

World at War™

STALINGRAD™

Game Guide



World at War™ **Stalingrad**

The East Front 1942-43

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In truth, this game is a collaborative effort of everyone at Atomic Games and Avalon Hill, as well as the beta testers, magazine reviewers and owners of our previous games. We read every registration card we receive and answer every electronic message we get. In short, we appreciate your participation in the development of our products. So, keep those cards and letters (and EMail) coming. We're listening.

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TABLE OF CONTENTS

1.0 INTRODUCTION	4	6.3 The Overview Map	12
2.0 INITIAL OPTIONS SCREEN	4	7.0 TERRAIN IDENTIFICATION	13
2.1 Scenarios	5	8.0 UNIT IDENTIFICATION	21
2.2 Variants	5	8.1 Unit Sizes	21
2.3 Realism Options	5	8.2 Unit Colors	21
2.4 Opponent	5	8.3 Unit Symbols	22
2.5 VP Adjustment	5	8.4 Unit Designations	22
2.6 Side	5	8.5 Information Gathering	22
2.7 Game	5	9.0 THE UNIT BOTTOM BOX	24
3.0 THE MENU BAR	6	9.1 Stacked Units	24
3.1 File Menu	6	9.2 Information Shown	24
3.2 Options Menu	6	9.3 The Command Window	25
3.3 Staff Duties Menu – The Executive Officer	7	9.4 Artillery Actions	26
3.4 Planning Menu	7	9.5 Cancelling a Movement or Attack Order	26
3.5 Phase Menu	7	9.6 Reviewing and Revising Orders	26
4.0 THE TOOL BAR	8	9.7 The Unit Side Bar	26
4.1 The Victory Button	8	10.0 THE STATUS BAR	27
4.2 The Calendar Button	8	10.1 Victory Level	27
4.3 The Overview Button	8	10.2 Victory Bar	27
4.4 The Air Power Button	8	10.3 Turn Display	27
4.5 The HQ Button	8	10.4 Time of Day Display	27
4.6 The Leaders Button	9	10.5 Phase Display	27
4.7 The Frames Button	9	10.6 Player Turn	27
4.8 The Order of Battle Button	9	11.0 STACKING	28
4.9 The Weather Button	9	11.1 Stacking Points	28
4.10 The World Map Button	9	11.2 Stacking Effects on Movement	28
4.11 The Jump Map	9	11.3 Stacking Effects on Combat	28
5.0 THE PHASES	10	12.0 ATTACHMENT	29
5.1 Planning Phase	10	12.1 Attachment Restrictions	29
5.2 Execution Phase	10	12.2 Attachment Procedures	29
5.3 After Action Phase	10	13.0 LEADERS	30
6.0 VIEWING THE MAP	11	13.1 Leadership Benefits	30
6.1 View Methods	11	13.2 Game Leaders	30
6.2 Getting Around on The Map in Close View or Far View	11	14.0 MOVEMENT	33
6.21 The Scroll Pad	11	14.1 Basic Movement Rules	33
6.22 Centering on a Unit	11	14.2 Tactical Movement	35
6.23 The Jump Map	11	14.3 Strategic Movement	36
6.24 The Centering Cursor	11	14.4 Automatic Movement	37

14.5 HQ Movement	37	19.7 Supply Source Distribution Points	57
14.6 Riding	38	19.8 Default Supply Levels	58
14.6 Overruns	39	19.9 Supply Consumption	58
15.0 COMBAT	40	20.0 TROOP QUALITY	59
15.1 General Combat Rules	40	21.0 FATIGUE AND DISORGANIZATION	59
15.2 Types of Attacks	40	22.0 SURRENDER	61
15.3 The Odds Sidebar and Bottom Box	41	23.0 IMPROVED POSITIONS	62
15.4 Combat Odds Modifications	41	24.0 WEATHER	64
15.41 Defender's Combat Modifiers	41	24.1 Sky Conditions	64
15.42 Unit Integrity Combat Modifiers	42	24.2 Ground Conditions	64
15.43 Armor and Antitank	42	24.3 The Weather Bottom Box	64
15.44 Engineer Support Combat Modifier	43	24.4 The Calendar Window – Weather Forecasts	65
15.45 Troop Quality Combat Modifier	43	25.0 REINFORCEMENTS	66
15.5 Defense Effects and Modifiers	43	25.1 Reinforcement Arrival	66
15.51 Types of Defense Orders	43	25.2 Reinforcements	66
15.52 Defense and Stacking	44	25.3 HQ Elimination	66
15.6 Combat Results	44	26.0 REPLACEMENTS	67
15.61 Losses	44	26.1 Assigning Replacement Points	67
15.62 Retreats	44	26.2 Eligibility	67
15.63 Advance After Combat	44	26.3 Replacement Effects	67
16.0 ARTILLERY	45	27.0 VICTORY CONDITIONS	68
16.1 Special Artillery Values	45	27.1 Victory Points	68
16.2 Artillery Movement and Ready Status	45	27.2 Victory Location Buttons	68
16.3 Artillery Fire Missions	45	27.3 Geographic Objectives	69
16.4 Automatic Artillery Allocation	47	27.4 Losses Inflicted on Enemy Units	69
16.5 Modifications to Artillery Fire Strengths	47	27.5 Victory Levels	69
17.0 AIR OPERATIONS	48	28.0 THE ORDER OF BATTLE DISPLAY	70
17.1 Air Mission Types	48	28.1 The Level Boxes	70
17.2 Mission Selection Procedure	50	28.2 The Unit Stats Box	71
17.3 The Air Unit Bottom Box	50	28.3 The HQ Supply Box	71
17.4 Assigning (Plotting) Air Missions	51	28.4 The Replacements Box	71
17.5 Anti-Aircraft Fire	51	28.5 Using the OB Display	71
18.0 ZONES OF CONTROL (ZOC)	52	29.0 THE SCENARIOS	72
19.0 SUPPLY	54	30.0 VARIANTS	73
19.1 Supply States	54	31.0 THE CAMPAIGN FOR STALINGRAD	74
19.2 The Supply Pipeline	55	32.0 SAVING A GAME	78
19.3 Supply Allocation	55	33.0 TWO-PLAYER PROCEDURE	78
19.4 Supply Lines	56	34.0 HINTS ON PLAY	79
19.5 Air Resupply and Airfields	57	STALINGRAD DESIGNER'S NOTES	90
19.6 Captured Supply	57		

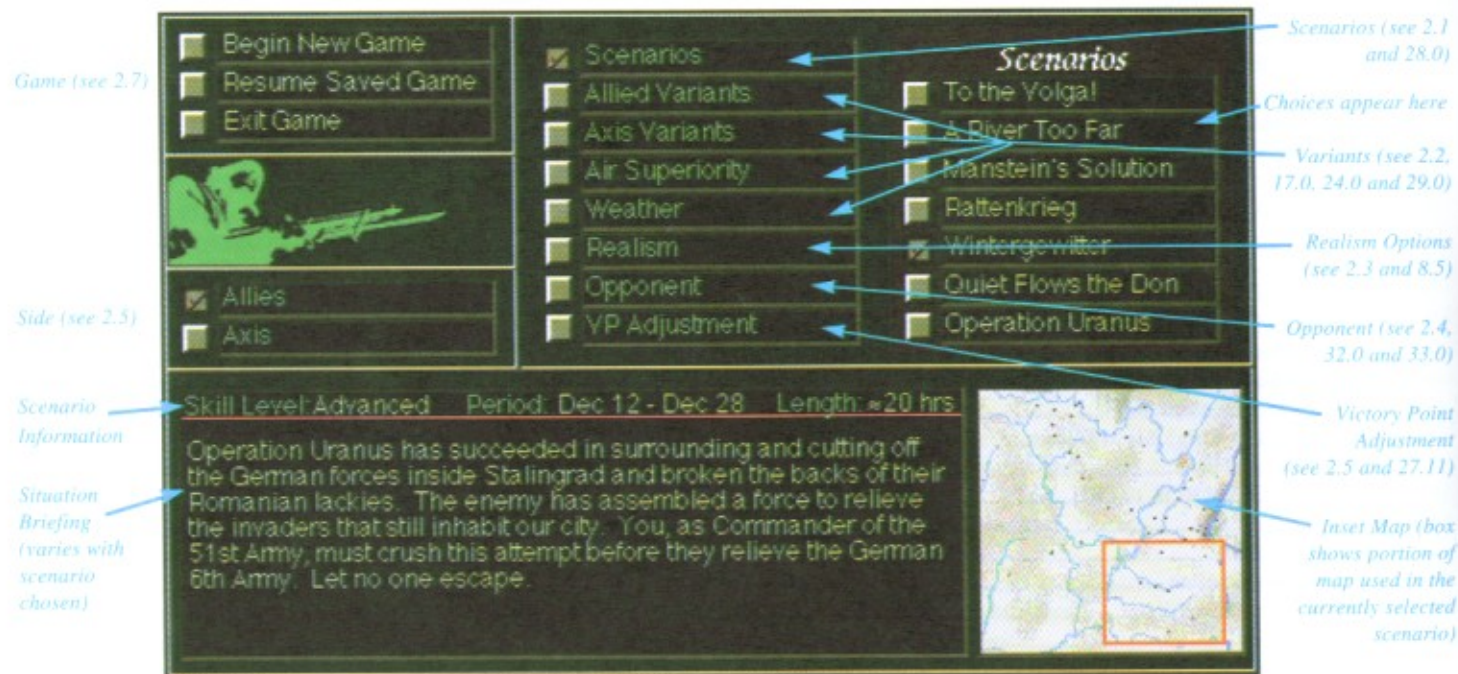
1.0 INTRODUCTION

Thank you for purchasing **WORLD AT WAR: Stalingrad!** Please take a moment to fill out and send in the game's registration card. This will ensure that you receive timely updates and product information. If you have any problems or questions concerning this or any other Avalon Hill computer product, contact us at 410-426-9600.

Quick Start: If you are ready to jump right in and face the snow-swept Russian steppes, we suggest you turn to the Quick Start instructions (see the separate Quick Start Instructions). Again, thank you for choosing **STALINGRAD**.

2.0 INITIAL OPTIONS SCREEN

This screen displays the information choices available for playing a game. **STALINGRAD** starts at the Initial Options Screen. This is where you choose sides and select scenarios, historical and realism options, the type of opponent, and game variants. When anything from the center column is selected, its "choices" appear for selection in the upper right of the screen. The bottom portion of this screen displays the situation briefing for the currently selected scenario and side, and an inset map shows the operational area covered by the scenario. A number of different options are available.



2.1 SCENARIOS: This allows you to select one of seven available scenarios (also see 29.0).

2.2 VARIANTS:

- ★ **ALLIED AND AXIS VARIANTS:** These “what if” options allow you to explore possible historical alternatives (also see 30.0).
- ★ **RANDOM VARIANTS:** *STALINGRAD* randomly selects a variant from the available list without revealing which variant was selected. Also, there is a 10% chance that an additional variant from the list will also be randomly selected and implemented.
- ★ **AIR SUPERIORITY:** Five Air Superiority options are possible, but only one can be in effect at any given time (also see 17.0).
- ★ **WEATHER:** There are two weather options, historical and realistic. The historical option recreates the *actual* weather that occurred over the battlefield. The realistic option offers random weather which is similar to what was really experienced, but without the predictability of using the historical weather (also see 24.0).

2.3 REALISM OPTIONS: These options influence the amount and the type of information you receive about enemy and friendly forces during the game. **NOTE:** With these options in effect, data in the Unit Bottom Boxes (see 9.0) may be as much as +/- 50% incorrect.

- ★ **LIMITED INTELLIGENCE:** You may view your own units, but limited information is available regarding enemy units (also see 8.5).
- ★ **FOG OF WAR:** The level and accuracy of information available on *friendly* units decreases as the units become fatigued or fall out of supply (also see 8.52).
- 2.4 OPPONENT:** You can select a computer opponent, a human opponent in the same room (also see 32.0) or a human opponent through electronic mail (see the separate PBEM instructions).
- 2.5 VP ADJUSTMENT:** Select a number of pre-game victory points to be awarded to either side for play balance (also see 27.11).
- 2.6 SIDE:** Select whether to play as the Soviet or the Axis side.
- 2.7 GAME:** Select to begin a new game, resume a saved game or to exit the program.



File Options Staff Duties Planning Phase



3.0 THE MENU BAR

The menu bar is composed of various pull-down menus described below. Menu items are marked with a diamond. If the diamond is solid, the option is active. If the diamond is empty, the option is inactive.

3.1 FILE MENU:

- ◆ **New:** Returns you to the Initial Options Screen to begin a new game.
- ◆ **Resume:** Allows you to locate and return to a previously saved game.
- ◆ **Save:** Saves the game in progress. If "Save" is selected for a game that has not been previously saved, a dialog box prompts you for a name and file path where the game will be saved. After a game has been named, the program automatically saves the game in the same location without interrogating you.
- ◆ **Save As:** Allows you to specify or change the name and file path where the current game is saved. "Save As" then functions as a normal "Save."
- ◆ **Restore PBEM Backup:** Allows you to restore a PBEM game from a previous turn.
- ◆ **Quit:** Ends the game without saving it.

3.2 OPTIONS MENU: You may turn these options on or off during play. *STALINGRAD* keeps track of these settings from game to game and from side to side. Therefore, each player can have a different configuration enabled for his screen. *For Example: One player can choose to display hexsides, while his opponent can opt to leave this setting off.*

- ◆ **Close View:** When selected, you see a tactical level map display. When not selected, the map displays an operational or "zoomed out" map view. This map offers less detail, but can be useful for getting the "big picture" of what's happening on the battlefield. Both maps can be navigated by using the directional arrow buttons on the Scroll Pad at the bottom right hand corner of the screen (see 6.21), or the "Jump Map" in the upper right (see 4.11).
- ◆ **Show Supply Lines:** A colored supply line tracing back to a unit's HQ is briefly shown whenever a unit is selected during a Planning Phase if this option is active.
- ◆ **Show Hex Ownership:** Friendly-controlled territory appears in a normal color scheme and enemy-controlled territory is shaded.

- ◆ **Show Hex Borders:** Displays a hex grid over the battlefield. This is useful when plotting movement or planning attacks.
- ◆ **Show Troops:** When selected, units are displayed normally. When not selected or clicked off, *all* units disappear, allowing the easy inspection of the map's terrain features.
- ◆ **Military Symbols:** Toggles unit designations between pictorial icons and standard NATO military unit symbols (see 8.3).
- ◆ **Center Map on Battles:** The map automatically centers over each battle as it occurs during the Execution Phase.
- ◆ **Sound Effects:** When selected, there are sound effects to punctuate the on-screen action. When not selected, blissful silence.
- ◆ **Show Help Messages:** The game's "Executive Officer" provides additional information during the course of the game.
- ◆ **Arrival Notification:** Announces the arrival of friendly reinforcements.
- ◆ **After Action Battle Reports:** Displays detailed information about each battle which occurred in the previous Execution Phase. When this option is "off", there is no After Action Phase, and the game automatically proceeds to the next Planning Phase.
- ◆ **Real Time Battle Reports:** Displays a brief battle report as each battle is resolved.
- ◆ **Autosave:** Saves the game at the end of each Execution Phase to a file named "Autosave". At this time, the previous turn's Autosave file is overwritten.





3.3 STAFF DUTIES MENU – THE EXECUTIVE OFFICER:

The following options delegate selected game functions to the game's "Executive Officer", which assumes many "staff" functions. This makes for a much faster game and allows you to "delegate" less critical details at the cost of some personal control.

- ◆ **HANDLE ALL OPERATIONS:** Delegates *all* game functions to the Executive Officer. The Executive Officer commands all units as the computer's programming sees fit, and proceeds to the next phase when appropriate. If this option is not selected or clicked off during the game, control is returned to you, although sometimes not *immediately*. If "After Action Battle Reports" is enabled, the Executive Officer waits until you have finished reviewing the after action battle reports and entered the Planning Phase before continuing play.
- ◆ **ALLOCATE SUPPLY (EACH DAY):** Instructs the Executive Officer to allocate supply to each Headquarters at the start of the first morning (daylight) turn. If this option is not selected, each HQs will maintain the same Supply Level it had the previous day, unless it does not have enough supply on hand, in which case its levels will be lowered to the best possible Supply Level (also see 19.0).
- ◆ **PLAN FIRE SUPPORT (EACH TURN):** Artillery units that did not receive orders from you are targeted by the Executive Officer. Once "Execute" is selected from the Phase menu, the Executive Officer analyzes your planned attacks and assigns artillery as deemed necessary, then allocates any remaining unordered artillery units to fire interdiction missions and general

harassment barrages. You do *not* have an opportunity to review or change these orders (also see 16.0).

- ◆ **OK TO USE AIR FORCE:** Selecting this option authorizes the Executive Officer to allocate air assets in a fashion similar to planning fire support (also see 17.0).
- ◆ **PLOT GROUND UNITS (EACH TURN):** Ground units (other than artillery units) that have not already received orders from you will receive orders from the Executive Officer. Once "Execute" is selected from the Phase menu, the Executive Officer analyzes your planned attacks and assigns orders to any unordered units as deemed necessary.
- ◆ **PLAN FIRE SUPPORT NOW:** Works the same way as "Plan Fire Support Each Turn", but the Executive Officer plans target assignments and support requests *immediately*, allowing you a chance to review and revise the Executive Officer's orders.
- ◆ **PLOT GROUND UNITS NOW:** Works the same way as "Plot Ground Units Each Turn", but the Executive Officer assigns orders *immediately*, allowing you a chance to review and revise the Executive Officer's orders. This choice also *automatically* invokes "Plan Fire Support Now" for unordered artillery units.

Please note that for large scenarios on *slower* machines, the "Plan Fire Support Now" and "Plot Ground Units Now" functions may take 30 seconds or more to complete.

3.4 PLANNING MENU:

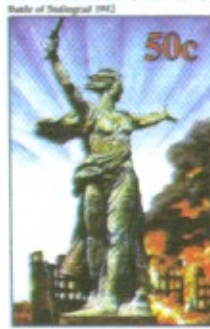
- ◆ **REVIEW SCENARIO OPTIONS:** Displays the Initial Options Screen for a review of the scenario briefing and active game settings. These options *cannot* be changed during play.
- ◆ **SHOW PLANNED MOVES:** Shows the planned destinations for each unit, draws a line from each firing artillery unit to its target, and displays arrows to indicate ground attacks. Note that this action shows what is *planned*, and not necessarily what will actually *occur*. Traffic jams, enemy interdiction, and other factors can significantly alter your units' intended course of action. Click anywhere on the screen to return to the normal map screen.

3.5 PHASE MENU:

- ◆ **PHASES:** This menu shows the three phases (Planning, Execution and After Action) of each game turn, and is used to proceed from one phase to the next. A solid diamond appears next to the *current* phase.

- **SWITCH SIDES:** Below "After-Action" on this menu is "Switch Sides". This is *not* a phase, but turns the game over to your opponent when playing a two-player, same-machine game (also see 32.0).
- **PBEM STATUS:** This selection is available during PBEM games, and displays the game name and current status for both players.

MARSHALL ISLANDS



Victory (4.1 & 27.0) Calendar (4.2 & 25.0) Overview (4.3) Air Power (4.4 & 17.0) HQ (4.5) Leaders (4.6 & 13.0) Frames (4.7) Order of Battle (4.8) Weather (4.9 & 24.0) World Map (4.10 & 6.0) Jump Map (4.11 & 6.23)

4.0 THE TOOL BAR

Across the top of the screen, beneath the Menu Bar, there is a horizontal row of buttons. This is the "Tool Bar", which provides easy access to the game's functions. Tool Bar buttons open windows which display detailed game information. Click on the button again to remove that button's display. Windows at the bottom of the screen are called "Bottom Boxes" and those to the right of the screen are called "Side Boxes" or "Side Bars".



4.1 THE VICTORY BUTTON: Opens the Victory Bottom Box, which displays victory conditions for the current scenario (also see 27.0).



4.2 THE CALENDAR BUTTON: Opens the Calendar Window, which displays the current date, and the days when you are scheduled to receive reinforcements (also see 25.0). A five-day weather forecast is shown in the "date" squares for the current day, as well as the next four days (also see 24.0). The current day in the scenario is high-lighted with a red frame.



4.3 THE OVERVIEW BUTTON: Opens the map Overview Box, which displays the current scenario's entire playing area on the screen, allowing you to get the "big" picture. Use the buttons in the Bottom Box to get an overall view of friendly and enemy troop locations. You may also choose to have hex ownership and major victory locations displayed (see 6.3 for more information).



4.4 THE AIR POWER BUTTON: Opens the Air Support Bottom Box, which allows you to assign missions to your air units (see 17.0).



4.5 THE HQ BUTTON: This opens the HQ Side Box, which displays supply and organizational information on your HQ units. Selecting the left and right arrows next to the HQ unit in the HQ Side Box will scroll through the HQ units in play. Current supply information is also displayed for the HQ unit shown in the Side Box. The Side Box features:

- ★ **Locate:** Selecting this button centers the map on the HQ unit shown in the HQ Side Box.
- ★ **Attach:** Selecting this button allows units to be attached to an HQ unit during these two turns (see 12.0).
- ★ **Supply:** Displays the current HQ's supply state.
- ★ **On Hand:** Displays the HQ's current supply tonnage.
- ★ **Used:** Displays the supply tonnage used by units attached to the HQ so far that day.
- ★ **More:** Select this button to open the HQ Bottom Box; this displays all available HQ units and their current Supply Levels (by colors; see 4.6).



