed.

CAPTURING VICTORY LOCATIONS

VPs are earned per turn. If a Location is worth 1 VP, then 1 VP will be awarded to the owner per turn.

Locations can be worth different amounts per side. For example, a location may be worth 2 VPs per turn for the Axis, but only 1 VP per turn for the Allies. Victory Points for a location maybe awarded to one side and not the other.

Press this button on the Right Toolbar to view victory data. See Victory Details Panel for more information.

APPENDIX A
TERRAIN EFFECTS CHART (TEC)

Terrain Type In Hex	Movement Point Cost to Enter/ Hex	Attack Effects	Defense Effects	Remarks
Open/Steppe 	1.25 MP	None	Infantry: DF x1 Armor: DF x1	9 Stacking Point Limit
Rolling Steppe 	1.5 MP	No Shock No Overruns	Infantry: DF x1.1 Armor: DF x1.1	9 Stacking Point Limit
Town 	1.25 MP	No Shock No Overruns	Infantry: DF x2 Armor: DF x0.5	9 Stacking Point Limit
Major City 	1 MP	No Shock No Overruns	Infantry: DF x2 Armor: DF x0.5	18 Stacking Point Limit
Fort (Axis) 	Cost of Terrain	No Shock No Overruns	Infantry: DF x2 Armor: DF x2	Only Axis units enjoy the fort effects.
Fort (Allies) 	Cost of Terrain	No Shock No Overruns	Infantry: DF x2 Armor: DF x2	Only Allies units enjoy the fort effects.
Entrenchment 	Cost of Terrain	No Shock No Overruns	Infantry: DF x1.5 Armor: DF x1.5	Only owning side benefits from entrenchment. Entrenchment is removed if occupied by an enemy force.

Rough 	2 MPs	No Shock No Overruns	Infantry: DF x1.25 Armor: DF x1.25	
Light Woods 	2 MPs	No Shock No Overruns	Infantry: DF x1.25 Armor: AF & DF x.5	
Woods 	3 MPs	No Shock No Overruns	Infantry: DF x1.5 Armor: AF & DF x.5	
Marsh 	Impassable accept when entering via highway or track	No Shock No Overruns		
Mud Flats 	3 MPs	No Shock No Overruns	Infantry: DF x.5 Armor: DF x.5	
Volga River 	Impassable; Entry Not Possible	-	-	Pontoons allowed at crossing sites.
Highway 	Normal Mode: 1 MP Road Mode: .25 MP	Moving Unit Cannot Attack	Moving units subject to ambush	Road Movement use only
Track 	Normal Mode 1 MP Road Mode: .5 MP	Moving Unit Cannot Attack	Moving units subject to ambush	Road Movement use only
Major River 	Impassable accept when entering via highway or track	Artillery may fire across		Pontoons allowed at crossing sites.

River 	Impassable accept when entering via highway or track; Assault Engineers +4 MPs	Overrun in hex not possible; artillery may fire across		Can be crossed anywhere by pontoon bridge (when constructed)
Mines 	Units will stop before crossing minefield hex side		Infantry: AF x.25 Armor: AF x.25	Mines are neutral; they affect both sides equally. See Combat Engineers
Breached Mines 	+3 MPs		Infantry: AF x.5 Armor: AF x.5	Mines are neutral; they affect both sides equally. See Combat Engineers
Airfield 	1 MP		Infantry: DF x1 Armor: DF x1	
Gully/Balka 	+2 MPs		Infantry: AF x.5 Armor: AF x.5	
Stream 	+2 MPs		Infantry: AF x.5 Armor: AF x.5	
Ridge 	+2 MPs		Infantry: AF x.5 Armor: AF x.5	

Historical Points of Interest. Many of the image-based scenario maps often have terrain features and points of interest that are depicted for historical purposes only—they have no impact on game play. For example, railroads are included as points of interest. There is no rail movement in the game.

APPENDIX B
PLAY TIPS

COMBAT TIPS

ON GROUND OPERATIONS

- Use Combined Arms. Shock-neutral (shock=0) units can attack with tank units and not degrade their Shock modifier. If you attack using shock-capable units with leg infantry, then you will dilute your Shock and have reduced odds.
- Fight for intelligence. It's not just the job of recce to get intelligence. Get infantry, artillery, and engineers into the process of fighting for intelligence. If you want intelligence—you need to go and get it with whatever means are available. Fight for it if you must.
- Maintain a Reserve. The last side to commit its reserve WINS! If there are two units left on a side – one of them is in reserve! If you commit your reserve—designate a new one—every time.
- Maintain Organizational Integrity. Don't commit units from two different divisions to an attack against the same hex. There is no benefit if you do; most often you will be punished with unfavorable odds shifts by combining the attacks or defenses of units from different HQs. If you must do it, use a Main Effort Ground Asset (if available) to overcome the disadvantages.
- Don't Mix Corps and Division Artillery Attacks. You decrease the potential attack strengths of these units by combining them. They too fall under the organizational integrity rules. But...if the final numbers generate the odds that you need – do it.
- Keep HQs units out of range of enemy artillery. HQs units are easy to destroy if left exposed to the combined attacks of enemy artillery units and/or air assets. HQs units provide MANY easy victory points

to the enemy. Their loss SEVERELY degrades the capabilities of their subordinate units. Protect your HQs units; move often – protect always.