4.6 THE LEADERS BUTTON: When depressed, this button opens the Leader Side Box, which displays information on your leaders (also see 13.0). The Leader Side Box has a "Locate" button which, when pressed, will center the map on the hex that leader is in. Additionally, each leader's combat modifiers are displayed.



4.7 THE FRAMES BUTTON: Using different colored frames, you can view your units in several different ways. If the Frames button is selected *when you are in the "Close View" screen (only)*, the color of the unit frames provides variable information, depending on the option chosen. When not in the Close View mode, all frames are black, regardless. Unit frames can be used to show the following information:

- ★ **HQ:** This shows the units attached to each HQ by having the units' frame colors match those of their HQs. **NOTE:** if there are more than 17 HQs in play, the colors will repeat.

Unit Types	Frame Colors
Anti-Aircraft	Cyan (bright blue)
Antitank	Light Blue
Armor/Mech. Recon	Red
Artillery	Green
Engineer	Yellow
HQ	White
Infantry/Machinegun	Black

- ★ **Unit Type:** The frame color shows units by unit type.
- ★ **HQ Supply:** The frame color shows unit Supply Levels based on their parent HQ's supply state (see chart below).
- ★ **HQ Dist.:** The frame color is a graphic display of the distance of the unit from its superior HQ (see chart below).
- ★ **Fatigue:** The frame color shows units according to their fatigue levels (see chart below).
- ★ **Disorganization:** The frame color shows units according to their disorganization levels (see following chart).

	Green	Blue	Yellow	Red	Black
HQ Supply	Attack	General	Defensive	Minimal	No Supply
HQ Distance	Attack	General	Defensive	Minimal	No Supply
Fatigue	0-2	3-5	6-8	9-11	12+
Disorganization	0-2	3-5	6-8	9-11	12+

- ★ **Orders:** Each unit which *has* been given an order for the current turn has a **green** frame, as opposed to the **black** frame on each unit that has *not* yet had an order assigned.



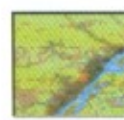
4.8 THE ORDER OF BATTLE BUTTON: Opens the OB box, and initially displays all of your HQs which are drawing supply directly from a supply source. Subordinate HQs and attached units may be viewed by clicking on any displayed HQ. In addition, the OB box displays strength data about your units, detailed supply data for each HQ, and the number of replacements you have available (also see 28.0).



4.9 THE WEATHER BUTTON: Opens the Weather Bottom box, which displays detailed information about the current weather and ground conditions (also see 24.0).



4.10 THE WORLD MAP BUTTON: Allows you to gain an overall view of the East Front Theater of Operations. The strategic map can be zoomed in to show the operational area of **STALINGRAD** (also see 6.0).



4.11 THE JUMP MAP: This shows a much-reduced version of each scenario's game map. The red dot on this small map indicates where the game's on-screen map is currently centered. Clicking in a different position on the jump map changes the portion displayed on the Map Screen.

Victory Decisive Axis	Allies  Axis	Turn 2 of 18	12:00 PM	Allies - Committed! Axis - Committed!	Phase Execution	
 <ul style="list-style-type: none"> • Executing Orders • Applying Interdiction • Checking Supplies 	<ul style="list-style-type: none"> • Updating Map • Getting Victory • Saving Game 	Ground Atk's Success Allied 20 65% Axis 	Turn Progress Battles - Hour {  2 3 4 }			

5.0 THE PHASES

In *STALINGRAD* there are three scales that are used in the seven different scenarios. "Operation Uranus", "Manstein's Solution" and "Quiet Flows the Don" have three turns per day (two daylight and one night) that comprise a game day; in the other scenarios ("To the Volga", "Rattenkrieg", "Wintergewitter" and "A River Too Far") there are six turns per day [three daylight and three night]. Three Phases (Planning, Execution and After Action) make up one turn.

A solid diamond appears next to the *current* phase on the Phase pull-down menu. Be sure you have completely finished the current phase before proceeding to the next one. Once the next phase in the sequence has been selected, you cannot return to the previous phase.

5.1 PLANNING PHASE: During the Planning Phase friendly units are assigned movement and combat orders, fire support missions, or other types of activities. Orders can be given to units in any desired sequence, and orders can be modified or cancelled as long as the Execution Phase has not been activated. You can alter HQ Supply Levels only during the morning (first daylight) Planning Phase (see 19.0). Each scenario begins with these parameters set to their historical values.

5.2 EXECUTION PHASE: To begin the Execution Phase, select the Phase pull-down menu and click on Execution Phase. The game will then simultaneously carry out each side's movement and combat orders.

- ★ When combat occurs, hexes containing attackers are highlighted, air markers are displayed, and explosions are shown over the hex in which the combat occurs.
- ★ A Bottom Box appears with information on where the game is and the overall success rates of the game's attacks so far.
- ★ The winner of each battle has its nationality flag displayed in the combat hex (except at night). Full-scale battles, artillery barrages and air attacks are highlighted by red hex borders, hexes that suf-

fered interdiction attacks have violet hexsides, and hexes in which multiple battles occurred appear outlined in dark green.

- ★ If the "Real Time Battle Reports" option is on, a Battle Report window will appear briefly displaying the result of each battle as it occurs. If the "After Action Battle Reports" option is selected, the turn moves to the After Action Phase at the conclusion of the Execution Phase, when battles can be checked at leisure.

5.3 AFTER ACTION PHASE: This phase is skipped if there were no combats. If "After Action Battle Reports" is on, you can examine the results of each battle and interdiction attack that occurred during the preceding Execution Phase. Selecting the highlighted combat hexes displays the corresponding Battle Report Window.

Briefing Details	<ul style="list-style-type: none"> • Moderate German attack. • Germans suffered 6% casualties • German performance was Poor
---------------------	--

- ★ Non-interdiction, non-ambush Battle Reports have two parts: a general briefing, and a detailed account of the combat odds with modifications for that battle. You may switch between these two displays by selecting the buttons on the left side of the Battle Report Window.
- ★ Each successive click on a hex highlighted in dark green (multiple battles in a hex) cycles through the different combat reports.
- ★ After viewing the turn's combat results, the After Action Phase and current turn are over. To start the next turn, select Planning Phase from Phase pull down menu, and the game advances to the next turn.



SPW 251/I, the standard German armored personnel carrier

6.0 VIEWING THE MAP

A paper copy of each of the game maps is included for quick and easy reference during play. Other views of the map must be obtained from the Map Screen or the Overview Map. The size of the map used in each scenario varies, but in general, you will only see a portion of the map at any one time (unless you're looking at the Overview Map; 6.3).

6.1 VIEW METHODS: There are three different ways of looking at a *STALINGRAD* map: Close View, Far View and Overview.

- ★ Close View, as the name implies, shows the smallest portion of the map, with the most detail on units and stacking. You'll generally want to issue orders, etc. in Close View.
- ★ Far View shows a much larger area and can be a great help with scenarios (such as "Operation Uranus", or "Wintergewitter") which have large playing areas. You may still issue orders in Far View.
- ★ Unlike the first two methods, you cannot issue orders when viewing the Overview Map, but its numerous display options and its coverage of the entire battlefield make it a very useful tool.

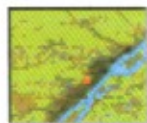
6.2 GETTING AROUND ON THE MAP IN CLOSE VIEW OR FAR VIEW:



6.21 THE SCROLL PAD: The easiest way to move around on the map is use the directional arrows buttons of the Scroll Pad (found at the bottom right of the Map Screen).

- ★ Clicking on a directional arrow button shifts the map one hex in the desired direction. Continuous scrolling is scaled proportionally. This means that the map first scrolls one hex in the desired direction, then two hexes at a time, three hexes at a time, etc., allowing for fast and smooth scrolling in any direction on the game map.
- ★ Holding down the directional arrow button causes the map to scroll continuously until the button is released.
- ★ The keyboard's number pad can also be used in the same fashion and mirrors the arrows on the Scroll Pad (i.e., press "8" for north, "9" for northeast, etc.).
- ★ Holding down the Shift key while scrolling with either the pad or keyboard accelerates the scroll speed.

6.22 CENTERING ON A UNIT: The map can be centered on a specific unit. Select any unit or stack, then select the center button on the Scroll Pad (or press the "5" key) to center the unit or stack on the map. This feature works in both the Close and the Far view screens.



6.23 THE JUMP MAP: The Jump Map window next to the Tool Bar shows the area encompassed by the scenario, and can also be used to navigate the map. The red dot on the Jump Map window indicates the point where the map is currently centered.

To quickly jump to another location, click anywhere in the Jump Map window, and the screen will center on that location. The red dot jumps to indicate the new position on the map.



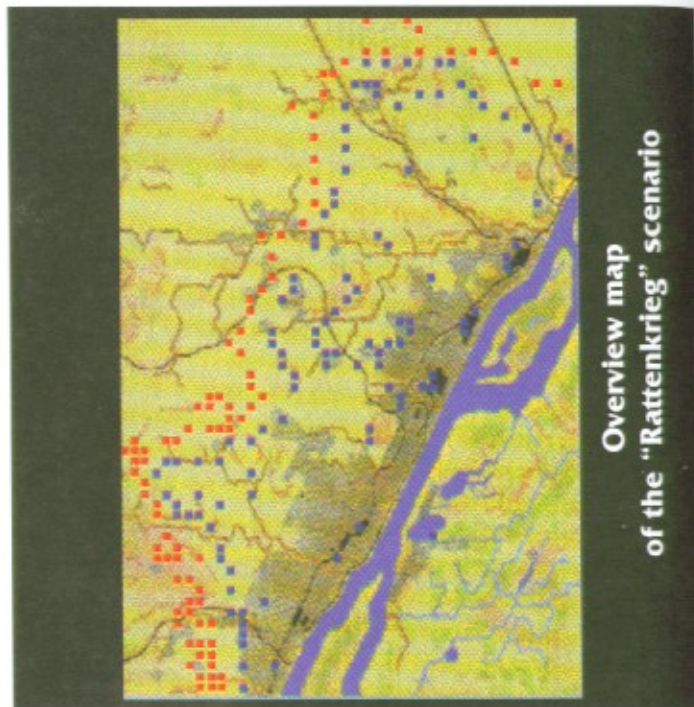
6.24 THE CENTERING CURSOR: Holding down the Option (Mac) or Control (PC) keys while the cursor is over the map will bring up the Centering Cursor. While it is active, the game will center the map on any hex you click on.



6.3 THE OVERVIEW MAP: The Overview Map provides you with a panoramic view of the entire field of play for each scenario. In addition to the map itself, there are numerous display options which graphically portray a wealth of information about your forces, known enemy units and the overall strategic situation.

- ★ **All Units:** All known (sighted) units, including those whose type is unidentified, will be displayed. This selection toggles all of the above buttons to their "selected" positions.
- ★ **Friendly Units:** Units of your side will be displayed in red (unless Use Frame Color is also selected).
- ★ **Enemy Units:** Opposing units will be displayed in blue (unless Use Frame Color is also selected). If Fog of War/Limited Intelligence are in use, only known enemy units will appear.
- ★ **Infantry:** All Infantry units will be displayed.
- ★ **Armor:** All Armor units will be displayed.
- ★ **Engineer:** All Engineer units will be displayed.
- ★ **Antitank:** All Antitank units will be displayed.
- ★ **Artillery:** All Artillery units will be displayed.
- ★ **Anti-Aircraft:** All Anti-aircraft units will be displayed.
- ★ **Headquarters:** All Headquarters units will be displayed.
- ★ **Unknown Units:** All units which can be seen, but about which there is as yet no information about type, will be displayed.
- ★ **Map Only:** All units are removed from the Overview Map. This selection toggles all other selected Overview Map buttons off.
- ★ **Use Frame Color:** If this option is selected, all units displayed in the Overview will be displayed as tiny squares with the color corresponding to its current Unit Frame color. This is instead of the default blue and red.
- ★ **Hex Ownership:** This selection will overlay the Overview Map with a pattern outlining the extent of the enemy's currently-held terrain.
- ★ **Victory Locations:** Each VP hex is marked with an "X" on the Overview Map.

For Example: Let's say you've finished your movement plots for a turn, but you want to recheck and make sure that you haven't forgotten anyone. To do so, first click on the Frames Tool Bar button, and select the Orders Frame. Then select the Overview Tool Bar button. Turn "Enemy Units" off,



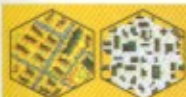
and then select the "Use Frame Color" button. At a glance, you'll be able to inspect all of your units and determine their orders status.

If you've been moving your troops around quite a bit, it's very helpful to know if any of your units have been inadvertently left behind, or otherwise have lengthy supply paths. There are two easy means of going about this. The first is to follow the steps in the previous example, but select the HQ Frame, instead of the Orders Frame. This displays all units corresponding to a given HQ in a given color (keep in mind that if you have more than seventeen HQs active, the frame colors will repeat). Another way would be to repeat the initial steps, but substitute the Distance Frame. Each unit with a long path to its HQ will clearly stand out.



7.0 TERRAIN IDENTIFICATION

A brief explanation of each terrain type found in *STALINGRAD* follows, along with a discussion of the terrain's effect on play. Note that it is possible for the effects of more than one terrain type to apply in a given hex.



VILLAGE/SUBURB

Unlike many western European cities, large portions of Stalingrad was built of wood. Much of the city consisted of large "Housing Estates"—rows of wooden buildings on the western outskirts of the city—home to the many factory workers and their families. There were also "suburb" hexes in and around the city, representing buildings with lesser density than the tightly-packed worker's settlements. Town hexes provide two shifts for the defender, and armor shifts are applied as per city terrain.



CITY



Cities are urban environments, with narrow streets and densely packed stone buildings. Cities offer very good defensive terrain. Artillery fire into city hexes is halved, defender's antitank strength is doubled, and units attacking a city hex have their final combat odds reduced by three. In the 400m/hex scenarios ("Rattenkrieg" and "To the Volga"), attacking or defending armor units may add at most one shift to an attack to reflect the difficulty of operating in this terrain.



RUBBLE

If enough firepower is applied to an urban area, the collapsed buildings will create a new type of "terrain," which is easy to defend, and which severely hampers movement of motorized/mechanized units. If 35 or more points of modified barrage strength (totalling all attacking/defending air and artillery) is expended on an urban hex in one turn, the hex will be turned into Rubble. Rubble hexes have all the defensive advantages of a city hex.



FACTORY



Similar to city terrain, but with more massive buildings of especially sturdy masonry construction. Factories make *ideal* defensive terrain.



CLEAR

This is open and relatively flat, with long grasses, a few scrub trees and bushes. Clear terrain is ideal tank country, providing an attacker, especially an armored one, plenty of room to maneuver. In addition, the open fields of fire and relative lack of cover combine to make these areas poor places to create a defensive line. Units defending in clear terrain receive no favorable combat modifiers, and units are not penalized for attacking into or out of clear terrain hexes.



AIRFIELD



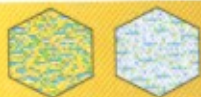
This is treated the same as a clear hex, but also contains an airfield (see 17.13).



WOODS



Large stretches of trees that hinder vehicular movement, but provide cover and concealment to units in a forest hex.



MARSH

Unless frozen, a marsh is very wet with extremely soft soil that will literally swallow any vehicles entering it. Infantry can get through (with difficulty), but vehicles can only enter (or exit) a marsh along a road or railroad. Artillery fire into a marsh is halved (since the soft soil absorbs much of the blast); armor and motorized units attacking into a marsh have their attack and armor strengths halved. Furthermore, *all* units attacking into a marsh have their final combat odds reduced by one, and all units attacking from a marsh have their attack and armor strengths halved. For infantry, this is due to the difficulties of moving, setting up, and operating the heavy weapons which form the core of their firepower. Motorized units are so penalized due to their restricted maneuver room.

Frozen marsh hexes are treated as clear terrain.





WATER



A large water obstacle. Since water can freeze and thaw, these can be used like clear hexes while frozen, but ferries are required to cross a water hex when it's not frozen.



FERRY

A ferry hex is a water hex (see above) marked with a series of red dots denoting the ferry crossing route, and are found only on the 400m/hex map. In order to transport troops and supplies across the Volga, the Soviets used an extensive series of ferries. For the purposes of movement and supply, ferry hexes are considered to be "land" terrain for Soviet ground units *only*, and movement across them may be plotted as for other hexes. (**EXCEPTION:** A unit may not "begin" ferry movement during a daylight turn.) Units on ferries may attack with strengths reduced to nearly nil, and are at extreme risk from air and artillery attack.





VOLGA RIVER

Dark blue "water" hexside (on the 3km/hex map, only).

A bridge to cross at any point until frozen. In the "Operation Uranus" scenario, there are two (non-Volga) "river" hexsides adjacent to the city of Stalingrad (see River, below), which allow troops to cross. These represent the Soviet ferry crossings. Once frozen, the Volga is treated as a regular river hexside.



RIVER



Light blue "water" hexside. Generally narrower and easier to cross than the Volga. Requires a bridge to cross unless frozen. Once frozen, Rivers do not impede movement, but do add an antitank bonus for units defending behind them.



BALKA



Long depressions, often with steep banks. These are essentially dried stream and river beds, and have the same effects on movement as a river hexside, except there is no effect on non-motorized units.



HILLSIDE

Hills represent slight elevation changes, which have military significance due to the flat, clear terrain around them. The “straight” side of the hill graphic is the “uphill” side. Units attacking uphill have their strength reduced by 25%, while units attacking downhill have their attack strength raised by 25%.





ROAD

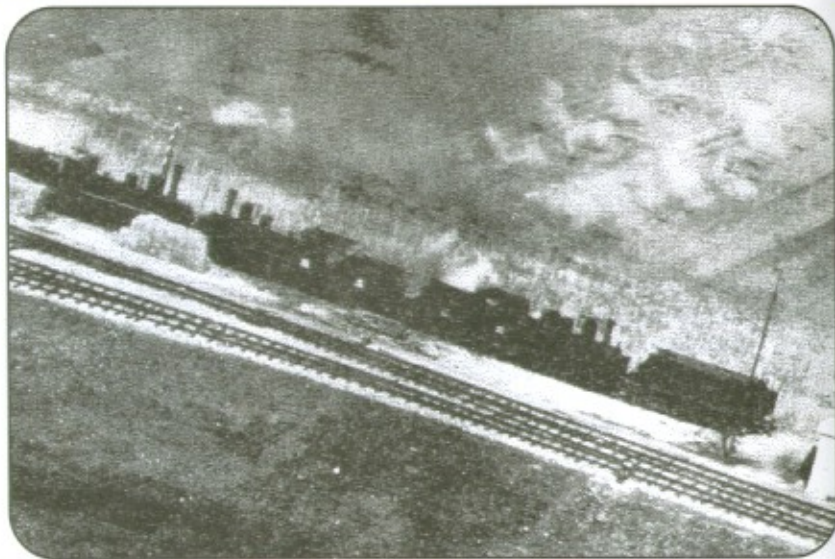


In the Soviet Union, these are quite primitive, offering little more than directional landmarks in the steppe. Units can move along roads more rapidly than in the open because roads provide a general sense of direction, along with a nominal road benefit. Road movement benefits are negated by mud.



RAILROAD

Similar to a road except that units move at a rate of one-third movement point per hex when following a rail line. Railroad movement is not affected by mud.



8.0 UNIT IDENTIFICATION

8.1 UNIT SIZES: Units in *STALINGRAD* can be Brigades, Regiments, Battalions or Companies, with each scenario having a different mix, depending on the scale. The 3km/hex scenarios ("Operation Uranus", "Manstein's Solution", and "Quiet Flows the Don"), have Brigades/Regiments and Battalions. Battalion-sized units are indicated by a diagonal stripe across the lower right-hand corner of the counter. The other scenarios have Battalions and Companies, Company-sized units being denoted by the diagonal stripe.

A full strength infantry regiment normally comprises three battalions, plus an antitank company and an infantry-gun company of regimental support weapons. Full strength infantry battalions contain 600 to 1,000 men, companies contain 100 to 200 men. Armor battalions (brigades, for Soviets) contain 40 to 60 tanks, companies 10 to 15 tanks. Antitank, anti-aircraft, and artillery battalions contain 8 to 24 guns, companies (batteries) have 4 to 6 guns. Each HQ unit represents several battalions of non-combat support troops (signals, medical, supply, maintenance, etc.). Each point of an HQ unit's defense strength represents approximately 1,000 troops.

8.2 UNIT COLORS: Nationality/type is delineated by the colors of the units.

★ SOVIET:

-  **Soviet Guard:** Dark red with white unit symbols
-  **Soviet Army:** Brown with white & black unit symbols
-  **Soviet Marine:** Purple with white unit symbols
-  **Ski Troops:** White with red unit symbols
-  **Soviet NKVD:** Brown with red unit symbols
-  **Factory Militia:** Dark red with white unit symbols



PSW 234/I, German eight-wheeled armored car

✚ III ✨ ✚ AXIS:

-  **German Army:** Gray with white & black unit symbols
-  **German Luftwaffe:** Blue with white & black unit symbols
-  **German Waffen SS:** Black with white unit symbols
-  **German Brandenburg Commando:** Gray with tan and black unit symbols
-  **Italian:** Gold with white & black unit symbols
-  **Italian Blackshirt:** Black with gold unit symbols
-  **Romanian:** Green with white & black unit symbols
-  **Croatian:** Gray with black & red unit symbols
-  **Cossacks:** Gray with pink & black unit symbols
-  **Turkoman:** Gray with blue & black unit symbols
-  **Turkistani:** Gray with green & black unit symbols
-  **Abwehr Cavalry:** Gray with orange & black unit symbols

8.3 UNIT SYMBOLS: There are two sets of unit symbols available. The default is a set of pictorial icons and the other style uses standard NATO military symbols like those used on organizational charts and situation maps. To toggle between the two sets of symbols, select "Military Symbols" from the Options menu.

Symbol	Icon†	Unit Type	Symbol	Icon†	Unit Type
		Antitank*			MG*
		Armor			Mech. Eng.
		Armored Engineer			Mech Recon*
		Armored Infantry			Motorcycle Inf.
		Artillery			Mountain Inf.
		Cavalry			Mountain Art.
		Construction Eng.			Rocket Art.
		Engineer			Security
		Headquarters*			S-P Artillery
		Heavy AA			Ski Infantry
		Infantry*			SS Police
		Light AA			Worker (Factory Militia)

† Some icons vary with nationality.

* Motorized versions of these units have "wheels" under the unit's NATO symbol and a dot in the upper right hand corner when using the pictorial icons.

8.4 UNIT DESIGNATIONS: Each unit has a historical unit designation, typically a number. This number may be a divisional, brigade, regimental, or battalion number, depending on the scenario's map scale and unit size.

★ HQ units display their division, brigade, or regiment numbers.

★ If a unit's lower left corner contains one or more dots, the unit's number is its regimental number. The number of dots indicates the unit's battalion (or company) number within the regiment.

★ If a non-HQ unit has no dots in its lower left corner, the number is the unit's own battalion or company number, which is sometimes the same as its divisional number.

8.5 INFORMATION GATHERING: If "Limited Intelligence" is selected from the Initial Options Screen, the first time an enemy unit is sighted, the game displays a marker which only shows whether the unit is an Axis or Soviet unit. "Dummy" units may also show up, and appear to be normal units.

8.51 INCREASING INTELLIGENCE: As more intelligence becomes available about an enemy unit, the game displays the unit's type (i.e. infantry, artillery, armor, etc.). When enough contact has been made with the enemy unit, its actual designation will appear. Information about enemy units appears in the Unit Bottom Box when an enemy unit is selected.

8.52 DECREASING INTELLIGENCE: During night turns, and/or if contact is lost with an enemy unit (or both), intelligence becomes less reliable, and you may begin to lose accuracy in information gained about the composition and status of enemy units. The sequence for increasing intelligence reverses, until the unit disappears from view. If the "Fog of War" option is being used (see 2.3), information about heavily fatigued and/or out of supply *friendly* units may be off by as much as +/- 25%, or not even available.

8.53 FACTORS INFLUENCING INFORMATION GATHERING: The following factors influence the information available about an enemy unit:

★ **AIR POWER:** In most scenarios you will have one or more Air Recon squadrons available (this may vary due to changing air levels). You can use these units to discover more about enemy units in a given area.

★ **CONTACT/ATTACK ORDER/FIRING:** Probing or assaulting an enemy unit will reveal some information. More information about an enemy unit becomes available as more friendly units move adjacent to the enemy unit, and the longer friendly units

remain in contact with the enemy unit. Artillery and anti-aircraft units reveal information about themselves to the enemy when they fire.

★ **FATIGUE AND DISORGANIZATION:** A unit with a high fatigue and/or disorganization level reveals more about itself to the enemy.

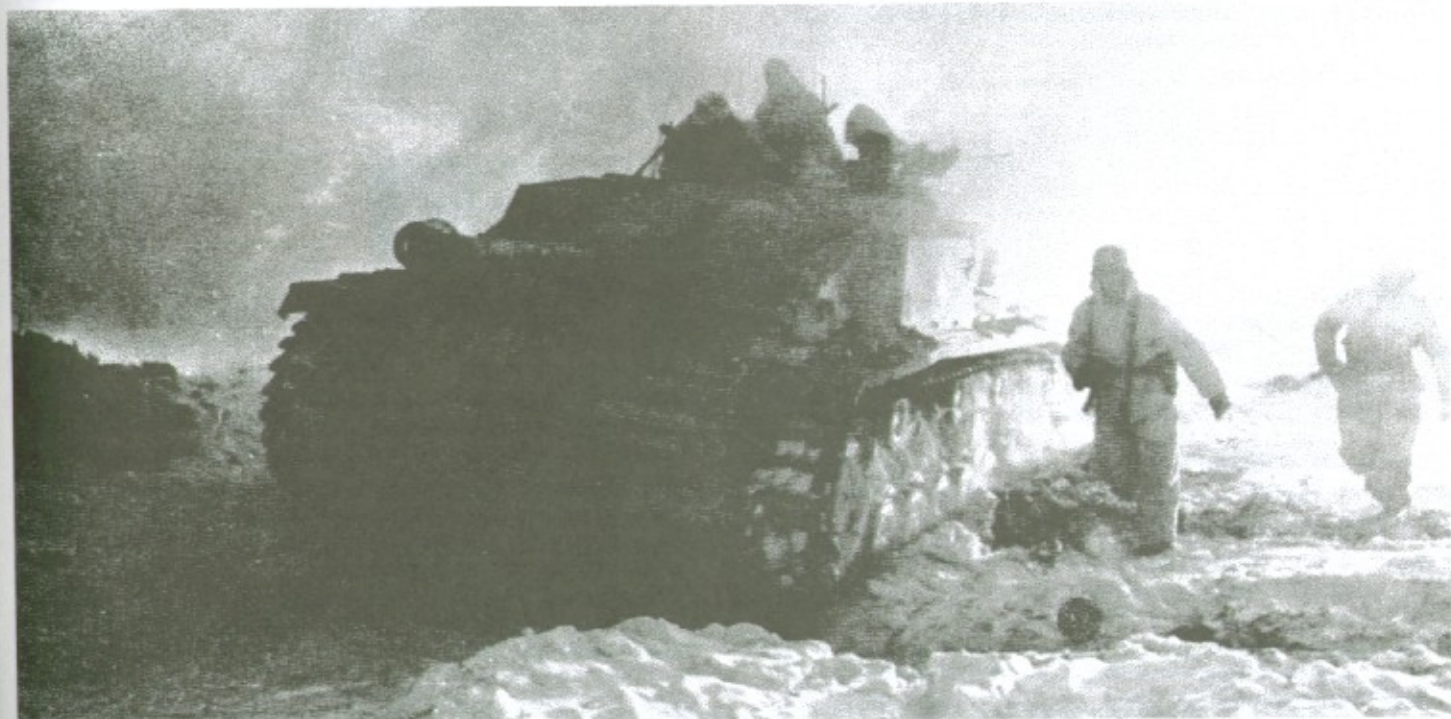
★ **TERRAIN:** It's harder to gather intelligence about units in urban terrain hexes than it is about units that are in more open types of terrain, so less information will be available on enemy units in urban terrain. Units that are dug-in or fortified reveal even less information about themselves.

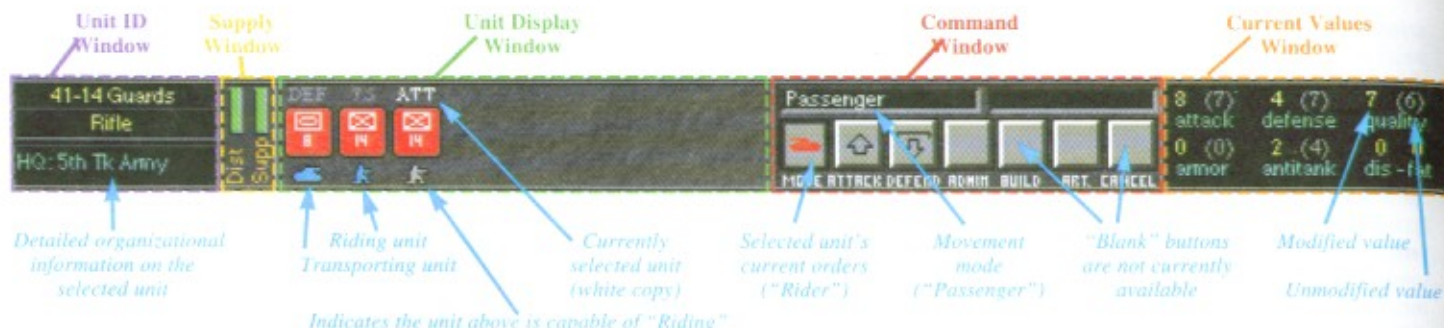
★ **TIME AND WEATHER:** When the night sky is darker (little or no moon) and/or the weather is bad, less information will be gathered about enemy units (see 24.0).

★ **UNIT SIZE AND TYPE:** It is harder to gather information on units of small size or high troop quality. It is easier to gather information on large units or stacks of units, units with low troop quality, armor and artillery units and HQ units. Reconnaissance units and units with high troop quality usually gain more information about an enemy, and reveal less information about themselves.



M9 halftrack, used in some Soviet mechanized infantry brigades





9.0 THE UNIT BOTTOM BOX

To open a Unit Bottom Box, select a unit or stack of units with the mouse and click on the mouse button. The Unit Bottom Box opens at the bottom of the screen, and displays information about *all* the units in the selected hex.

9.1 STACKED UNITS: If more than one unit is “stacked” in the same location, a depiction of each will appear in the Unit Display Window of the Unit Bottom Box when a unit in that location is selected. The unit on top of a stack is the left-most unit depicted. The currently *selected* unit has the letters or numbers above its unit depiction shown in white.

- ★ All data displayed in the Unit Bottom Box pertains only to the *selected* unit, and any orders are assigned only to that unit (**EXCEPTION:** the Unit Display Window contains some information for each unit depicted—see below).
- ★ To select a different unit, click on the desired unit in the Unit Display Window, or click on the stack on the map to cycle through the stack. The information on the right and left sides of the Unit Bottom Box (in the Unit ID and Unit Display Windows) will change to display information about the new unit, and any orders entered will be assigned only to that newly selected unit.

9.2 INFORMATION SHOWN: Each Unit Bottom Box has five distinct “subsections”, as listed below (from left to right):

- ★ **The Unit ID Window** lists, from top to bottom, the *selected* unit’s name (usually unit ID numbers), type, and parent HQ.
- ★ **The Supply Window** has two colored bars which indicate the supply status and supply line distance for the currently selected unit. The supply status directly influences a unit’s combat and

movement capabilities (“Attack” supply is the best, down to “No Supply,” the worst). The Supply Line distance color indicates how much of a unit’s supply request will actually be delivered. This ranges from Green (if the Superior HQ has the amount on hand, all of the request will be honored) to Black (the unit is unable to trace any line, and thus cannot receive supply tonnage from its Superior HQ).

	Green	Blue	Yellow	Red	Black
HQ Supply	Attack	General	Defensive	Minimal	No Supply
HQ Distance	100%	90%	75%	50%	none

- ★ **The Unit Display Window** shows all units in the selected location. If a unit is attacking or defending, “ATT” or “DEF” appears (respectively) above the unit. If a unit has been plotted to move, the number of movement points it has remaining instead appears above the depiction. A unit eligible to ride will have an infantry icon displayed below the unit; a unit eligible to transport a rider will have a tank icon displayed below the unit (see 14.6).
- ★ **The Command Window** has “buttons” that may be used to give the *selected* unit orders. Only a button with an icon currently displayed on it may be selected. See 9.3 for a more detailed discussion of the various orders available.
- ★ **The Current Values Window** displays the *selected* unit’s current attack, defense, troop quality, armor, antitank, disorganization, and fatigue values. The gray number in parentheses is the selected unit’s *unmodified* combat value and the other (brighter) number is its *current (modified)* value. Information for artillery

units is different than for other unit types. Below is an example of a Current Values Window for an artillery unit:

Ready	3 (6)	2 (2)
state	barrage	support
30	5 (5)	0 0
range	quality	dis - fat

An artillery unit's
"Current Values
Window"


9.3 THE COMMAND WINDOW appears in the Unit Bottom Box whenever a friendly unit or stack on the map is selected. To assign an action to a unit, select the desired action from the buttons available. The unit's current primary action is displayed at the top left of the box, and its secondary action (if any) is displayed at top right.




A typical "Command Window"


9.31 PRIMARY ACTIONS (ONE PER TURN):

MOVEMENT ACTIONS: Below is a summary of each movement action; see 14.0 for more detailed information.

 **Tactical Movement** is the recommended formation when contact with the enemy is expected (or feared). Security is increased, with a corresponding decrease in movement points.


 **Strategic Movement** is the recommended formation when a unit needs to travel a long distance, especially along roads and tracks, but is more dangerous when traveling in enemy-controlled territory. A unit conducting strategic movement is more open to attack by enemy air interdiction (see 17.1) and to an ambush (see 14.31).


 **Automatic (Auto) Movement** allows the Executive Officer to plot a path and choose a formation based on the distances involved.


 **Passenger Movement** allows a non-motorized (i.e., "foot") infantry unit to become a "Rider" on an armored unit and travel with that armored unit at the armored unit's movement rate. This icon *only* appears once a unit has become a passenger (also see 14.6).




ATTACK ORDERS: Below is a summary of each attack order. See section 15.0 for more information on the different attack types. **NOTE:** Artillery and headquarters units may *not* be given attack orders.

 **Probe** is a *low intensity* attack designed to gather information about an enemy's troop strength and readiness. It minimizes an attacking unit's losses, fatigue and disorganization effects.


 **Assault/No Advance** orders a *holding* attack designed to repulse an enemy without advancing. A victorious attacker will *not* advance after combat.


 **Assault** is a *standard* attack designed to dislodge an enemy and take his position. This is a heavy but balanced attack, with reserves kept back for emergencies.

 **All-Out Assault** is a *full-scale* attack designed to dislodge an enemy and to advance at whatever the cost.

DEFEND ORDERS: Below is a summary of each defensive stance; see 15.6 for more detailed information.

 **Retreat if Attacked** orders the defending unit will attempt to retreat before significant losses are incurred.

 **Defend if Attacked** orders the defending unit will attempt to stand its ground and make a determined defense.

 **Hold at All Costs** orders the defending unit to stand fast, holding its territory at all costs. It will take losses rather than retreat, depending on its troop quality.

9.32 SECONDARY ACTIONS: Below are the allowable Secondary Actions. See section 23.0 for more information on Improved Positions, and section 26.0 for information on taking replacements.



Dig-In orders the unit to use the protection of natural cover, and dig defensive positions (foxholes, trenches, etc.).



Fortify orders the unit to construct elaborate defenses. This order may be given *only* with the presence of an engineer unit in the hex. Only engineer units may fortify a hex, although other units may enlarge fortifications.



Replacements are available for a unit if this icon appears in the Unit Bottom Box. Clicking this icon will order to hold and take replacements.

9.4 ARTILLERY ACTIONS: An artillery unit is always setting up or ready to perform a fire mission (**EXCEPTION:** if on a ferry hex; 16.2). See 16.0 for more information on the different types of fire missions available.



The Ready Status of an artillery unit is displayed by the appearance of a "wrench" (i.e., the battery is still setting up and is not yet able to fire), or a "crosshairs" (i.e., the artillery unit is ready to be given a fire mission).

9.5 CANCELLING A MOVEMENT OR ATTACK ORDER:



The Cancel Button is used to cancel or alter a unit's given movement or attack order. Click on the unit's hex and select the unit in the Unit Bottom Box. The unit's current movement or attack orders will be displayed by arrows (red for an attack; blue or green for movement). Pressing the Cancel button will halt that unit's attack, or shorten its movement order by one hex each time the Cancel button is pressed. Alternatively, a unit's attack or entire movement order can also be cancelled by pressing the "Escape" key, or by giving the unit any defensive order. The unit can then be given a new set of movement orders by selecting the Move button, or it can be ordered to perform another non-movement action.

9.6 REVIEWING AND REVISING ORDERS: If a unit that has already been given orders is selected again during the Planning Phase, the unit's assigned orders appear in the Unit Bottom Box, and its movement and/or attack path is displayed on the map. Once a player is satisfied with a unit's given orders, the Unit Bottom Box can be closed by clicking on the map.

9.7 THE UNIT SIDEBAR: The Unit Side Bar gives information about the currently-selected unit, and is displayed only when the Unit Bottom Box is also active.

★ **Unmodified Strength Window:** If the unit is attacking, its unmodified attack and armor strengths are shown here, otherwise only its defense and antitank strengths are displayed.

★ **Info Box:** This has two possible displays: leader/movement-class or a modifiers' tree. To switch between the two displays, simply click on the info box in the SideBar.

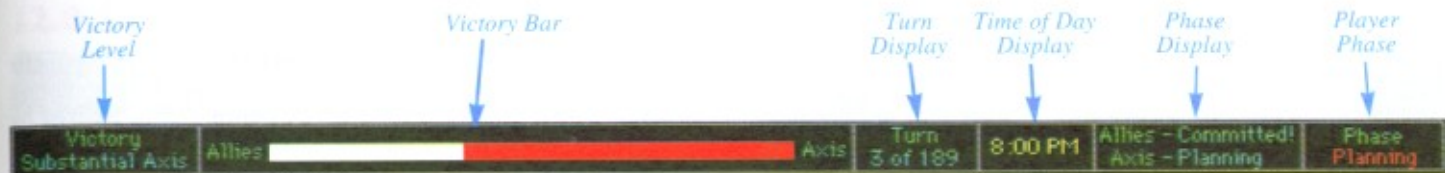
★ **Modified Strength Window:** As above, only the strengths shown are after modifications for supply, terrain, etc.



Leader/Movement-Class Display:

If a leader is attached to the unit (as above), his counter will be shown. The unit's movement class display corresponds to the rows in the terrain cost charts (see 14.12). **NOTE:** A unit with a movement class of "Mounted" is a cavalry unit, and uses the same terrain costs as a "Foot" unit. Units with the class "Horse" are horse-drawn and use the "Horse" row.

Modifiers Tree: This display contains two sets of lights for four of the most important strength modifiers (Supply Level, Terrain, Fatigue and Disorganization). If one of these elements is *raising* a unit's strength, a **green** light will appear; if affecting the unit for the worse, the light will be **red**. Otherwise, the lights remain gray.



10.0 STATUS BAR

The Status Bar allows you to quickly scan the victory level, turn, and progress of the current turn for both sides.

10.1 Victory Level: Displays the current Victory Level (Marginal, Substantial, Decisive), and the side which is winning (Axis, or Allies). See also 27.5.

10.2 Victory Bar: Graphically displays the points accumulated by both sides as a percentage. The Allies have a white bar, which starts on the left, and the Axis have a red bar, which starts on the right. At the start of each scenario, both sides are even (unless a VP adjustment has been made; see 27.11), so the overall bar will be half white and half red. As the game progresses, and VPs are awarded, the relative lengths of the white and red bars will be adjusted accordingly. *Example: It is turn two, and the Allies have scored 100 points, while the Axis have none. The white bar (Allied) will extend the entire length of the bar, while the red (Axis) bar will not be displayed.*

10.3 Turn Display: Shows the current turn, as well as the total number of turns in the Scenario.

10.4 Time of Day Display: Shows the starting hour of the current turn. Depending on the scale of the scenario being played, the possible times are:

1 km/hex & 400m/hex scenario: 6AM, 10AM, 2PM, 6PM, 10PM
3km/hex scenario: 4AM, 12PM, 8PM

10.5 Phase Display: Shows the current phase for both sides.

Planning The player is plotting his moves

Thinking The Executive Officer is plotting moves

Committed! The player or AI is ready to Execute

10.6 Player Phase: This shows the current phase for the current player. "Thinking" will flash on and off to let you know the AI is working if the game is waiting for either your Executive Officer or the opposing AI to complete their plotting for the current turn.



11.0 STACKING



More than one friendly unit may be located in a hex at the same time. Having multiple friendly units together in a hex is known as “stacking”. A stack may only contain friendly units—Axis and Soviet units may *never* stack together in the same hex.



striped



non-striped

11.1 STACKING POINTS: The number of friendly units which may stack together in the same hex is limited to nine “stacking points” per hex, *regardless* of the terrain. Because of the varying scales of the scenarios in **STALINGRAD**, unit size varies from regiments to battalions to companies. Units with a stripe in the lower right corner *always* count as one stacking point; all non-striped units count as three stacking points. (**EXCEPTION:** In the two 400m/hex scenarios [“To the Volga” and “Rattenkrieg”] non-striped units count as four stacking points.)

STACKING POINTS CHART†

Map Scale	Unit Size		
	Regt/Bde	Battalion	Company
3km/hex	3	①	—
1km/hex	—	3	①
400m/hex	—	4	①

† The number indicates the stacking points of the listed unit. If the number is circled, that unit type has a stripe in all scenarios of that scale.



EXAMPLE OF A STACK (1km/hex scale): The stack contains two battalions and three companies (3+3+1+1+1=9 stacking points—the maximum stacking limit for this scale). The adjacent Light Flak company (1 stacking point) may not enter the hex.