- Anti-tank Units Are Always place your anti-tank units so they are in position to face the enemy's tanks. AT units twiddling their thumbs in distant locations where their armor-negating capabilities can't be used are wasted resources.
- Ambush Avoidance. Avoid use of road movement mode to enter enemy territory; ambushes can devastate an entire road column. Have security forward and don't out-run it. On the other hand? Use road movement to run a corps around an open flank into the enemy's rear... Fortune favors the bold.

ON AIR OPERATIONS

- Fly 'em, Rest 'em. Don't fly your Air Assets turn after turn without rest. Never fly more than 2/3 of your air assets unless the situation demands it, and/or you have a rest plan that supports it. 50% on and 50% off is the way to keep your air assets rested. If they are not rested, you will find them absent when you need them the most.
- AA exists for a reason. Place your AA units so they protect those units in your main effort that are most vulnerable to air attack. While defending, identify where the enemy's main attack is and protect those units facing it. HQs and artillery units behind the line that are supporting the main effort should be protected with the same vigor as those critical points on the front line.
- Counter-air is important. Supporting ground operations requires much more than just providing close air support to individual attacks and/or attacking individual enemy units on the battlefield. Air superiority helps insure unfettered ground unit movement, the resupply of fuel and ammo points, and sustainment of command and control ranges.

ON NAVAL OPERATIONS

- Threaten. The threat of naval bombardment can be just as useful as its actual employment. Once employed – that threat is gone.
- Destroy. If you find an enemy HQs within range of naval assets, attack! Throw in some air assets if available and artillery if in range. Strike the HQs – Kill it. This impacts the supply status of all its subordinate units.

ON LOGISTICS OPERATIONS

- Spend Supplies Wisely. Don't be stingy with your supplies; Fuel and Ammo points that remain at the end of a scenario are unused combat potential.
- Manage Supplies. HQs consume Move+ and/or Combat+ supply points based on their most costly subordinate unit. The costliest units are armor, mechanized, or motorized units.
- Think Supplies. Supplies and the lines of communications along which they travel represent the combat power potential of ground units. Never start – nor end a turn – without checking the supply status of your units – and taking action to fix or mitigate any logistics issues.
- Offense vs Defense. On offense, you will use more fuel than ammo. Burn off that "excess" ammo by providing Combat+ supply to organizations that have artillery units in position and ready to expend it. Corps artillery units with Combat+ supply are sledge-hammering destroyers of enemy units.

GENERAL

- Rest your units. After each third turn (3, 6, 9, 12, etc.) there is a "night" phase during which units recover readiness at double the normal rate; use this opportunity every time—unless you have a good reason not to.
- Attack, attack, attack!. Defense is slow death for armored forces. Find a way to offensive action and the results will be in your favor.

- Efficiency vs Maximum Effort. There will come a time in your game play when you start to see the difference between having an efficient system that sustains combat power over time...and knowing the critical time to go ALL IN—regardless of efficiency. This isn't something connected to the arrival/departure of reinforcements; it has to do with "knowing" you have an advantage through your reconnaissance efforts and then acting aggressively on that "knowledge"—Maximum Effort at the decisive place and time.

APPENDIX C
ABBREVIATIONS

AA – Anti-aircraft

AC – Armored car

AF – Attack Factor

Arko – Artilleriekommandeur

Arm – Armored

Arty – Artillery

AT – Antitank

Bde – Brigade

Bn – Battalion

Bty – Battery

Co – Company

CRT – Combat Results Table

DF – Defense Factor

EAV – Effective Attack Value

EDV – Effective Defense Value

Engr – Engineer

FOW – Fog of War

Gds – Guards

Grp – Group

HArko – Heeresartilleriekommandeur

Inf – Infantry

KG – Kampfgruppe

LOC – Line of Communications

MC – Motorcycle

MF – Movement Factor

Mot – Motorized

MP – Movement Point

NKVD – People's Commissariat for Internal Affairs

Plt – Platoon

PzJgr – Panzerjaeger

Recce – Reconnaissance

Regt – Regiment

Spt – Support

Sqdn – Squadron

Strat – Strategic

TEC – Terrain Effects Chart

Tk – Tank

APPENDIX D
DESIGNER'S NOTES

"The moral is to the physical as three is to one."