11.2 STACKING EFFECTS ON MOVEMENT: Stacking limits are only enforced during the Execution Phase. A unit may be assigned to move into a hex occupied by enemy units, blocked by enemy ZOC, or stacked to capacity with friendly units. However, a unit assigned to move in violation of stacking restrictions (see 11.0) will be unable to complete its orders during the Execution Phase until stacking restrictions are no longer violated. *For Example:* A friendly unit cannot enter an enemy-occupied hex until the enemy unit is dislodged as a result of combat. An HQ unit ordered to move into a city hex already occupied by eight stacking points of friendly units will not move into that hex unless one of the other units moves out of the hex during the Execution Phase.

11.3 STACKING EFFECTS ON COMBAT: Normally, only two non-“striped” (six stacking points) of the stacking points in a hex can be used to attack or defend at full strength. *For Example:* If a hex has three non-“striped” (nine stacking points), only two of those battalions (six stacking points) can use their full attack or defense strengths to engage in combat. This limitation represents the fact that only so many men could attack or defend across the front line of a given hex. Units in a hex which do not fully participate in combat due to this limitation still exert a normal ZOC into adjacent hexes (they are watching the flanks and guarding the rear). Units stacked in excess of the two-thirds stacking limitation cannot participate fully in combat or its aftermath unless:

- ★ The extra unit in a stack is an artillery unit, in which case the artillery unit can conduct fire missions normally.
- ★ The stacked hex is subject to an artillery or air attack, in which case the enemy attack affects all of the units in the hex.
- ★ A combat results in an advance, in which case an *entire* stack may advance, even a unit(s) which did not participate in the attack.
- ★ A combat results in a retreat, in which case the *entire* stack must either retreat and/or suffer losses. Units which did not participate in the defense of the hex must also retreat, and they may also suffer losses.
- ★ If more than two-thirds of a hex’s stacking limit is assigned to attack, the attack is conducted using the fraction of the total attack strength that corresponds to 2/3 of the stacking limit (usually 6/7, 3/4, or 2/3, for 7, 8, and 9 stacking points, respectively).
- ★ The hex is subject to an Overrun attack, in which case the defensive values of all units in the hex are totaled, and all units are subject to the effects of the Overrun (i.e., elimination).

12.0 ATTACHMENT



Unit attachment restrictions enhance the realism of the game by putting players under some of the same restrictions faced by military leaders in a military command structure. Generals Manstein and Chuikov never enjoyed the level of command flexibility that players enjoy in the game. This is especially true when it comes to coping with sudden changes and unexpected events on the battlefield. Coordinating the actions of many different units, and dealing with the individual wishes and actions of superiors, peers, and subordinates can severely affect a general's ability to command effectively. To illustrate the complexities of command and supply, each HQ and combat unit in the game is always attached to a headquarters (HQ) unit, and is part of that HQ's command formation for all purposes. The only exceptions are Army (German) and Front (Soviet) HQs, which are the highest-level HQs represented in the game.

12.1 ATTACHMENT RESTRICTIONS: There are limits on attaching units to headquarters.

12.11 HQ COMMAND SPAN: Each HQ in the game has a limit to the number of combat units and subordinate HQs which it can reasonably control and provide supply for. The exact number is dependent on the HQ's nationality and type. To aid you in determining the current status of an HQ's Span, there is a field in the unit data in the Order of Battle Box which graphically displays this information. If an HQ is already at its attachment limit, the "Attach" button will remain blank on the HQ Sidebar.

- ★ Only other HQs, infantry and armored units count against a HQ's Command Span.
- ★ HQs may only be attached to HQs which are at a *higher* level; i.e., a divisional HQ may be attached to a Corps or Front HQ, but may not be attached to a divisional or brigade HQ. For the purpose of this rule, Soviet mechanized/tank corps, while labeled corps, are considered to be divisional-level.

12.12 TIME AND TYPE LIMITATIONS: There are limitations on the flexibility of attachment, depending on the time of day.

- ★ Out of Supply units are *always* free to attach.
- ★ With the exception of the above, units may *not* be attached in the morning (4 AM or 6 AM, depending on the scenario).
- ★ On other day turns, units may be attached "down" one step along the chain of command. *For Example: A unit attached to a Front*



HQ could be reattached to an army HQ subordinate to it.

- ★ There are no time or type restrictions on attaching at night.

12.13 ATTACHMENT FLEXIBILITY: A unit may be attached to any friendly HQ unit, within the above limits, regardless of the unit's official name or historical attachment. A brigade HQ may be attached to a different division, corps or army HQ units—it need not maintain its original attachment. Likewise, a divisional, corps or (Soviet) Army HQ may be reattached (within the restrictions of 12.11-.12).

12.2 ATTACHMENT PROCEDURES: Attaching does not affect the Supply Levels of any of the involved units/HQs. The supply path of the unit/HQ being attached will be changed to correspond to the distance to the new Superior HQ. If the unit you wish to reattach has met the time/type restrictions, and the new HQ has sufficient command span, the Attach button in the Side Bar will be selectable.

12.21 ATTACHING COMBAT UNITS: To change a combat unit's attachment:

- ★ Select the HQ Tool Bar Button, then
- ★ Select the unit's new HQ, then
- ★ Select the unit you wish to reattach, and
- ★ Select the "Attach" button.

12.22 ATTACHING HEADQUARTERS: To attach a HQ to a different Superior HQ:

- ★ Select the HQ Tool Bar button then
- ★ Select the new Superior HQ using the HQ Arrow Buttons then
- ★ Hold down the shift key and
- ★ Click on the HQ you wish to reattach.

13.0 LEADERS

In *STALINGRAD*, "leadership" represents intellect, training, motivation, daring, and resource management abilities. While the deeds of many great leaders may never be known, some gain fame and notoriety due to success on the battlefield. These are the leaders that are portrayed in *STALINGRAD*.



13.1 LEADERSHIP BENEFITS: Each leader has been given an attack bonus and a defense bonus, ranging from 0 to +3. By assigning a leader to a combat unit, you also assign his bonuses to that unit. To do this, first open the Leader Box (see 4.5). Then, select a combat unit and click on the "Assign" button in the Leader Box. The leader is now assigned to the selected unit until reassigned (using the above procedure), or until that unit is destroyed. If more than one leader is assigned to units which are involved in a single combat, the game will use whichever leader it "finds" first—multiple leader bonuses in a single combat on the same side are not allowed.

NOTE: A leader cannot be assigned to an artillery unit.

13.2 GAME LEADERS: There are twelve leaders in *STALINGRAD*. Each scenario has a different mix of leaders available, depending on the units involved.

★ The Soviet leaders ★

CHUIKOV, Vasilii Ivanovich (1900-1982)

May only be assigned to a unit subordinate to the 62nd Army



Chuikov was a regimental commander during the Russian Civil War who joined the Soviet Army in 1918 and graduated from the Frunze Military Academy in 1925. Between the wars, he served as a military advisor in China and from 1939-40 he commanded the 9th Army in the "Winter War" with Finland. Due to his ineptitude in this post, Chuikov was again sent to China as a military advisor. He was later given a command behind the lines so as to free better officers for the front. It was quite by chance that this command placed him at Stalingrad. His mission at Stalingrad was to hold the

city at all costs and this order eminently suited his command style and enabled him to salvage his career. From September 1942 until the end of the war he commanded the 62nd Army (which was later redesignated the 8th Guards Army). Many in the military do not consider him a brilliant strategist, however he compensated for his lack of intellect with ambition and determination. He was twice decorated Hero of the Soviet Union (1944, 1945) and ultimately rose to the rank of Marshal of the Soviet Union (1955).

EREMENKO, Andrei Ivanovich (1892-1970)

May only be assigned to a unit subordinate to the Southwest Front



A veteran of World War I, Eremenko joined both the Soviet Army and the Communist Party in 1918. During the Russian Civil War, he was chief of staff in a cavalry brigade and in 1935 he graduated from the Frunze Military Academy. During WWII, he commanded the Western and Briansk Front's 4th Shock Army. At Stalingrad, he was commander of the South-Western Front, including the 5th Tank Army and the 21st Army, and was successful in smashing the Rumanian 3rd Army. He was made a Hero of the Soviet Union in 1944 and rose to the rank of Marshal of the Soviet Union in 1955. Josef Stalin had great faith in Eremenko, and often accepted his ideas without question.

RODIN, Alexei Grigorovich (1902-1955)

May only be assigned to a unit subordinate to the 26th Tank Corps



Hardened by his experiences in the Russian Civil War, Rodin joined the Soviet Army in 1920. In 1937 he attended the Military Mechanized and Motorized Academy of the RKKA (Workers & Peasants of the Red Army) and from 1939-1940 commanded an armored division in the Russo-Finnish War. At Stalingrad, Rodin commanded the 26th Tank Corp, which was instrumental in the Russian breakthrough on the Axis northern wing. In 1943, Rodin rose to command the 2nd Tank Army and was later made a Hero of the Soviet Union. At the end of WWII he was placed in charge of the armored and mechanized forces for all the military districts and was also in charge of the preparedness efforts throughout the Red Army. The highest rank Rodin held was that of Colonel General of Tank Troops.

LELYOUSHENKO, Dmitrii Danilovich (1901-1987)

May only be assigned to a unit subordinate to the 3rd Guards Army



Lelyoushenko is considered to be one of the Red Army's finest World War II tank commanders. He joined the Soviet Army in 1919, and graduated from the General Staff War College in 1939. At Stalingrad, Lelyoushenko commanded the 1st and 3rd Guards Armies and was credited with routing the Italians during Operation Little Saturn. After World War II he served as commander of the Unified Army and Mechanized Forces in Germany. Lelyoushenko was twice made a Hero of the Soviet Union (1940, 1945).

PLIEV, Issa Alexandrovich (1903-1979)

May only be assigned to a unit subordinate to the 3rd Gds Cavalry Corps



Pliev joined the Soviet Army in 1922 and graduated from the General Staff War College in 1941. During World War II, Pliev commanded the 1st Guards Cavalry Division and during the Stalingrad Campaign he was commander of the 3rd Guards Cavalry Corps, responsible for exploiting the breach in the line north of Stalingrad held by the 3rd Rumanian Army. He was twice made a hero of the Soviet Union (1944, 1945) and rose to the rank of Full General in 1962.

ROKOSSEVSKII, Konstantin Konstantovich (1896-1968)

May only be assigned to a unit subordinate to the Don Front



During World War I, Rokossovskii was the commander of the 5th Kargopolsky Dragoon Regiment of the 5th Cavalry Division. He saw action during the Russian Civil War, but his career suffered a severe setback in 1937 when he was arrested and tortured during Stalin's purges. The case against him was dropped in 1941 when he was appointed commander of the Briansk Front. At Stalingrad, he commanded the Don Front which was charged with crushing the German-held pocket around Stalingrad—a task he deftly accomplished. After the war, Stalin appointed him Polish Minister of Defense. Rokossovskii was twice made a Hero of the Soviet Union (1944, 1945) and rose to the rank of Marshall of the Soviet Union in 1944.



The Axis leaders



von MANSTEIN, Erich (1887-1973)

May attach to any German or Romanian (non-artillery) unit



Manstein joined the Royal Prussian Cadet Corps at the age of twelve and proved a quick study. In 1906 he joined the 3rd Guard Infantry Regiment of the German Imperial Army and in 1914 was made a lieutenant in the 2nd Reserve Foot Guards, serving there on the Eastern Front until he was severely wounded. At the start of World War II, Manstein masterminded the invasions of Poland, the Low Countries and France although most of the credit for these plans fell to von

Rundstedt and Hitler. In 1941, Manstein was given command of the 11th Army which was later moved to the Leningrad area to complete the siege of that city. As the 6th Army was being encircled at Stalingrad, Hitler recalled Manstein to the Southern Front to stabilize it and lead the relief attempt. The resulting winter campaign of 1942-1943, in which he was given much freedom of action, proved him to be one of Germany's most brilliant strategists. Manstein held command of Army Group South until March of 1944 when he was retired by Hitler and sat out the rest of the war at Celle, France.

HOTH, Herman (1891-1976)

May attach to a unit subordinate to the 57th Panzer Korps



During his service with the *Wehrmacht*, Hoth commanded *Infanterie Division 18* beginning in 1935, and was promoted to command the *XV Korps* during the Polish Campaign. In 1940 he commanded *Panzergruppe Hoth* with the 5th and 7th Panzer divisions under his control. His quick dash to the sea through the Ardennes was the blow that destroyed the resistance of the Western Allied Armies. After this success he was given command of *Panzer Gruppe 3* for the invasion of

Russia. He was very successful in the opening days of the offensive and took part in the battles on Minsk, Smolensk, Vyazma, and Moscow before the Russian winter turned the tables on the Nazi invaders. He was then moved south for the second campaign season and took command of the *Panzer Army 4* for the drive into the Caucasus. His command was split on numerous occasions and he

saw action from Voroshilovsk, in the oil-rich Kaylmuck steppe, to Stalingrad on the Volga. After the 6th Army (with one Korps from the 4th Panzer Army) was encircled at Stalingrad, Hoth joined his fragmented command with von Manstein's forces to try and relieve the pocket. After being turned back, Hoth took the 4th Panzer Army to the Ukraine and scored an impressive victory during the third battle of Kharkov against the over-extended Russian forces of the Russian 6th Army and Armored Group Popov. He reached his zenith as a commander when he commanded the largest German armored concentration in history during the battle of Kursk. After that battle he commanded the withdrawal across the Dnieper but was later dismissed by Hitler for a "defeatist attitude" and spent the remainder of the war in retirement.

PAULUS, Friedrich (1890-1951)

May attach to any unit subordinate to the 6th Army



Friedrich Paulus was born a member of the German "middle class" but sought status at an early age by applying to the German Navy, and later by applying and being accepted into the Army. In 1917 he was moved to the general staff where he gained a reputation for great detail in drawing up orders. During the period between the wars, and during the early years of World War II, Paulus held many staff positions and was given the task of drafting the plan for the attack

on Russia. At the beginning of 1942 Paulus was given command of the German 6th Army and was quickly thrust into the series of tactical mistakes that would end in disaster on the Volga a year later. Paulus was captured by the Soviets on 31 January, 1943, in the rubble of his Stalingrad headquarters. From then until the end of the war, Paulus led an anti-Fascist league of German officers. He returned to East Germany in 1952 and died five years later.

RAUS, Erhard (1893-1956)

May attach to any unit of the 6th Panzer Division

Erhard was an Austrian by birth and joined the German Army after the Austrian Army was absorbed into it in 1938. He was Chief of Staff of the XVII Korps in 1939, commanded the Infantry Regiment 243 in 1940, and commanded the 6th Rifle Brigade of the Panzer Division 6 in 1941 for a short time until he assumed command of the entire division in early 1942. He commanded the 6th Panzer Division during the relief attempt on Stalingrad and Operation

Wintergewitter (Winter Storm) and was instrumental in sealing off a Russian tank breakthrough around Tatsinskaya. Later in the war he held command of the II Korps, the XLVII Korps, the 4th Army and both 1st and 3rd Panzer Armies. He was also acting commander of Army Group North-Ukraine in the summer of 1944.

von SENGER und ETTERLIN, Frido (1891-1963)

May attach to any unit of the 17th Panzer Division



After completing reserve training ca. 1910, Senger began studies at Freiburg University and went on to become a Rhodes scholar at St. John's University at Oxford. His World War I service was done on the Western Front as an artillery officer and he received a staff appointment at the end of the war. Early in World War II he commanded Cavalry Regiment 22 in Poland, the 1st Cavalry Brigade in the Netherlands and was the head of the German delegation

to the Italo-French Armistice Commission. In the Autumn of 1942 he took command of the 17th Panzer Division on the East Front and participated in the relief attempt at Stalingrad. He also led the Panzer Division 17 at Kursk but was soon transferred to Sicily as commander of the 14th Panzer Corps. He remained in Italy until the end of the war where he was to serve as the chief negotiator for the surrender of German forces in Italy. In 1952 he was instrumental in the drafting of the "Himmeroder Denkschrift" which was the plan for German rearmament under the Adenauer Government.

JANECKE (1888-?)

May attach to any unit of the 389th Infantry Division

Generalleutnant Jänecke, a close friend of Paulus, was the commander of the Hessians of Infantry Division 389. He had just earned the Knight's Cross for leading his men from the Don to Stalingrad with much skill and dash. During the October assaults on the factories, Jänecke commanded a powerful *kampfgruppe* of tanks, infantry and artillery that bore his name. In November he took over command of IV Corps. Wounded in battle in November, Jänecke was mercifully flown out of the doomed pocket and later commanded the Eleventh Army in the Crimea.



14.0 MOVEMENT

There are three types of movement (tactical, strategic and automatic) available on the movement button in the Command Window. A fourth type of movement (passenger) becomes available when certain conditions are met (see 14.6). Another movement option, HQ Movement, is available through the HQ Button (see 14.5).

14.1 BASIC MOVEMENT RULES: Each unit has a movement allowance (expressed in "movement points") which appears in the Command Window when the unit is selected.

14.11 EXPENDING MOVEMENT POINTS:

- ★ A unit expends movement points each time it moves from one adjacent hex to another. The cost to enter *and* exit each hex is deducted from the unit's available movement points as it moves from hex to hex. The Command window displays the number of movement points the unit has remaining.
- ★ The terrain type of a hex will affect how many movement points a unit must expend to enter the hex. The same terrain may cost some units more points to enter than other units. Some units are not able to enter or cross certain terrain types at all; e.g., armored and motorized units cannot enter a marsh hex unless they move along a road. Note that some HQ and artillery units have low movement point allowances. This is due to the heavy equipment and support facilities these units have to carry with them.

- ★ Movement points do not accumulate from one turn to the next, and they cannot be transferred from one unit to another.
- ★ All movement point costs are cumulative.
- ★ Mounted units have the same movement point cost as "foot" units.

14.12 TERRAIN COST CHARTS: The following charts list the number of movement points (or fraction thereof) that a unit must expend to enter *and* exit the given terrain type. *For example:* A "foot" type unit must expend 1/2 MP to enter and 1/2 MP to exit a clear terrain hex when normal ground conditions are in effect. A "0" means that terrain type may not be entered by the specified unit when that ground condition is in effect. A separate chart is given for each of the five different ground conditions.

TERRAIN COSTS CHART										
Normal Ground Conditions										
Unit Type	Clear	Forest	Marsh	Village	Factory	Water	City	Ferry	Rubble	Suburb
Foot	1/2	1	2	1/2	1/2	0	1/2	1/4	1/2	1/2
Non-Mot. HQ	1/2	1	0	1/2	1/2	0	1/2	1/4	1/2	1/2
Ski	1/2	1	2	2	1/2	0	1/2	1/4	1/2	1/2
Horse	1/2	1	0	1/2	1/2	0	1/2	1/4	1/2	1/2
Bicycle	1/2	1	2	1/2	1/2	0	1/2	1/4	1/2	1/2
Motorcycle	1/2	1	0	1/2	1/2	0	1/2	1/4	1	1/2
Truck	1/2	1	0	1/2	1/2	0	1/2	1/4	1	1/2
Mot. HQ	1/2	1	0	1/2	1/2	0	1/2	1/4	1	1/2
Armored Car	1/2	1	0	1/2	1/2	0	1/2	1/4	1	1/2
Tracked	1/2	1	0	1/2	1/2	0	1/2	1/4	1	1/2

TERRAIN COSTS CHART										
Light Mud Ground Conditions										
Unit Type	Clear	Forest	Marsh	Village	Factory	Water	City	Ferry	Rubble	Suburb
Foot	3/4	1 1/2	2 1/2	3/4	1/2	0	1/2	1/4	1	3/4
Non-Mot. HQ	1	2 1/2	0	3/4	1/2	0	1/2	1/4	1	3/4
Ski	3/4	1 1/2	2 1/2	3/4	1/2	0	1/2	1/4	1	3/4
Horse	1	2 1/2	0	3/4	1/2	0	1/2	1/4	1	3/4
Bicycle	3/4	1 1/2	2 1/2	3/4	1/2	0	1/2	1/4	1	3/4
Motorcycle	1	2 1/2	0	3/4	1/2	0	1/2	1/4	2	3/4
Truck	1	3 1/2	0	3/4	1/2	0	1/2	1/4	2	3/4
Mot. HQ	1	3 1/2	0	3/4	1/2	0	1/2	1/4	2	3/4
Armored Car	3/4	2 1/2	0	3/4	1/2	0	1/2	1/4	2	3/4
Tracked	3/4	2 1/2	0	3/4	1/2	0	1/2	1/4	2	3/4

TERRAIN COSTS CHART
Light Freeze Ground Conditions

Unit Type	Clear	Forest	Marsh	Village	Factory	Water	City	Ferry	Rubble	Suburb
Foot	1	1 1/2	1 1/4	1/2	1/2	0	1/2	1/4	1	1/2
Non-Mot. HQ	1	2 1/2	0	1/2	1/2	0	1/2	1/4	1	1/2
Ski	1	1 1/2	1 1/4	1/2	1/2	0	1/2	1/4	1	1/2
Horse	1	2 1/2	0	1/2	1/2	0	1/2	1/4	1	1/2
Bicycle	1	1 1/2	1 1/4	1/2	1/2	0	1/2	1/4	1	1/2
Motorcycle	1	2 1/2	0	1/2	1/2	0	1/2	1/4	2	1/2
Truck	1	3 1/2	0	1/2	1/2	0	1/2	1/4	2	1/2
Mot. HQ	1	3 1/2	0	1/2	1/2	0	1/2	1/4	2	1/2
Armored Car	1	2 1/2	0	1/2	1/2	0	1/2	1/4	2	1/2
Tracked	1	2 1/2	0	1/2	1/2	0	1/2	1/4	2	1/2

TERRAIN COSTS CHART
Hard Freeze Ground Conditions

Unit Type	Clear	Forest	Marsh	Village	Factory	Water	City	Ferry	Rubble	Suburb
Foot	1/2	1	1/2	1/2	1/2	0	1/2	1/4	1/2	1/2
Non-Mot. HQ	1/2	2	1/2	1/2	1/2	0	1/2	1/4	1/2	1/2
Ski	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/4	1/2	1/2
Horse	1/2	2	1/2	1/2	1/2	0	1/2	1/4	1/2	1/2
Bicycle	1/2	1	1/2	1/2	1/2	0	1/2	1/4	1/2	1/2
Motorcycle	1/2	2	1/2	1/2	1/2	0	1/2	1/4	2 1/2	1/2
Truck	1/2	3	1/2	1/2	1/2	0	1/2	1/4	2 1/2	1/2
Mot. HQ	1/2	3	1/2	1/2	1/2	0	1/2	1/4	2 1/2	1/2
Armored Car	1/2	2	1/2	1/2	1/2	0	1/2	1/4	2 1/2	1/2
Tracked	1/2	2	1/2	1/2	1/2	0	1/2	1/4	2 1/2	1/2

TERRAIN COSTS CHART
Deep Snow Ground Conditions

Unit Type	Clear	Forest	Marsh	Village	Factory	Water	City	Ferry	Rubble	Suburb
Foot	1	1 1/2	1	1	1	1	1	1/4	1	1
Non-Mot. HQ	2	3 1/2	2	1	1	2	1	1/4	1	1
Ski	1/2	1	1/2	1/2	1/2	1/2	1/2	1/4	1	1/2
Horse	1	3 1/2	2	1	1	2	1	1/4	1	1
Bicycle	1	1 1/2	1	1	1	1	1	1/4	1	1
Motorcycle	2	4 1/2	2	1	1	1 1/2	1	1/4	3	1
Truck	1 1/2	4 1/2	2	1	1	2	1	1/4	3	1
Mot. HQ	2	4 1/2	2	1	1	2	1	1/4	3	1
Armored Car	1 1/2	3 1/2	1 1/2	1	1	1 1/2	1	1/4	3	1
Tracked	1	3	1	1	1	1	1	1/4	3	1

14.13 HEXSIDE TERRAIN COST CHARTS: The following chart lists the number of movement points (or fraction thereof) that a unit must expend to cross the noted hexside terrain type.

HEXSIDE TERRAIN MOVEMENT COSTS CHART

Hexside Type	Effect on Movement
Volga hexside	Impassable
Volga hexside (frozen)	No effect
River hexside	
Motorized	Impassable
Non-Motorized	+3 MP
River hexside (frozen)	no effect
Road across River hexside	
Tactical Mode	+1/2 MP
Strategic Mode	no effect
Up Hill or Down Hill	
Foot, Ski, Tracked, Armored Car in mud	+1 MP
Other types in mud	+2 MP
Foot, Ski, Tracked, Armored Car in other	+1/2 MP
Other unit types in other conditions	+1 MP
Balka hexside	
Motorized in Heavy Snow or Mud:	+2 MP
Motorized in other conditions	+1 MP
Non-Motorized in Heavy Snow	+1 MP
Non-Motorized in other conditions	No effect



14.14 MOVEMENT PROCEDURES: The easiest method allows the game's Executive Officer to calculate and plot a move as a series of arrows leading to the destination hex (see 14.2 and 14.3 for more detailed ways for you to issue more specific orders). However, to have more control over a unit's move, you may also plot the move manually.

★ **DRAG & DROP:** Select the unit or stack (select an entire *stack* by holding down the *Shift* key when dragging), then select the tactical or strategic (as desired) movement button in the Command Window. **NOTE:** The Executive Officer will use the movement mode currently displayed in the Command Window when he plots the move. Drag the unit/stack to the desired location, and release the mouse button. A series of **green** (tactical) or **blue** (strategic) movement arrows will appear illustrating the movement type and path the unit(s) intends to follow. To change the displayed move, simply repeat the process with a different destination hex. The new orders will override the previous. Alternatively, plot each unit's move manually (see below). This "Drag & Drop" method is recommended when the exact path a unit takes to reach the desired destination is not critical.

- ★ **MANUAL:** Select the unit (a stack may not be moved using this method), then select the Tactical or Strategic (as desired) movement button in the Command Window. Then, *while depressing the Command key (Mac) or Alt key (IBM)*, click on a hex adjacent to the unit and a movement arrow will appear. Continue to plot the movement path for the unit by clicking in a "chain" of hexes.

IMPORTANT! You must have the Command/Alt key depressed to manually plot a move. This method is recommended when you must have control over the exact path a unit takes to reach its destination.

14.15 EXTENDING A MOVEMENT PATH: A unit's plotted movement path can be extended by adding new arrows to the end of the displayed movement path, one hex at a time. To do so, hold down the Command key (Mac) or the Alt key (PC) and click in the additional hexes, starting at the end of the current path. The cursor changes to an "X" if the unit does not have enough movement points remaining to enter the next hex.



14.16 SHORTENING A MOVEMENT PATH: To shorten a unit's plotted movement path, click on the unit's hex and select the unit in the Unit Bottom Box. Each click on the Cancel button in the Command Window will shorten the unit's movement path by one hex. Alternatively, a unit's attack or entire movement order can also be cancelled by pressing the "Escape" key, or by giving the unit any defensive order. The unit can then be given a new set of movement orders by selecting the Move button, or it can be ordered to perform another non-movement action.

14.17 VARIABLE MOVEMENT: Circumstances can change movement allowances and/or movement costs.

★ **DECREASED MOVEMENT ALLOWANCES:** Movement allowances may be decreased by fatigue, disorganization, or a unit's supply status. Each point of fatigue or disorganization decreases a unit's movement allowance by 2%. In addition, movement allowances for mechanized and motorized units are halved when in Defensive Supply, reduced by two-thirds when in Minimal Supply and quartered when in No Supply.

★ **MOVEMENT COSTS – NIGHT AND BAD WEATHER:** To reflect the difficulty and dangers involved with moving at night, movement costs for all non-road/rail terrain are doubled during night turns, and road/rail movement costs are usually increased by 50%. (EXCEPTION: If there is a full moon and the weather

is either clear, light overcast, or moderate overcast [see 24.0], movement costs for all non-road/rail terrain are increased by 50%, but road movement costs are unaffected.) Road movement costs during daylight turns are not affected by weather.

14.18 MOVEMENT POSSIBILITIES: Any movement orders may be assigned as long as they are *theoretically* possible; however, prohibited moves will not occur during the Execution Phase. *For Example: A friendly unit may be assigned to move into a hex that is occupied by enemy units, blocked by enemy ZOC, or already at its stacking limit, but the unit will not enter the hex until the condition preventing it from doing so is corrected (i.e. the enemy unit moves away or is dislodged by combat, etc.).* If the turn ends before the movement becomes possible, the movement orders will remain in effect next turn unless they are changed, cancelled, or executed.

14.19 MOVEMENT RESTRICTIONS: A unit may always move one hex per turn, regardless of movement point allowances or costs, unless:

- ★ The unit is motorized and is in a No Supply status.
- ★ The unit is plotted to enter or cross prohibited terrain.
- ★ The move would violate stacking limits.
- ★ The move is into a hex containing an enemy unit, and the friendly unit is unable to conduct an overrun (see 14.7).
- ★ The move is from one strong enemy ZOC directly into another strong ZOC belonging to the same enemy unit (see 18.0).



14.2 TACTICAL MOVEMENT: Tactical movement represents a combat-ready movement formation. Units using tactical movement move slowly and make use of available cover. Units making tactical moves do not gain any benefit from roads. Tactical movement allowances range from 6 (average foot infantry) up to 16 (most motorized units).

In the illustration at right, the green arrows identify the movement as "tactical".



14.21 TACTICAL MOVEMENT RESTRICTION:

★ **Stop At An Enemy ZOC:** Units using tactical movement must stop for the turn as soon as they enter an enemy "strong" ZOC regardless of the presence of friendly units or friendly ZOC.


14.22 DRAG & DROP OVERRIDE: When using the "Drag & Drop" movement method (14.12), the Executive Officer will plot a the move of your unit(s) *around* enemy units and their ZOC. However, there are times when you may wish him to ignore the presence of an enemy unit(s) and have the move plotted *through* the enemy-occupied hex or ZOC. To do this, make sure the unit is not in Strategic movement mode, then:

- ★ Hold down the Command/Alt key *before* beginning the "drag".
- ★ Drag the unit (or shift-drag the stack) to the desired location.

The Staff Assistant will then plot a path for your units, which ignores the presence of enemy units. In addition, if you plot a one-hex path into an adjacent hex, the planner will normally convert this into an Assault plot. With the override in effect, units will still be given a Tactical Movement order (and will therefore attempt to conduct an overrun; 14.7). If done correctly, one or more green arrows will indicate the tactical movement plot of your unit(s).

The German unit is plotted to use tactical movement through the enemy-occupied hex.



 **14.3 STRATEGIC MOVEMENT:** Strategic movement represents non-combat movement, typically when the unit forms a column to take advantage of a road. Strategic movement allowances are higher than tactical allowances, and units pay lower movement costs if they move along roads. Strategic movement allowances range from 9 (average foot infantry) up to 32 (most motorized units).



Strategic Movement. Cursor (one red arrow) positioned over next hex to be plotted for entry.

14.31 STRATEGIC MOVEMENT RESTRICTIONS: Units using strategic movement can move much farther than units using tactical movement, but the disadvantage is that units using strategic movement are not prepared for combat.



- ★ **Ambush Possibilities:** Units using strategic movement are subject to a special attack called an "ambush". There is a chance an ambush may occur anytime a unit using strategic movement moves into a hex that is in an enemy ZOC. This is especially important to remember when moving into enemy-controlled terrain, which may contain undetected enemy units.
- ★ **Combat Disadvantages:** Units attacked in any way while conducting strategic movement have their defense and antitank strengths halved, and do not benefit from any field fortifications or bunkers in the hex, although they do benefit from other favorable terrain.

- ★ **Stop At An Enemy ZOC:** Units using strategic movement stop for the turn as soon as they enter an enemy ZOC, regardless of the presence of friendly units or friendly ZOC.
- ★ **Start In An Enemy ZOC:** A unit starting a turn in an enemy ZOC (see 18.0, explaining Zones of Control) may use strategic movement to leave the enemy ZOC, but cannot move directly from one enemy ZOC to another. Units have their ZOC reduced while conducting strategic movement.



14.4 AUTOMATIC MOVEMENT: Automatic movement allows you to delegate movement orders to the Executive Officer. Using this feature, you simply select the unit, and the destination hex. The game's Executive Officer then determines which movement type (tactical or strategic) to use and the path to the destination.



14.41 AUTOMATIC MOVEMENT DESTINATION SELECTION: Follow the steps outlined below to plot an automatic movement order:

- ★ Select the unit (a stack cannot be selected) by clicking on it, then
- ★ Select the automatic movement button in the Command Window, then
- ★ While depressing the Command/Alt key, click on the desired destination hex. If the movement is successfully plotted, a path of arrows will be displayed leading from the unit to its destination. If not, a message window will appear and your Executive Officer will state that the movement was not plotted.
- ★ You may alter the displayed path if desired (see 14.15-.16).

14.42 MORE ON AUTOMATIC MOVEMENT:

- ★ To avoid ambushes, the Executive Officer takes into account all enemy units and ZOC currently known to you, and will not assign movement paths into or through *known* enemy occupied hexes or enemy ZOC.
- ★ When Limited Intelligence is on, movement paths assigned by the Executive Officer ignore all enemy units and ZOC currently known to you. When Limited Intelligence is in effect, it can be quite dangerous to assign automatic movement paths longer than

twelve hexes that enter or cross enemy-owned territory, due to the risk of enemy ambush.

- ★ If a unit conducting automatic movement cannot reach its assigned destination hex in one turn, the Executive Officer's movement orders will remain as assigned, and the unit will spend as many turns as necessary to reach its destination, unless you change your orders. A unit following a strategic movement path generated by the Executive Officer will sometimes change to tactical movement for a later turn.

14.5 HQ MOVEMENT: HQ Movement allows all of the units attached to a HQ to be assigned automatic movement orders, regardless of their current locations. The units' common destination will be either the HQ's current location, or (if the HQ has already been assigned its *own* movement order) the HQ's destination hex.

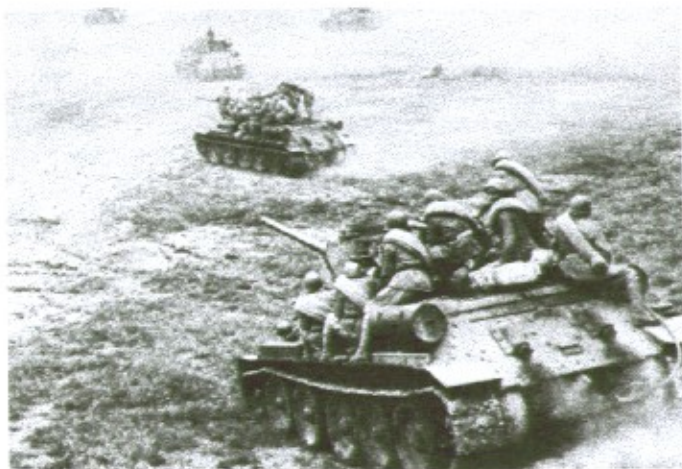
14.51: To enter HQ Movement orders, first decide where the HQ unit should go, then assign the HQ Movement orders to that hex. All units attached to that HQ will automatically be issued orders to move to that "destination" hex. Afterwards, you are always free to change the paths or orders for individual units (see 14.15-.16).

14.52 HQ MOVEMENT PROCEDURE: Follow the steps outlined below to plot an HQ Movement order.



- ★ Issue a movement order to the HQ (if you wish the HQ's units to move to a hex *other* than the HQ's *current* hex), then
- ★ Select the HQ button to open the HQ Sidebar and Bottom Box, then
- ★ Press the "More" button at the bottom of the HQ Sidebar, then
- ★ Select the desired HQ from the HQ Bottom Box (unless already selected), and finally
- ★ Press the "Send Units to HQ Dest" button in the HQ Bottom box.

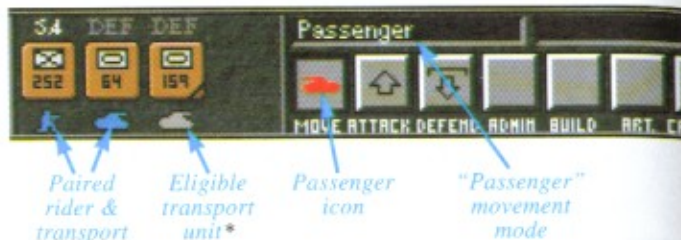
"We shall hold the city or die there."
—General Vasili Chuikov



14.6 RIDING: The Soviet army was the first to adopt the practice of transporting infantry by having them “ride” as passengers on armored vehicles. By late 1941, it was standard practice for the infantry in Soviet tank brigades to be carried atop the tanks they were supporting. The Germans quickly followed suit, and used the tactic more and more as the war progressed.

“Riding” allows a *non-motorized infantry* unit to become a “passenger” on an armored unit and travel with that armored unit at the armored unit’s movement rate. A rider, whose movement type is listed as “Passenger” in its Command Window, has its combat factors halved and is more exposed to attack by enemy air interdiction (see 17.2), and is also more vulnerable when ambushed (see 14.31). The following conditions must be met for a unit to become a “passenger”:

- ★ The *transported* unit must be a *non-motorized infantry* unit. Cavalry units and HQs may not be transported.
- ★ The *transporting* unit must be a tank, assault gun, or mech recon unit.
- ★ The *transporting* unit must be the same size or larger than the unit being transported. For the purpose of calculating transport, “unit size” is the same across all scenarios; e.g., a transporting unit with a stripe can carry one passenger with a stripe; a transporting unit without a stripe may carry one passenger without a stripe, or up to three passengers with stripes.



* Note that this unit would be unable to carry the infantry in this hex.

14.61 ELIGIBILITY: A unit eligible to be a passenger will have a white infantryman symbol displayed beneath its counter in the Unit Bottom Box. A unit eligible to transport a passenger will have a white tank symbol beneath its unit counter in the Unit Bottom Box.

Units currently paired as rider and transport have their respective infantryman/tank symbols displayed in matching (non-white) colors. Up to four pairs of transporter/passenger units may be in a stack.

14.62 MOUNTING PROCEDURE: To mount a unit on a tank:

- ★ Locate a hex that contains at least one unit eligible to transport and one unit eligible to be transported (see 14.6-.61),
- ★ Click on the passenger unit in the Bottom Box, hold down the mouse button and *drag* the counter over onto the intended transport unit in the Bottom Box and then release the mouse button. If both units are eligible and the transport can carry the passenger, both units will have the tank/infantry symbols underneath them redrawn with the same color. The passenger will then become the selected unit, and its listed movement type will be changed to “Passenger”.

An appropriate error message will appear if there is a problem (e.g., you haven’t selected a unit eligible to be transported, the intended transport unit is not eligible to carry a rider, or the transport unit is not of sufficient size to carry the intended passenger).



Soviet OT-34 (flame-thrower variant of the T-34)

14.63 DISMOUNTING: You can “manually” order a riding unit to dismount if you change the movement command of the passenger to a different movement type, or the passenger is given a different type of order (e.g., an attack command). Furthermore, a passenger will *automatically* dismount if:

- ★ The transporting unit is ordered to attack, or
- ★ The riding/transporting units are ambushed, or
- ★ The riding/transporting units are hit by an artillery barrage (interdiction does not count).

14.64 RIDER ATTRIBUTES:

- ★ In the Execution Phase, the passenger(s) and the transporting unit move together to the transporting unit’s destination hex, using the transporting unit’s movement allowance and costs. While being transported, a passenger unit has the same ZOC it would have if it were moving alone using strategic movement. Carrying a rider(s) does not affect the ZOC or strength factors of the transporting unit.
- ★ A riding unit has its combat factors halved. Its vulnerability to interdiction and ambush is dependent on the movement type of its transport.
- ★ A Passenger accrues normal fatigue and disruption modifications while riding, as if conducting the movement on its own.
- ★ If the transport unit attempts to overrun a hex, the reduced strength of the passenger unit(s) is factored into the overrun odds calculation.

14.7 OVERRUNS: An overrun represents a swift and annihilating “on-the-move” attack by overwhelming armored forces.

14.71 OVERRUN PROCEDURE: An overrun is not specifically ordered, but occurs automatically under the proper conditions. Possible overruns are checked stack by separate stack; if units are trying to enter an enemy-occupied hex from different hexes, each unit or stack trying to enter is checked separately—their combat strengths and shifts are *not* added together for purposes of determining overruns. An overrun may occur when a unit or stack of units using *tactical* movement tries to enter an enemy-occupied hex when the following conditions are fulfilled:

- ★ There must be 10:1 or greater odds against the enemy-occupied hex, computed the same as if an attack was made against the hex (see 15.0). Artillery and air attacks are *not* counted for this, but shifts from leaders, armor support, depots and troop quality *do* count.

- ★ An overrun may only be made by an armor unit or by a stack of units (all of which contribute) that contains at least one armor unit.
- ★ Overruns cannot occur in urban, forest or unfrozen marsh terrain, or in a hex containing an armor unit with a positive armor value.

When an overrun is successful, the enemy unit(s) is eliminated, along with any enemy ZOC (see 18.0) projected into the hex.

14.72 DELAYED OVERRUNS: It is possible (and a good thing for an attacker) to have an overrun occur after a normal battle has taken place in a hex. To do this, plot normal attacks on the enemy hex *and* plot one or more armor units or stacks containing armor units to move through the hex. *After* the normal battle is resolved, the attempted overrun(s) is automatically resolved (if defenders remain).





15.0 COMBAT

15.1 GENERAL COMBAT RULES: *STALINGRAD* uses a continuous-odds algorithm to determine combat results. Unlike many wargames, all fractions are significant and retained, so a combat odds of 3.1:1 is different (and better) than a combat odds of 3:1. There are no set minimum or maximum odds. Units with attack strengths greater than zero may conduct attacks. Offensive artillery fire missions are also attacks, but you should not confuse an artillery unit's barrage strength with a ground unit's attack strength.

- ★ All units (except aircraft and artillery units) must start a turn adjacent to an enemy unit to engage in combat. More than one friendly unit may attack the same enemy-held hex at the same time.

- ★ The easiest way to assign attack orders is to use the Drag and Drop method to assign assaults (see 14.12). All non-artillery attacks assigned using the Drag and Drop method are assigned as standard Assaults, except when these attacks are into (across) terrain that a unit cannot enter (cross), in which case an Assault with No Advance is automatically assigned. A red arrow appears indicating the attack, and the Odds window displays an estimate of the final combat odds. A more detailed method of entering orders is also available, and is described in the Command Window rules (see 10.0). Assigning assaults using the Command Window offers you a choice between several different types of attacks.
- ★ Factory Militia units, HQs, and units with an attack strength of 0 may *not* be given an attack order (15.2). An artillery unit may only add its Barrage/Support strength to an attack by having a fire mission plotted for it.