– Napoleon

If we can put our trust in Bonaparte for a moment, the physical measurable aspects of combat are the smallest fraction of the actual combat potential of a unit in the **WEGO WW2 Series**. The "physical" is one-quarter of the "whole".

The moral factor combined with the subjective numerical assignment of quality to intangibles like leadership, training from the individual soldier level through squad/gun & tank crew, to platoon, company, battalion, regiment/brigade units, and on to the staffs at division, corps, and army levels; to tables of organization and the changes to them during war, and to the evolutionary aspects of doctrine (tactics, techniques, and procedures), and materiel, combat experience, morale, and most important of all—the people, their belief (or lack thereof) in the cause for fighting, their ideas of manhood—their "standards of behavior or beliefs concerning what is and is not acceptable for them to do". All these things and more bear more heavily on the outcomes of the battlefield than the calculus of the weight of a shell plus the number of soldiers in a squad divided by the climb rate of an aircraft. We are cautious about finding too much comfort in merely number-crunching the "objective" components of combat.

Deriving "accurate" attack, defense, and movement factors that are decimal perfect that we hope will reflect the realities of the battlefield is—in the end—a very subjective approach to the problem—and only a quarter of it at that (the physical). Without access to the relevant historical data—foxhole reports of the day-to-day strengths of present for duty soldiers, mission-capable guns, tanks, aircraft, generators, wireless sets, machine-guns, mortars, trucks, trailers, mechanics tool boxes with a set of three cross-tips and a quarter-inch spanner, first aid pouches, petrol, oil, lubricants, replacement parts, etc.—we

don't have all the relevant numbers. Nor will we ever. So let's go for "about right" and be done with it.

Our goal in the **WEGO WW2 Series** is to use a narrow set of subjectively selected numbers to achieve something that is "about right"—somewhere in the neighborhood of correct. Yes, we will use numbers—decimal perfect—to get to that neighborhood. Will they be good numbers? Well...if they feel "about right" to the player during game play, then we have achieved our goal—the numbers are...good enough. The people who play this game come to it with some knowledge about the War in the East during WWII...or...none at all. It needs to be fun for ALL (the many) and acceptable to those with deep knowledge of the subject (The Few).

And so...if we make a mistake? Well—the game editor is very powerful and will allow others to pursue different paths to their versions of what is "about right". That's a square deal.

APPENDIX E
RECOMMENDED READING LIST

Antony Beevor: *Stalingrad: The Fateful Siege: 1942-1943*

Marshal Vasili Ivanovich Chuikov: *The Battle of Stalingrad*

William Craig: *Enemy at the Gates: The Battle for Stalingrad*

Heinrich Gerlach: *Breakout at Stalingrad*

David M. Glantz and Jonathon M. House: *Stalingrad* (abridged)

Heinz Schroter, *Stalingrad*

CREDITS

BRIAN KELLY GAMES

WEGO WWII Creator
Brian Kelly

Programmer
Brian Kelly

Game Design & Development
Brian Kelly and John Duquette

WEGO WW2 Series Historian
John Duquette

Unit and Organizational Data
John Duquette

Scenario Designer
John Duquette

Game Artwork
John Duquette, Jim Martin, Mitchell Nolte

Military Icon Artwork
Greg Moore

Game & Editor Manuals
John Duquette and Brian Kelly

Playtesting and Feedback
Michael Bolmer, Dingbat, Dreamslayer, Jeff Duquette, Fabio Governato, Mike Green, gwgardner, hank9953, Okayrun3254, Miquel Ramrez, Don Timian.

SLITHERINE GROUP

CEO
Iain McNeil

CFO
JD McNeil

CMO
Marco A. Minoli

Technical Director
Philip Veale

Operations Director and CEO, Matrix Games Llc
Erik Rutins

Creative Director
Richard Evans

Executive Producer
David Sharrock

Assistant Producers
Sam O'Neill, Anny Sims, Jenny Zsibrita

Brand Manager
Alberto Casulini

Assistant Brand Manager
Marco Tonello

Social Media Manager
Enzo Fallara

Media Relations
Paolo Paglianti

Community Manager
Edward Jenkins

Production Design
Adriana Bienati

Manual Layout
Myriam Bell

Operations Lead
Matthew Ravenwood

Operations Team
Sam O'Neill, Joseph Stephenson, Callum Morris

Administration
Dean Walker

Admin Assistant
Richard Baker

Customer Support Staff
Paulo Costa, Joseph Miller

Web Development
Valery Vidershpan, Andrea Nicola, Fernando Turi, Yurii Shmeloyv