15.2 TYPES OF ATTACKS: You may choose the type of attack your units make.



PROBE: A low intensity attack designed to gather information about the enemy's troop strength and readiness. Minimizes losses, fatigue and disorganization effects.



ASSAULT/NO ADVANCE: A holding action designed to repulse the enemy without advancing. Victorious attackers do *not* advance after combat.



ASSAULT: A standard attack designed to dislodge the enemy and to advance into his position.



ALL-OUT ASSAULT: An all-out attack designed to dislodge the enemy and to advance at all costs.



ATTACK ORDER COMBINATIONS: If an attack involves several friendly units, some with different types of attack orders, the attack occurs as the average of the different attack types. *For example: If one friendly unit has Probe orders and two other friendly units have Assault orders as part of the same attack, the whole attack occurs as if all units had Assault orders.* The individual units in a joint attack will receive all of the benefits (or suffer all of the losses) of their own orders. *For Example: If one unit attacks using Assault orders, and two other units attack using Assault/No Advance orders, and the enemy is dislodged, only the unit that attacked using Assault orders would be allowed to advance into the hex.*

15.3 THE ODDS SIDEBAR AND BOTTOM BOX: The Odds Sidebar provides detailed information on each battle's combat odds. This sidebar appears on the right side of the screen whenever a player selects any friendly unit involved in combat, or the Air Power Button.



★ **READING THE ODDS SIDEBAR:** For each combat, the game calculates the attack and defense strengths, determines the initial combat odds, makes adjustments for any combat modifiers (i.e. terrain effects, leaders, etc.) and applies the final combat result. When friendly units attack an enemy unit, they use their attack strengths, and the defending unit(s) use their defense strengths. The odds of an attack are the sum of the attack strengths of all attacking units, divided by the sum of the defense strengths of all defending units. These odds are a ratio, such as 3:1 or 6.5:1. The higher the combat odds, the greater the chance that the attack will succeed, and that the defender will have to suffer losses. In the Odds Window, odds appear as only the left half of the ratio; the ":1" is implied. For Example: 6.5 represents 6.5:1, or 6.5 to 1 odds.

★ **COMBAT STRENGTH SUMMARY:** This displays the selected units' raw and modified combat strengths. Units and stacks under attack orders display attack and armor strengths, while defending units display defense and antitank strengths. Attack or defense strengths are on the left, armor or antitank on the right. A green dot next to a value indicates that the value has been favorably modified by the listed combat factor, a red dot means that the value has been unfavorably modified, and a gray dot means that no modification applies.

★ **ODDS:** Selecting this button displays a detailed account of the combat odds modifiers in the Odds Bottom Box. Below this, the Odds Window displays the Executive Officer's estimate of the odds for that combat. Note that when using Limited Intelligence, the actual odds may vary +/- 25% from those displayed.

★ **SCRUB:** Any attack can be immediately cancelled by selecting the Scrub button. This changes the assigned attack orders of all attacking ground units to Defend If Attacked orders, and cancels all artillery and air attacks assigned against the defending hex.

15.4 COMBAT ODDS MODIFICATIONS: The combat odds modifiers listed below are cumulative.

15.41 DEFENDER'S COMBAT MODIFIERS: These defensive modifiers are all cumulative.

★ **TERRAIN:** The terrain occupied by a defending unit or stack can modify the odds. For attacks made exclusively by artillery or aircraft, the only modifications that apply are those for the defender's terrain.

TERRAIN EFFECTS ON COMBAT	
Defender is in...	Effects
City, Factory	Odds column is lowered by 3
Rubble	Odds column is lowered by 2½
Town, Suburb	Odds column is lowered by 2
Fortified	Odds column is lowered by 2§
Dug-In	Odds column is lowered by 1½§
Forest, unfrozen Marsh	Odds column is lowered by 1
Clear	no effect†
Ferry	Odds column is raised by 1 Defense strength × ½
Attacking across...	Effects
Hill hexside, going "downhill"	Attack strength × 125%
Hill hexside, going "uphill"	Attack strength × 75%
Balka hexside	Attack strength × 75%
River hexside	Attack strength × 50%
Frozen River	no effect
Volga hexside	Attack strength × 5%
Frozen Volga hexside	no effect
Attacker is in...	Effects
Marsh (unfrozen)	Armor × 50%
Ferry hex	Attack strength × 5%

§ Defender's benefit is less if insufficient fortifications exist for all defending units in the location.

† When attacking in Deep Snow conditions, all units (except tracked and ski units) have their strengths halved when attacking into clear terrain.

★ **STRATEGIC MOVEMENT:** Each unit conducting strategic movement (see 14.3) has its defense strength halved.

★ **SUPPLY STATUS:**

Supply State	Effect on Defense Strength
Attack	Increased by 125%
General	Normal
Defensive	Normal
Minimal or None	Halved

★ **DISORGANIZATION AND FATIGUE:** Each point of disorganization and/or fatigue reduces a unit's defense strength by two percent, *after* modifications for strategic movement, supply status and the defenders' terrain are made.



15.42 UNIT INTEGRITY COMBAT MODIFIERS:

In addition to the line battalions, regiments and divisions also contain smaller support units such as artillery sections, antitank and mortar companies, and engineer and recon platoons. Odds modifications for unit integrity represent the effects of these units, which do not appear in the game as individual units. Unit integrity also gives you an incentive to follow the historical practice of keeping constituent units of a regiment/brigade or division within supporting distance of each other.

- ★ For a unit to receive the unit integrity modifier(s) when defending, another unit of the same organization must be within two hexes of the battle hex at the moment of combat.
- ★ For a unit to receive the unit integrity modifier(s) when attacking, another unit of the same organization must be attacking the same enemy hex.
- ★ Units need *not* be attached to the same HQ in order to receive the integrity bonus.
- ★ No adjustment applies for unit integrity in attacks involving only artillery units and/or aircraft. HQ units do not provide integrity benefits to their attached infantry units.
- ★ The number of integrity modifiers each side may receive in a given attack is limited only by the number of organizations involved. Naturally, the modifiers of opposing sides act to cancel each other out. *For Example: Assume the attacker has three unit integrity shifts, and the defender, 2. The final odds will receive a positive shift of 1 for integrity (3 - 2).*

15.43 ARMOR AND ANTITANK: Armored vehicles had a highly variable affect on combat. The relative value of an armored unit in battle depended greatly on outside factors, particularly terrain, the characteristics of the armored vehicles themselves and the antitank assets available to the enemy. In some battles, armor was the crucial, deciding factor; in others, the availability of armored units made little or no difference.

★ **ARMOR AND ANTITANK EFFECTS:** In addition to attack and defense ratings, many units have armor and/or antitank strengths.

Armor Strengths: A unit's armor strength reflects the composition of the unit and its armored vehicles. The greater a unit's armor strength, the more potential it has to affect the final combat odds, if conditions favor the use of its armored vehicles. If a unit's armor strength is reduced to zero, it cannot increase the combat odds.

Antitank Strengths: In addition to its attack and defense strengths, all units also have an antitank strength, which reflects its ability to defend against enemy armored attacks.

Combat Comparisons: In a combat, the total modified armor strength of all attacking unit(s) is compared to the total modified antitank strength of all defending unit(s). An odds increase or decrease is determined by dividing the larger total modified strength by the smaller total modified strength. (**NOTE:** For decreases involving defending antitank strengths, the *maximum* is only three negative shifts, but the *maximum* number of positive shifts can be *ten*.)

Defending With Armor Units: Normally, only attacking units are eligible to receive a positive odds modification for armor support, and only defending units are eligible to receive negative odds modifications for antitank strength. However, if an armor unit(s) is a defender, its armor strength and the attacker's antitank strength work as if the armor unit were attacking, but any armor support advantage *decreases* the actual attacking unit's odds (in this case, where superior defending armor is involved, the maximum number of *negative* shifts can be *ten*).

EXCEPTIONS: On the 400m/hex map, armor/antitank effects are calculated differently from the method employed in the other, larger-scale maps *when the terrain is urban* (i.e., city, factory, town, suburb, rubble). An attacking armored unit receives a *maximum* of *one* positive shift. Defenders with one or more units with an armor

factor receive a maximum of one negative shift per attack. In terrain other than urban (clear, etc.), armor/antitank modifiers are calculated as per the larger-scale scenarios.



German 75mm antitank gun, towed

★ **ARMOR AND ANTITANK STRENGTH MODIFIERS:** The following cumulative modifiers apply to armor and antitank strengths:

Armor and Antitank Supply Status Modifiers:

Supply State	Effect on Strength
Attack	Both armor and antitank strengths increased by 125%
General	Normal
Defensive	Armor strength decreased by 50%
Minimal	Both armor and antitank strengths decreased by 50%
None	Armor strength decreased by 25%; antitank strength decreased by 50%

Antitank Strategic Movement Modifiers: Antitank strength is reduced by 50%.

Armor and Antitank Disorganization and Fatigue Modifiers: Each point of disorganization and/or fatigue reduces a unit's armor strength by 2%, after modifications for its supply status and for the defenders' terrain are made. Each point of disorganization and/or fatigue reduces a unit's antitank strength by 2%, after modifications for its supply status, strategic movement and terrain effects are made.

Armor and Antitank Terrain Modifiers: Only certain types of terrain cause armored or antitank strength modifiers, as follows:

TERRAIN EFFECTS ON ANTITANK & ARMOR	
Defender's terrain	Effect on A-T/Armor Strength
Rubble	defending A-T $\times 250\%$
City/Factory	defending A-T $\times 200\%$
Forest/Town/Suburb	defending A-T $\times 150\%$
Fortified	defending A-T $\times 150\%^*$
Dug-In	defending A-T $\times 125\%^*$
Ferry hex	defending A-T $\times 25\%$
Marsh (unfrozen)	attacking armor $\times 50\%$
Defender is across...	Effect on A-T/Armor Strength
Frozen-Volga/River hexside	attacking armor $\times 50\%$
Balka hexside	attacking armor $\times 50\%$
Volga/River hexside	attacking armor $\times 25\%$
Defender is...	Effect on A-T/Armor Strength
"downhill" from attacker	attacking armor $\times 125\%$
"uphill" from attacker	attacking armor $\times 75\%$
* Defender's benefit is less if insufficient fortifications exist for all defending units in the location.	



15.44 ENGINEER SUPPORT COMBAT MODIFIER:

Combat engineers offer a favorable odds modification when attacking into urban terrain or improved positions. There is one positive shift (for the attacker) for *each* engineer unit participating.

15.45 TROOP QUALITY COMBAT MODIFIER: For each battle, the average troop quality of the attacking units is compared to the average troop quality of the defending units. The side with the higher average troop quality receives an increase in its combat odds equal to the difference between the two sides. *For Example: In a combat, if the average troop quality of the attacking units is "5.5" and the average troop quality of the defending units is "7.6", the odds are reduced by "7.6" minus "5.5" = "2.1".*

15.5 DEFENSE EFFECTS AND MODIFIERS:

15.51 TYPES OF DEFENSE ORDERS: If not attacking, you may choose how your units defend. Unlike units which are moving and attacking, a unit assigned to defend may also conduct one or more secondary actions shown by the Defend button in the Command Window.



RETREAT IF ATTACKED: Defending units attempt to retreat the battle escalates. If such a unit is attacked solely by artillery units or aircraft, the combat occurs as if the unit were under "Defend If Attacked" orders. The retreat hex is *always* chosen by the Executive Officer. The success of an attempted retreat before combat depends on the relative movement allowances on both sides, the troop quality of both sides, the artillery support available to both sides, and/or the defender's terrain.



DEFEND IF ATTACKED: Defending units stand their ground and make a determined defense.



HOLD AT ALL COSTS: Defending units will attempt to hold their position, no matter what the cost. The likelihood of their successfully holding is largely dependent on the defending unit's troop quality.

15.6 COMBAT RESULTS:

15.61 LOSSES: Each side in a ground attack will lose a percentage of their participating ground forces, with the winner *generally* taking fewer casualties, although this is not always the case. As a rule, the higher the odds, the fewer casualties the attacker will take, and the higher the casualties for the defender. Probes are an exception; since the purpose of a Probe is to gain information and not to gain ground, casualties for both sides are minimized. Casualties are calculated differently for Ground Attacks than for Barrage/Air attacks.

- ★ Losses are always in strength points. These are deducted directly from a unit's Attack and Defense strengths, and proportionally from a unit's other strengths. *For Example: A unit with an unmodified defense strength of ten, and an antitank strength of 20 which takes a 1 point loss will have a defense strength of nine and an antitank strength of 18 after combat.*
- ★ In a Ground Attack, a "base casualty" figure is calculated for both sides, this figure being modified by the odds, size of the participating forces, etc. Each ground unit participating is then assessed a portion of this loss, based on its size in stacking points. *For Example: Assume there are two attacking ground units of three stacking points each for a total of 6 stacking points. If the loss from the attack is 1 point, each unit will take a 1/2 point loss (1/6 × the loss). An attacking artillery unit does not have its size added in for the purpose of this calculation, and never takes a loss as a result of a ground attack it supports.*
- ★ Casualties from a Barrage are dependent on the type and density

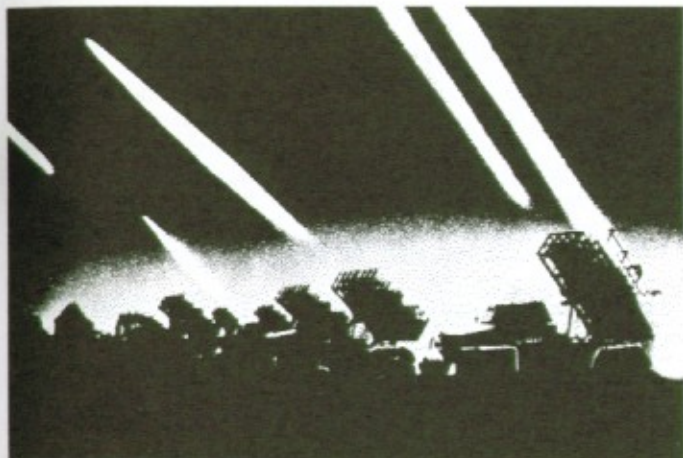
of the defenders (the more crowded the hex, the higher the casualties). Unlike a Ground Attack, a casualty figure is calculated and then applied to each defender in the hex. Small units, artillery, flak, HQs and antitank units will take fewer casualties. Armored units will also take fewer casualties, unless being attacked by air in an unfrozen marsh hex. Units attacked on a ferry hex during daylight hours will generally be eliminated.

15.62 RETREATS: Units that lose a battle may be required to retreat one or more hexes.

- ★ Retreating units suffer increased fatigue and disorganization levels.
- ★ Retreating units must move away from enemy units and ZOCs toward a friendly supply source, and through terrain costing the *least* amount of movement points.
- ★ Units cannot retreat into or through prohibited terrain or into enemy occupied hexes. Units may retreat through an enemy ZOC if no other retreat path exists, but suffer additional losses when doing so. The presence of a friendly unit in a hex negates the effect of enemy ZOCs for retreat purposes.
- ★ For each hex containing an enemy ZOC that the retreating unit must enter, the unit's losses will increase by 25%. In the case of a retreating stack, each unit in the stack suffers additional losses. If no permissible retreat path exists, a unit or stack required to retreat remains in place and must suffer additional losses.
- ★ Retreat results do *not* apply to a unit(s) defending against pure artillery and/or air attacks.
- ★ Attacking units that lose a battle are not required to retreat unless they are attacking from clear terrain or frozen marsh. The maximum distance an attacking unit can retreat is one hex.

15.63 ADVANCE AFTER COMBAT: If all defending units in a hex are eliminated or forced to retreat as a result of combat, the attackers may then be able to advance into the defender's hex, and possibly farther.

- ★ Advancing units cannot advance into or through prohibited terrain or enemy-occupied hexes. They may advance into or out of an enemy ZOC, but these advances may be hindered by enemy ZOC [also see 18.0].
- ★ Advances must follow the defender's path of retreat. Any terrain other than clear slows the advance, and tends to cause the attacker to break contact with the defender. Units with high movement allowances and/or high troop quality tend to advance farther after combat.



16.0 ARTILLERY

Artillery units—heavy mortars, guns, howitzers and rockets—are used for indirect, ranged fire and need not be adjacent to an enemy unit to attack it. Artillery units may never fire into their own hex.

16.1 SPECIAL ARTILLERY VALUES: Instead of attack strengths, artillery units have the following special attributes:

- ★ **Barrage Strength:** Used to attack enemy occupied hexes.
- ★ **Support Strength:** Used to increase the defense strengths of friendly units.
- ★ **Range:** The maximum distance, in hexes, that the artillery can use its barrage or support strength.

16.2 ARTILLERY MOVEMENT AND READY STATUS: In order to fire, an artillery unit must first prepare and become “ready to fire”. An artillery unit is ready when its guns are set up, sufficient ammo is on hand, and the fire control network (consisting of a radio or field phone in contact with a forward observer) is in place.



16.21 ARTILLERY PREPARATION: An artillery unit cannot conduct a fire mission on the same turn in which it moves (**EXCEPTION:** “Shoot’n Scoot” fire mission). Light, self-propelled, and rocket artillery units can fire one turn after they move. Medium artillery units require one full turn without movement to prepare. Heavy artillery units require two full turns

without movement to prepare. If an artillery unit moves again, it must begin the preparation process anew.

- ★ An artillery unit will automatically prepare to fire if it is not assigned any other orders providing it is not on a ferry hex (400m/hex map). An artillery unit cannot (prepare to) fire from a ferry hex.
- ★ If an artillery unit is defending and is not ready to fire, the artillery button shows a wrench, and “Prepare” appears in the window. An artillery unit’s ready status also appears in the Unit Bottom Box.



16.22 READY TO FIRE ARTILLERY: When an artillery unit is prepared to fire a “crosshairs” icon appears on the artillery button in its Unit Bottom Box and “Target” appears in the Secondary Action Window. An artillery unit’s ready status also appears in the Unit Bottom Box.

- ★ An artillery unit may be ordered to barrage enemy units located in a hex that is not being attacked by a friendly ground unit. If the hex is within “spotting range” of a friendly unit, or has odds of 1.0 or higher, the attack will be resolved as a Barrage. The spotting ranges vary according to map scale:

3km/hex map:	1 hex
1km/hex map:	2 hexes
400m/hex map:	5 hexes

- ★ If the target hex is unoccupied or the conditions for a barrage do not exist, the artillery unit fires an Interdiction mission. An Interdiction mission inhibits enemy operations in the target hex (**EXCEPTIONS:** see 16.34).
- ★ Whenever an artillery unit is attacked, any unresolved fire missions assigned to it are delayed by an amount of time proportional to the strength of the attack.
- ★ An artillery unit may build improved positions like all other units, but cannot do so on the same turn that it conducts a fire mission or prepares to fire. An artillery unit building improved position cannot prepare to fire during the same turn. Artillery units can benefit from *both* types of improved positions.

16.3 ARTILLERY FIRE MISSIONS: Fire missions may be offensive or defensive.

16.31 GENERAL ARTILLERY FIRE MISSION RULES:

- ★ A player may assign any number of artillery units per target hex.
- ★ If an artillery unit is selected, and if eligible to fire, the cursor

turns into a "☉" (a "☉" is displayed if placed over a friendly unit). The cursor remains a "☉" or "☉" as long as the cursor remains within the artillery unit's range. The cursor changes to a "✕" if it is moved out of the artillery unit's range.

- ★ To assign a barrage, interdiction or dedicated support mission, select the artillery unit and Alt-click (IBM) or Command-click (Macintosh) on the intended target hex.
- ★ Alternatively, select the artillery unit by clicking on its on-map counter. Select it again in the Unit Bottom Box to open its Command Window. Click on the "Art." Command Window until the desired fire mission is selected ("Target", "On call", or "Counter battery"), then Alt-click (IBM) or Command-click (Macintosh) on the intended target hex (if necessary).
- ★ When a target is assigned, it is marked with two target indicators. The blue target indicator is temporary, and marks the *currently selected* artillery unit's target (and/or friendly units supported). Once an artillery mission has been assigned, each targeted enemy unit (or hex) is marked with a red-circled letter "A"; each friendly unit receiving defensive fire support is marked with a shield. These icons remain on-screen until the Execution Phase.

16.32 OFFENSIVE ARTILLERY FIRE MISSIONS: There are four types of offensive fire missions:



INTERDICTION FIRE MISSIONS: An interdiction fire mission uses an artillery unit's barrage strength throughout the Execution Phase to interfere with enemy operations in a target hex. The greater the strength of an interdiction attack, the greater the probability that enemy activity will be delayed or prevented. A barrage attack is automatically changed to interdiction attack if *any* of the following conditions are true:

- ★ The target hex is more than the Spotting Range (16.22) from the nearest friendly unit and the final odds are less than 1:1.
- ★ The target hex is currently unoccupied.
- ★ The target hex for a interdiction mission need not be occupied—an empty hex may be targeted. Any enemy unit that enters the targeted hex during the Execution Phase will be interdicted. An interdiction attack against a hex which remains unoccupied throughout the Execution Phase will have no effect, but will consume the same amount of supply (and cause fatigue) as if it had been an effective fire mission.



BARRAGE FIRE MISSIONS: A barrage is the most concentrated type of artillery attack.

- ★ If a target hex is being attacked by friendly ground units in addition to being barraged, the modified artillery barrage strength is *added* to the attack strength of the attacking ground units. If the target hex is not being attacked by friendly ground units, the modified artillery barrage strength is used to attack *each* unit in the defending hex. If more than one artillery unit fires on the same hex, all of the barrage strengths are combined into one barrage attack.
- ★ If a target hex is enemy occupied, not being attacked by ground units, and within the Spotting Range (16.22) of a friendly unit, the modified barrage strength is used to attack *each* target unit in the hex.



COUNTER BATTERY FIRE MISSIONS: Counter battery fire missions represent opportunity fire, or short notice counterattacks against enemy artillery units which fired during the Execution Phase. (After an enemy artillery unit fires, its position is revealed, allowing friendly artillery to counter-battery the enemy artillery position.) To assign a counter battery mission, select the artillery button in the Command Window until the "gun & target" symbol appears. The Executive Officer will determine the specific target for this fire mission immediately before the attack occurs.




SHOOT'N SCOOT FIRE MISSIONS: A "Shoot'n Scoot" mission combines a barrage attack with tactical movement to avoid possible enemy counter-battery fire. Only self-propelled and light artillery units can perform Shoot'n scoot missions. To assign a Shoot'n Scoot fire mission:

- ★ Select the artillery button in the Command Window until the "tactical movement & target" symbol appears on the artillery button (and the words "Shoot'n Scoot" appear in the command window above the button), then
- ★ Select the intended target hex.


Shoot'n Scoot fire occurs as a normal barrage mission, except that the artillery unit automatically moves to an adjacent hex immediately after it fires, thus avoiding counter-battery fire. The Executive Officer determines which adjacent hex the artillery unit will move into during the Execution Phase.

NOTE: When an enemy unit is targeted by an artillery fire mission, all adjacent friendly units automatically receive the benefit of a Dedicated Support fire mission (see below).

16.33 DEFENSIVE ARTILLERY FIRE MISSIONS: Two types of defensive fire missions are available: Dedicated Support and On-Call. Unlike offensive fire missions, an artillery unit may conduct several defensive fire missions during one turn, using its support strength several times to add to the defense strength of several different friendly occupied hexes.

 **ON-CALL FIRE MISSIONS:** An On Call fire mission does not assign a specific target to an artillery unit, but places it into a pool of artillery that is available to support a friendly unit attacked by adjacent enemy units during the Execution Phase. The Executive Officer allocates On Call fire missions as attacks occur during an Execution Phase. When used, the artillery unit's support fire strength is added to that of the defending units selected by the Executive Officer. To assign artillery to an On Call fire mission:

- ★ Select the artillery unit.
- ★ Click on the artillery button in the Command Window until the "shield & target" symbol appears (and the words "On Call" appear in the command window above the buttons).

 **DEDICATED SUPPORT FIRE MISSIONS:** A Dedicated Support fire mission assigns an artillery unit to direct defensive support to a specified hex (and each adjacent friendly-occupied hex). Should the targeted hex(es) undergo a Ground Assault during the Execution Phase, the artillery unit's strength will be added to the strength of the defending unit(s). When assigned, a "shield" icon will appear over the selected and adjacent, friendly-occupied hexes. To assign a Dedicated Support fire mission:

- ★ Select the artillery unit.
- ★ Click on the friendly unit you wish to support. That unit, as well as each friendly unit adjacent to it, will be marked with a shield to indicate the Dedicated Support Fire each will receive if it is assaulted.

16.34 FIRING ON FERRY HEXES: Artillery (and Air) attacks on ferry hexes in the two 400m/hex scenarios are handled somewhat differently from bombardments on other types of hexes:

- ★ All bombardments of ferries are resolved as interdiction attacks.
- ★ Unlike normal interdiction attacks, interdictions on ferries during daylight hours also cause casualties (in addition to the normal slowing of traffic through the location). In fact, casualties resulting from daylight ferry interdiction attacks will usually result in the destruction of the interdicted unit(s).
- ★ Nighttime interdiction attacks on ferries are handled as per the normal interdiction rules (see 17.11).
- ★ The hill in the center of Stalingrad, the "Mamayev Kurgan", provides an excellent observation post. If the Germans control the hill (i.e., possess the Victory Hex on the eastern-most side), casualties caused as a result of ferry interdictions will be doubled.

16.4 AUTOMATIC ARTILLERY ALLOCATION: For a faster game, you can delegate some or all the artillery fire mission assignments to your Executive Officer. To do this, select "Plan Fire Support Each Turn" from the Staff Duties pull-down menu. "Plan Fire Support Now" allows you to review and change any individual artillery missions (see 3.3).

16.5 MODIFICATIONS TO ARTILLERY FIRE STRENGTHS: The barrage and support strengths of artillery units may be modified by several factors, but their ranges are never modified. Except for supply, these modifiers also apply to air support. All the effects listed below are cumulative:

16.51 ARTILLERY/AIR ATTACK TERRAIN MODIFIERS: Artillery and air attack strengths are affected by terrain as follows:

Clear, frozen Marsh	Barrage strength reduced by 25% in Heavy Snow
Forest, Town, Suburb	Barrage strength reduced by 50%
Rubble, Factory	Barrage strength reduced by 50%
City, non-frozen Marsh	Barrage strength reduced by 50%
Ferry	Barrage strength increased by 50%

16.52 NIGHT: Barrage and support strengths are decreased by 50% during night turns.



16.53 SUPPLY: The following table shows the effects of supply on artillery barrage and support strengths:

Supply State	Barrage	Support
Attack	Increased times 25%	Increased times 25%
General	Normal	Normal
Defensive	Decreased times 50%	Normal
Minimal	Decreased times 50%	Normal
None	Zero	Zero

16.54 IMPROVED POSITIONS: Barrage strengths are reduced if units in the target hex are dug-in or fortified. The amount of the reduction depends upon the size of the improved position, the number of units in the hex and the type of position. If the position is large enough to hold all of the units in the hex, barrage strengths are reduced by 25% against dug-in positions, and 50% against fortified positions.

16.55 DISORGANIZATION AND FATIGUE: Each disorganization and/or fatigue point reduces an artillery unit's barrage and support strengths by 2%.



17.0 AIR OPERATIONS

You have three different types of tactical air operations available to support your ground forces: Ground Support (bombing/strafing), Recon and Air Resupply. Judicious use of your air assets can often mean the difference between success and failure.

Axis air units may only fly during non-Storm daylight turns. Soviet air units may fly during daylight turns as long as the weather is not Heavy Overcast or Storm.

17.1 AIR MISSION TYPES



Fighter Bomber



Light-Med Bomber

17.11 GROUND SUPPORT MISSIONS: Ground Support air missions can be performed by Fighter-Bombers and Light

& Medium Bombers. Fighter squadrons with this mission require one turn to refit between missions. This means that in the 1km/hex and 400meter/hex scale scenarios, they may fly in the morning (6AM) and in the afternoon (2AM), weather permitting. Bombers in all scales, and fighters in the 3km/hex scenarios, may fly no more than one Ground Support mission per day, weather permitting.

★ **BARRAGE AIR MISSION:** An aerial attack against a *specific* enemy-occupied hex. A Barrage Air Mission may take place on its own, or in conjunction with attacking friendly ground forces. A maximum of one Barrage Air Mission may be plotted per hex per turn, and is assigned in the same manner as an Artillery Barrage (see 16.32). Unlike an artillery Barrage, however, there is no minimum odds requirement or spotting requirement.

★ **INTERDICTION AIR MISSION:** An aerial mission designed to hinder or prevent enemy activities. An Interdiction Air Mission is assigned in the same manner as a Barrage Air Mission (see above), but is directed against an *unoccupied* hex (usually behind the enemy's front lines). Air units on an Interdiction Air Mission conduct strafing attacks versus enemy ground units that enter or pass through the targeted location, considerably slowing their movement.

★ **CLOSE SUPPORT AIR MISSION:** A defensive aerial mission made to *support friendly ground units* (and, as such, is similar to a Dedicated Support artillery mission; 16.33). While it can be

effective, the barrage strength actually delivered to the target is only 25% of the squadron's normal attack strength. Additionally, there is a good chance you'll hit your own troops. A Close Support air mission should only be flown in Clear weather due to the risk of friendly fire.

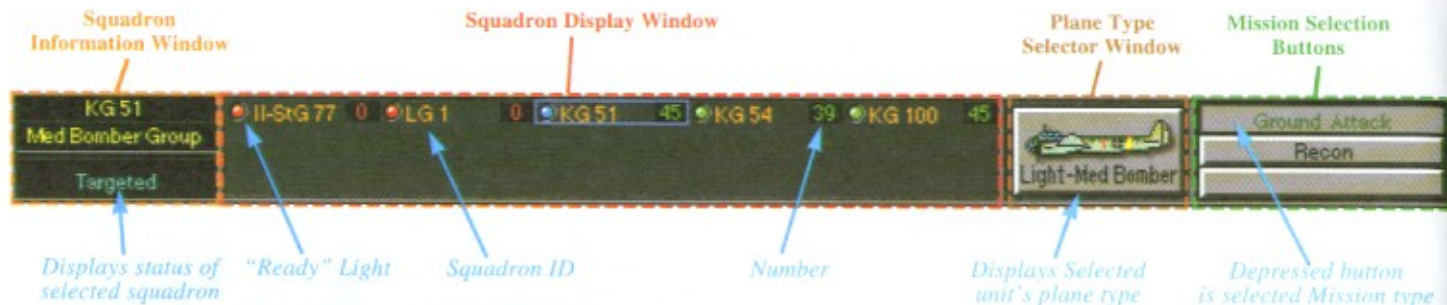


17.12 AIR RESUPPLY MISSIONS: Air Resupply missions can be performed by Transports and some Medium

Bombers. There are two methods of Air Resupply: Air Dropping and Air Landing (the latter is *only* available to the Axis in the "Operation Uranus" scenario). Multiple Air Resupply missions may be plotted into the same hex. An air squadron with such a mission assigned may fly only once per day (regardless of the scenario).



- ★ **AIR DROP MISSION:** Allows supplies to be parachuted to friendly ground units. If there are multiple HQs in the hex, the tonnage dropped will be split between them, otherwise it is split equally among the combat units in the hex. Air Dropping of supplies is a good method of helping a limited number of isolated friendly units, but is ineffective when dealing with a large group of encircled troops, as only about half of the air-dropped supplies will actually reach the intended recipients. Furthermore, if all friendly units leave the assigned drop hex, and an enemy unit(s) occupies it, the supplies will be delivered to the enemy unit(s) instead!
- ★ **AIR LANDING MISSION:** Allows the Axis side (in the "Operation Uranus" scenario *only*) to air-land supplies at the Pitomnik, Gumrak and/or Stalingradskii airfield(s). An Axis HQ will instead draw supplies from that airfield when it is cutoff from its Supply Source Distribution Point (19.7) or its parent HQ, providing it can trace a supply line to such an airfield *and* that airfield currently has supply tonnage. If you plot an Axis Air Resupply mission to a hex containing an HQ *and* a qualifying airfield, the tonnage will be air-landed to the airfield. See also 19.5.



17.13 AIR RECON MISSIONS:

Air reconnaissance missions can be performed by air Recon units, Bombers, and Fighter-Bombers. These missions are used to gain information on enemy units inside a given area. The size of this area varies, depending on the map scale (see chart below). The amount of information gained varies with the severity of the weather, the unit(s) being reconned, and the reconning unit's strength. You will gain information on any units that are in, or move through, hexes that are within range of the air recon unit's plotted hex. Planes with this mission may fly every daylight turn, weather permitting. **NOTE:** An Air Recon mission is effective *only* when the Limited Intelligence realism option is in effect.

Map Scale	Range
3km/hex	2 hexes
1km/hex & 400m/hex	8 hexes

17.2 MISSION SELECTION PROCEDURE: Each air squadron in the game will have one or more possible missions available to it. These can be determined by looking at the Mission Selection Buttons in the right side of the Air Unit Bottom Box. If that mission is available, the corresponding button will have the mission type printed on it.

- ★ Each squadron type (Fighter-Bomber, Light-Medium Bomber, Recon, and Transport) has a default mission type. This mission is pre-selected when you open the Plane Bottom Box, and is signified by that mission button being already depressed.
- ★ To assign a different mission to the squadron, click on another button containing a mission name.

17.3 THE AIR UNIT BOTTOM BOX: The Air Unit Bottom Box is accessed by selecting the Air Power button of the Tool Bar, and allows you to assign missions to your air squadrons. The Air Unit Bottom Box contains four "windows":

★ **SQUADRON INFORMATION WINDOWS:** The left-hand side of the box contains the name and squadron type of the currently-selected air unit, as well as the unit's status.

★ **SQUADRON DISPLAY WINDOW:** Each squadron of the current type has a light to the left of its name, and a number in a black field to the right. The lights graphically represent the "ready" status of that squadron, as follows:

GREEN: Available for a mission.

BLUE: Already assigned a mission for that turn.

RED: Refitting and *not* currently available for a mission.

To the left of the each squadron's ID in the Squadron Display window is a number. The color of this number represents the mission type:

GREEN: The number of points available for a Barrage or Interdiction mission.

YELLOW: The effective radius (in hexes) for Air Recon mission.

BLUE: The squadron's supply tonnage carrying capacity for Air Resupply purposes.

RED: The unit is refitting, and is not available for a mission.

★ **PLANE TYPE SELECTOR WINDOW:** Clicking on this button will cycle through the various types of air units available during the scenario. Not all types of planes will be available for each side in every scenario (unavailable types are not shown).

- ★ **MISSION SELECTION BUTTONS:** If a mission is available for the currently-selected squadron, the air mission's name will appear on the button. The currently-selected mission type's name is printed in green. To select a different mission, click on a different button with a mission name listed on it.

TOP BUTTON: Ground Support

MIDDLE BUTTON: Air Recon

BOTTOM BUTTON: Air Resupply

17.4 ASSIGNING (PLOTING) AIR MISSIONS: Follow the procedures below to assign a Ground Support, Air Reconnaissance or Air Resupply mission.

Ground Support: After selecting the squadron and mission, move the cursor over the map. If the hex is not a legitimate target (e.g., unfrozen water), the cursor will display an "X". If placed over a friendly unit, it will change to a "☙" indicating a Close Air Support mission, and if over an enemy unit, or empty hex, a "☙" will be displayed. Clicking on a hex when the cursor is a "☙" plots an attack mission into the hex.

Air Reconnaissance: If the hex is unfrozen water, the cursor will display an "X". Clicking on a hex when the cursor is a "☙" plots an Air Recon mission into the hex. This hex will be the center of the search radius.

Air Resupply: If the hex is a valid candidate for an Air Drop or Air Landing, the cursor will display a "☙" icon, otherwise it will be an "X". Clicking on a hex when the cursor is a "☙" will plot the appropriate Air Resupply mission into the hex.

17.41 RESULTS OF PLOTING AIR MISSIONS: Flying planes in **STALINGRAD** is not just a "hit or miss" proposition—there are a number of possible resolutions. The success of each squadron is very dependent on the weather (the heavier the cloud cover, the less likely the squadron will be able to find the correct target), and the presence of enemy AA unit(s) within range of the target hex (17.5). Some possible alternatives are:

- ★ The squadron aborts the mission. The flight is scrubbed, and the unit is available the following turn.
- ★ The squadron flies, but, after prolonged searching, is unable to find its assigned target (the squadron must return to base and refit for the appropriate number of turns).
- ★ (Ground Support only) The squadron flies, is unable to hit the primary enemy target, but manages to locate another target.

- ★ (Ground Support only) The squadron flies, but mistakenly hits friendly troops. The odds of this happening are trebled when plotting squadrons for Close Air Support.
- ★ (Air Resupply only) The squadron drops the supplies to a hex which is occupied by enemy units. The enemy units in the hex receive up to 50% of the dropped tonnage.



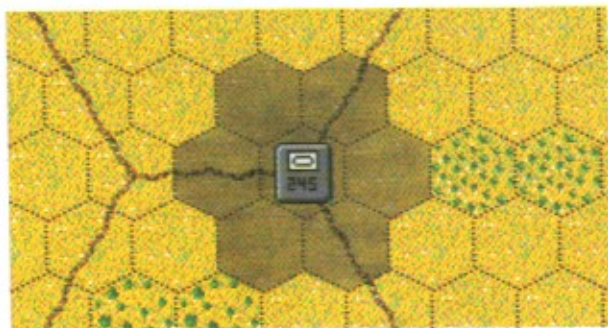
17.5 ANTI-AIRCRAFT FIRE: Anti-aircraft (AA) units can reduce the strength of enemy air attacks and can increase the chance that an aerial attack will miss its intended target. The more anti-aircraft units that are within range of a given aerial target, the greater the chance that an air mission will encounter difficulties in carrying out its assigned mission. The range of AA fire is dependent on map scale:

Map Scale	AA range
3km/hex map	1 hex
1km/hex & 400m/hex map	same hex only

- ★ Before each air attack, enemy AA strengths within range of the target hex are totaled, and the air unit's attack strength is reduced proportionately.
- ★ AA fire is more effective in good weather. Also, the higher the supply state of the AA units, the greater their effect.

18.0 ZONES OF CONTROL (ZOC)

Each ground unit exerts a "Zone of Control" (ZOC, hereafter) into the six hexes surrounding its hex. This ZOC represents the influence a unit can exert into nearby terrain using observation and fire. For larger units, ZOC represents the fact that some portions of the unit may actually be located in neighboring hexes. The effectiveness of a given ZOC is represented by its ZOC value. **STALIN-GRAD** keeps track of ZOC values for *all* units on *both* sides, and the effects of those ZOCs on movement and terrain ownership. The ZOC values themselves do not appear on the screen. When units stack together, the unmodified ZOC value exerted into an adjacent hex by a stack of units is the *sum* of the ZOC values exerted into that hex by all of the units in the stack.



Shaded hexes show the unit's Zone of Control

18.1 ZOC VALUES: ZOC values can range from a minimum of 0 to a maximum of 8. The higher the number, the more influence and control the unit exerts into a hex.

18.11 INFLUENCE OVER ADJACENT HEXES:

- ★ **No ZOC Value (0):** Indicates that the unit has no influence or control over adjacent hexes.
- ★ **Weak ZOC Value (1 or 2):** Indicates that the unit can observe portions of a neighboring hex and fire into some areas of the neighboring hex.
- ★ **Strong ZOC value (3 or more):** Indicates that the unit exerts significant influence over the adjacent hex. A strong ZOC value may also mean that parts of the unit may actually occupy part of the neighboring hex.

18.12 UNIT'S ZOC VALUES: Company-size units exert a ZOC value of 1 and battalion-sized units exert a ZOC value of 3, with these exceptions:

- ★ Each HQ exerts a ZOC value of 2.
- ★ Any unit using strategic movement exerts a ZOC value of 1.
- ★ An artillery unit exerts a ZOC value of 1 regardless of size.
- ★ A non-artillery battalion with an unmodified defense strength less than 3 exerts a ZOC value equal to its unmodified defense strength.

18.13 COMBINED ZOC VALUES: A hex may have a ZOC value for both sides simultaneously. When units or stacks in different hexes exert ZOC's into the same hex, the total ZOC value in that hex is the sum of the values exerted from all adjacent hexes.

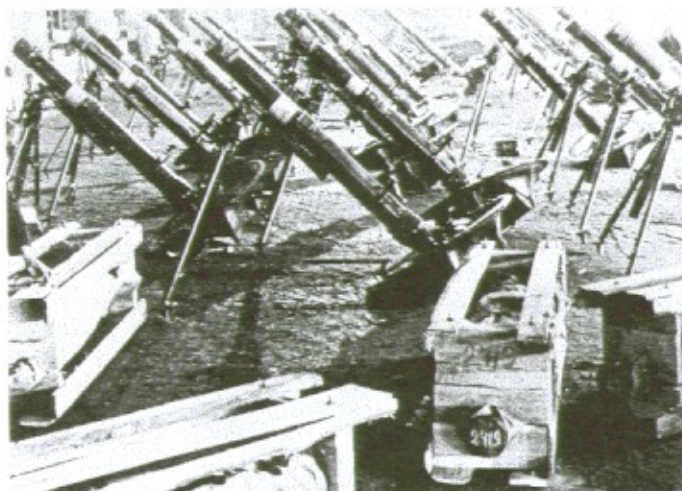
18.2 ZOC MODIFICATIONS: Regardless of modifiers, a ZOC value is *never* reduced to less than "1". The following cumulative modifiers apply to each unit's ZOC value:

Situation	ZOC Modifications
Unit is in a fortified hex	+2 per stack
Unit is in a dug-in hex	+1 per stack
Unit has troop quality of 7 or more	+1 per unit
Unit has troop quality of 3 or less	-1 per unit
Unit has fatigue value of 12 or more	-1 per unit
Into an enemy dug-in hex	-1 per stack
During clear, light or moderate overcast weather on a full-moon night turn	-1 per stack
During non-full-moon night turn	-1 per stack
During heavy overcast, or storm, night turn	-2 per stack
Into an enemy-controlled fortified hex	-2 per stack
Into an enemy-controlled city hex	-2 per stack

Soviet units on the 400m/hex map (i.e., in the "To the Volga" and "Rattenkrieg" scenarios) do *not* have their ZOCs modified by urban terrain.

18.3 ZOCS AND MOVEMENT: No movement point cost is assessed to enter an enemy ZOC, but enemy ZOCs tend to stop or inhibit further movement. In addition to terrain costs for movement, an extra cost applies to leave an enemy ZOC.

deep into enemy controlled territory, the enemy territory will "close in" behind it as it moves deeper behind enemy lines, even in the absence of enemy units. This reflects the fact that a lone unit deep behind enemy lines isn't very likely to exert much control over the surrounding territory due the lack of supply and communications lines.



19.0 SUPPLY

The strength and readiness of a military unit depends on several factors, the most important one being its level of supply. Without a constant flow of ammunition, food, and fuel, even a powerful military unit will be stopped dead in its tracks. All armies on the Eastern Front devoted considerable manpower and resources towards maintaining strong logistical support for their units.

Military supplies are measured in tons. Besides providing a realistic representation of the historical supply conditions, tonnage figures are used to determine the supply status of each unit in the game.

19.1 SUPPLY STATES: There are five supply states, ranging from "Attack Supply" to "No Supply"

	Green	Blue	Yellow	Red	Black
HQ Supply	Attack	General	Defensive	Minimal	No Supply
HQ Distance	100%	90%	75%	50%	none

ATTACK SUPPLY (GREEN): The HQ is able to provide twice the usual level of supply to each unit attached to it. Units have an abundance of food, fuel, ammunition, and spare parts. Attached units have their attack, defense, armor and antitank strengths increased by 25%. Troop quality increases by one point.

GENERAL SUPPLY (BLUE): The HQ is able to offer normal supply to its attached units. Units in General Supply have (or can get) everything they need to maintain normal combat readiness. Combat and movement values are unaffected.

DEFENSIVE SUPPLY (YELLOW): The HQ is able to provide a minimum level of supply to its units, allowing them to hold their positions, but not much more. Supply is substantially reduced, units receive less of everything, although still enough to conduct defensive operations. Attack and armor strengths are halved, but defense and antitank strengths are normal. Furthermore, the movement allowances of armor and motorized units are halved due to reduced fuel deliveries.

MINIMAL SUPPLY (RED): The HQ can only offer subsistence level supplies to its attached units. Units cannot engage in prolonged combat. Attached units have their attack strengths quartered. Defense, armor, and antitank strengths are halved. Armor and motorized units have their movement allowances cut to one-third of normal.

NO SUPPLY (BLACK): Things are grim! The HQ is unable to provide even a minimal level of supply. Units are forced to rely on the ammo, fuel, and food they happen to have on hand. Attack and armor strengths are quartered. Defense and antitank strengths are halved. Armor and motorized units have their movement allowances quartered. Troop quality is decreased by one, and the HQ's attached units are much more prone to surrender (see 22.0).

19.11 REVIEWING SUPPLY STATUS: An HQ's Supply Level may be adjusted voluntarily *only* during a morning turn (see 19.3), but you may *review* the supply status of your HQs and units at any time. To quickly review just the Supply Levels of your HQs:

- ★ Select the HQ button from the Tool Bar to open the HQ Bottom Box display. Underneath each HQ counter in the HQ Bottom Box is a light, the color of which corresponds to the HQ's supply state.

- ★ There are several methods to review your units' supply status. One is to select the OB button from the Tool Bar, then cycle through your HQs. Each unit and HQ in the box will have a light underneath it corresponding to its Supply Level. You can also select the "Supply" frame type and scroll around on the Close View map, or select the Overview Tool Bar button, and view the Supply Level of your units (select "Use Frame Color" when the Overview map is displayed). Finally, anytime you select a friendly unit/stack on the map, the Unit Bottom Box will have a graphic display of the Supply Level of the currently-selected unit.



19.2 THE SUPPLY PIPELINE: Each side has a Supply Pipeline which moves supply tonnage received at the front down the chain of command to the combat units. Each turn, supply arrives from the supply source and is distributed to the highest-level HQ(s) currently in play, as well as to any independent HQ which is tracing to that Supply Source Distribution Point (see 19.7). Tonnage is then distributed down through each level of the hierarchy.

The pipeline is demand-based; i.e., each unit requests a tonnage amount from its parent HQ, based on its Supply Level, and these requests are then passed back up the line. However, there is always an inherent lag in the system, and you should keep this in mind.

- ★ Each HQ and combat unit begins the game with a certain amount of tonnage "on hand"; for combat units—enough for one day's normal operations at the "default" Supply Level (see 19.8). As supply deliveries come in during the day and get passed down the line, more tonnage is added to the HQ's total.
- ★ While an HQ may receive supply *every* turn, a combat unit receives supply *only* during the morning turns (4AM or 6AM, depending on the scenario). At that time, each unit will request one day's worth of supply at its current Supply Level, *unless* that unit is unable to trace a supply line back to its parent HQ. Thus, it's imperative that you do everything you can to ensure that each unit's supply line is "cleared" during the night, so that by morning it is free from enemy influence.
- ★ As a combat unit performs actions in the game—maintenance, combat, movement—it consumes a portion of the supply it has on-hand. At the end of each turn, the unit will evaluate its remaining tonnage, and estimate its requirements for the rest of the day. If the unit does not have enough on hand, it will automatically lower its Supply Level until it can get itself safely through the day. Thus, a unit which has fought/moved heavily during the the first part of a day will frequently have a lower Supply Level than originally assigned to it by nightfall. In the morning, a unit will reset its Supply Level to match the parent HQ's level. (**EXCEPTION:** A unit which cannot trace a supply path in the morning will not have its Supply Level adjusted to match its parent HQ's Supply Level.)

19.3 SUPPLY ALLOCATION: Each morning turn (4AM or 6AM, depending on the scenario), you have the opportunity to change the Supply Level of each of your HQs during the Planning Phase. To aid you in making decisions on new Supply Levels, the HQ Side Bar displays two important pieces of information about each HQ's Supply status:

- ★ **Supply:** This is the HQ's current Supply Level, and can range from Attack to No Supply. The supply pipeline will do everything in its power to provide enough tonnage to keep the HQ at this level.
- ★ **On Hand:** This represents the current tonnage of supplies carried by the HQ. Raising an HQ's Supply Level causes tonnage to be taken from the HQ and distributed to its combat units; lowering the level causes tonnage to be returned to the HQ from the units.
- ★ **Used:** This is the running total of the supply tonnage used by the

units attached to the HQ during the course of the day (or, in the morning, during the previous day). This should give you a guide to setting the supply requirements for the HQ. Note that if you attach large numbers of units to the HQ at night, this "Used" number will not be as accurate as it would be without the attachments. The "Used" number is cleared at the end of each morning turn.

Each HQ unit may be assigned a Supply Level, subject to the following:

- ★ The total tonnage allocated by an HQ unit cannot exceed the amount of supply the HQ has on hand.
- ★ Each combat unit in the 1km/hex and 400m/hex scenarios will try to draw enough subsistence for six turns, ammunition for four turns of defense (vs. probes for six turns), fuel (if applicable) for six turns, and enough artillery shells (if applicable) for four turns. In the 3km/hex scenarios, combat units will try to draw subsistence for three turns, ammunition for two turns, fuel (if applicable) for three turns, and shells (if applicable) for two turns.
- ★ After this is done, players may assign higher or lower supply states to their HQs. To do this, select the HQ by using the arrows at the top of the HQ Sidebar, then click on the "More" button (at the bottom of the HQ Sidebar) to open the HQ Bottom Box. Then, select the desired supply status button.
- ★ When raising an HQ's Supply Level, the HQ's on-hand tonnage will decrease, and when lowering, will increase.
- ★ An HQ cannot voluntarily be assigned a state of No Supply.

19.4 SUPPLY LINES: Supply lines represent the routes by which supplies are forwarded to troops and HQs. A supply line must exist at the beginning of a turn for an HQ to receive supplies on that turn. A supply line must exist at the beginning of the first morning turn for a combat unit to receive supplies for that day. This line is a continuous path of friendly-owned hexes, beginning at the unit's hex, extending to its Superior HQ, or, for some HQs, to a Supply Source Distribution Point (see 19.7 for a listing of these). Additionally, in the "Operation Uranus" scenario, surrounded Axis HQs may alternatively trace to certain airfields.

19.41 SUPPLY LINE COLORS: To aid you in determining a given unit's supply status, each supply path is coded with a color ranging from **green** (100% of a request will be received) to **black** (the unit cannot trace a supply line, and receives no supplies). Each color corresponds to a given length in hexes (see 19.43).

	Green	Blue	Yellow	Red	Black
HQ Supply	Attack	General	Defensive	Minimal	No Supply
HQ Distance	100%	90%	75%	50%	none

19.42 REVIEWING SUPPLY LINES: There are three ways of reviewing a unit's current supply line:

- ★ Selecting a friendly unit on the map will display the supply line color for the currently-selected unit in the Unit Bottom Box.
- ★ If the "Show Supply Lines" menu option is in effect, a friendly unit's supply line will be flashed on-screen in the proper color when that unit is selected on the map. (**EXCEPTION:** No supply line is drawn if the unit is currently unable to trace a supply line.)
- ★ Selecting the "HQ Dist." unit frame from the Frame Tool Bar list will display the unit's frame in its current supply line color. This also makes that color visible in the OB Box, Overview map, Bottom Box, and Close View map.

19.43 SUPPLY LINE LENGTHS: A unit's ability to trace a valid supply line, and the length of that path, has a direct effect on the supply tonnage the pipeline is able to deliver to that unit. In general, the shorter the line, the greater the likelihood that a unit's requests will be honored.

- ★ A unit unable to trace a supply line receives no further supply tonnage until it re-establishes a valid supply line. A supply line may be traced through a friendly-occupied hex, even if the hex is in an enemy ZOC (a friendly unit negates the effect of enemy ZOC for supply purposes).
- ★ On the 400km/hex map, both a combat or HQ unit must be able to trace a supply line no longer than 128 hexes in order to receive 100% of its supply request. Thus, at this scale, a unit will either have a **green** supply line, or no line at all.
- ★ On the 1km/hex map, the distance varies:

Combat Units: The basic supply line length is 12 hexes, and is traced to the unit's parent HQ. If the line is longer than 12 hexes, the line status is reduced by one level for each additional multiple (or fraction of the basic length). *For Example: Assume a combat unit in the "Wintergewitter" scenario is able to trace a path to its HQ, but that path is 23 hexes long. Its supply line would thus be shown as blue (and supply deliveries reduced to 90% of the amount requested). If the line was 24 to 35 hexes long instead, it would be shown as yellow and the unit would get only 75% of the supplies it needs.*

HQs: Each HQ must be able to trace a supply line of no longer than 128 hexes to its Superior HQ, or (if not present in the game) to a Supply Source Distribution Point. As with the 400km/hex scenarios, HQs either have a "green" supply line, or no line at all.

★ On the 3km/hex map, the distance also varies:

Combat Units: Handled as per the 1km/hex scale.

Brigade/Divisional HQs: (Includes Soviet Mechanized and Tank Corps HQs) The basic path length is 12 hexes. Supply line status is adjusted for length as for combat units.

Corps HQs: (Includes Soviet Army HQs) The basic path length is 48 hexes. A Corps HQ's Supply Level is lowered one level for every additional multiple (or fraction of 48) of the line's length.

Army/Front HQs: Must be able to trace a path not exceeding 128 hexes to a Supply Source Distribution Point.



19.5 AIR RESUPPLY AND AIRFIELDS: Depending on the scenario and the Air Superiority level, the Axis player may have transport aircraft squadrons available (or bombers capable of supply transport). When available, such aircraft may be used to supplement normal supply deliveries from the pipeline, or used to supply out-of-supply units via the air drop (17.4).

In the "Operation Uranus" scenario (only), the Axis has the capability to have the *Luftwaffe* air-land supply tonnage at certain friendly-controlled airfields. Supply tonnage may be air-landed at the Gumrak, Pitomnik and/or Stalingradskii airfields (all of which are located west of Stalingrad). An airfield that has had supplies air-landed on it may function as a temporary Supply Source Distribution Point for a Axis HQ otherwise unable to trace a valid supply line (as long as that airfield remains Axis-controlled).

- ★ For the airfield to function as a Supply Source Distribution Point, the Axis player must have previously air-landed supplies there. This is the only way to stockpile supplies at an airfield.
- ★ An HQ unable to trace a supply line to its normal Supply Source Distribution Point will instead attempt to trace a supply line to an airfield with stockpiled supply tonnage.
- ★ An HQ able to trace a supply line to such an airfield will draw supplies from tonnage stockpiled at that airfield.

19.6 CAPTURED SUPPLY: Supply tonnage may be captured in one of three ways:

- ★ When an enemy HQ is eliminated up to 50% of its current supply tonnage may be added to the attacking side's supply stockpile.
- ★ When an Axis airfield is captured up to 50% of the tonnage currently stockpiled at it may be added to the Soviet's stockpile.
- ★ A unit can capture supplies air-dropped by the enemy if it takes possession of the hex where the supplies were air-dropped.

19.7 SUPPLY SOURCE DISTRIBUTION POINTS: Following is a listing of each scenario's Supply Source Distribution Points.

TO THE VOLGA:

- ★ The road hex on the *east* side of the Volga that leads off the southern map edge.
- ☙ Each road and rail hex on the *west* side of the Volga that leads off the southern, western or northern map edge.

A RIVER TOO FAR:

- ★ The rail hex leading off the eastern edge of the map, as well as the two open hexes in the extreme northwestern and northeastern corners of the map.
- ☙ The open hex in the extreme southwestern corner of the map.

MANSTEIN'S SOLUTION:

★ The road hex leading off the northern edge of the map, and the two hexes in the far southeastern corner.

⚡ Each road and rail hex leading off the western, southern or eastern edges of the map.

RATTENKRIEG:

★ The road hex on the *east* side of the Volga that leads off the eastern map edge.

⚡ Each road and rail hex on the *west* side of the Volga that leads off the southern, western or northern map edge.

WINTERGEWITTER:

★ Each road and rail hex leading off the northern, eastern or southern map edge *that is Soviet-controlled at scenario start*.

⚡ Each road and rail hex on the western map edge, as well as the road hex on the northern map edge *that is Axis-controlled at scenario start*.

QUIET FLOWS THE DON:

★ Each road and rail hex on the northern map edge *east* of the Don river.

⚡ Each road and rail hex leading off the western and southern map edges, as well as the road hex leading off the northern map edge that is *west* of where the Don flows off the north edge.

OPERATION URANUS:

★ Each road and rail hex leading off the eastern and northern map edges that are *east* of the Don river.

⚡ Each road and rail hex leading off the southern and western map edges, as well as the road hex leading off the northern map edge that is *west* of where the Don flows off the north edge.



19.8 DEFAULT SUPPLY LEVELS: Each side in each scenario has a different "default" Supply Level. The supply pipeline will be setup so as to maintain your HQs at this level during the course of normal operations. See section 34.0 ("Hints on Play") for additional information regarding Supply Levels.

To the Volga:

★ Defensive Supply

⚡ General Supply

A River Too Far:

★ Attack Supply

⚡ Attack Supply

Manstein's Solution:

★ General Supply

⚡ Attack Supply

Rattenkrieg:

★ General Supply

⚡ Attack Supply

Wintergewitter:

★ General Supply

⚡ Attack Supply

Quiet Flows the Don:

★ Attack Supply

⚡ General Supply for the Germans, and Defensive Supply for most Romanians

Operation Uranus:

★ Attack Supply

⚡ General Supply

19.9 SUPPLY CONSUMPTION: For reference and guidelines, the following actions cause (or do not cause) supplies to be consumed (exact rates of consumption vary from unit to unit and with the Supply Level):

★ **Movement:** Moving a motorized or mechanized unit 50% or more of its movement allowance consumes fuel.

★ **Combat:** Conducting ground or artillery combats. A probe or an overrun consumes half the supplies of an assault or all-out-assault. Artillery using a defensive fire mission consumes half the supplies of one performing an offensive fire mission. A defending unit generally consumes half as many supplies as an attacking unit.

★ **Ambush:** Due to its short duration, an ambush consumes no supplies.

★ **Stay Alive For One Turn:** While doing nothing, at least a maintenance Supply Level is required.

20.0 TROOP QUALITY

20.1 EFFECTS OF TROOP QUALITY: Each unit has a troop quality rating that ranges from 4 (least effective) to 8 (most effective). Troop quality is a measure of the effectiveness and morale of the unit, independent of its size or strength. Units with high troop quality are more likely to carry out their orders and be successful in combat. All other factors being equal, units with a high troop quality:

- ★ Move and attack before lower-quality units,
- ★ May receive a favorable modification to combat odds,
- ★ Have a more effective ZOC,
- ★ Are more likely to stay in place and take additional losses rather than retreat in combat,
- ★ Are more likely to obtain information about enemy units, and are less likely to reveal information about themselves to the enemy, and
- ★ Will affect an artillery unit's ability to defend itself against enemy ground attacks (using its defense strength), but not its fire missions (using its barrage or support strengths).

20.2 MODIFICATIONS TO TROOP QUALITY: Several factors can cause a unit's troop quality to improve or deteriorate during the game. These changes are not permanent, and may be reversed by alleviating the condition responsible for the change. All troop quality modifiers are cumulative, but a unit's current troop quality level can never be less than 0. The maximum possible troop quality is 9, for a non-fatigued, non-disrupted, elite unit in Attack Supply.

Unit is in Attack supply	+1
Fatigue level is 6 to 11	-1
Disorganization level is 6 to 11	-1
No supply	-1*
Fatigue level is 12+	-2
Disorganization level is 12+	-2
* Does not apply when checking for surrender.	

21.0 FATIGUE AND DISORGANIZATION

21.1 FATIGUE: Orders can be assigned to a unit every turn and each day, but after a while the troops will become so fatigued that their performance will suffer. All troops eventually require time to rest and recover from the demands of the battlefield. If troops aren't given time to recuperate, their combat performance will suffer. In some extreme cases, the troops may virtually break down and be unable to conduct any operations as a cohesive military force.

You should keep in mind the often severe weather conditions that can be encountered in the game, and plan your operations in such a way as to minimize losses in combat effectiveness due to fatigue (e.g., move and attack only when necessary, limit night operations, and allow fatigued troops time to rest).

A unit can reduce its fatigue level by remaining completely idle for one or more turns. Each unit has a fatigue level, shown in the Unit Bottom Box when the unit is selected.



21.11 EFFECTS OF FATIGUE: Each point of fatigue:

- ★ Reduces a unit's attack, defense, armor, antitank, barrage, support, and movement by 2% of its current value, after modifica-

tions are made for strategic movement, supply, terrain, and improved positions,

- ★ Decreases troop quality by 1 when the unit's fatigue reaches 6,
- ★ Decreases troop quality by 2 when its fatigue reaches 12, and
- ★ Decreases troop quality by an additional 2 when its fatigue level reaches the maximum fatigue level of 15. At this point, a unit's movement allowance and combat strengths are reduced by 33%.
- ★ For every three points (or fraction thereof) of fatigue a unit has when it is given a Dig In or Fortify order, one extra turn will be added to the time required to complete the order. *For Example: A unit with 3 points of fatigue is given an order to Dig-in in a clear terrain hex. It will take him three turns (instead of the normal two) to complete the task.*

Circumstance	Fatigue Effect†
Making a Probe attack	+2
Making any type of Assault	+2
Making a Barrage attack	+1
Defending against an air attack	+2
Defending against any other attack	+1
Tactical Movement	+1...+3*
Strategic Movement (motorized only)	+1
Digging In	+1
Staying in an unfrozen marsh	+1
Taking no actions while in an enemy ZOC	-1
Taking no actions while not in an enemy ZOC	-3

† In the 3km/hex scale, add one point to each penalty, and subtract an additional point for each recovery.

† Each penalty/recovery is doubled at night (after adding/subtracting for 3km/hex scale—see note above). **EXCEPTION:** Soviet units in the 400m/hex scale take only one point maximum penalty for moving at night.

† All fatigue costs are doubled if the temperature during the turn is -20° or colder. This does not affect recovery rates.

* Tactical and Strategic movement penalties (for non-motorized units) range from +1 to +3, depending on the percentage of movement points expended.

21.12 CHANGES IN FATIGUE LEVELS: The following causes of fatigue level changes are cumulative, although no unit ever has more than 15 points of fatigue.

21.2 DISORGANIZATION: Units engaging in movement and combat will become disorganized—constituent formations may be out of position and possibly out of contact with each other. All types of combat are disruptive, and each battle increases a unit's disorganization level, which reduces its efficiency in battle. Attacking units usually become more disrupted than defending units, since the attackers are moving around, while the defenders usually remain in prepared positions. At night, disorganization experienced by attacking units is especially severe. Each unit has a disorganization level, shown in the Unit Bottom Box whenever the unit is selected. The disorganization level may vary from 0 to 15, with higher numbers representing a higher degree of disorganization.



21.21 EFFECTS OF DISORGANIZATION: Each point of disorganization:

- ★ Reduces the unit's attack, defense, armor, antitank, barrage, support, and movement by 2% of its current value, after modifications are made for strategic movement, supply, terrain, and improved positions,
- ★ Decreases troop quality by 1 when the disorganization level reaches 6, and
- ★ Decreases troop quality by 2 when disorganization level reaches 12.

21.22 CHANGES IN DISORGANIZATION LEVELS: When determining disorganization for attackers, the overall attack type is an average of the individual units' attack types (see 15.2). Units reduce their disorganization levels by remaining idle and not performing any activity during a turn. The following causes of disorganization level changes are cumulative.

Circumstance	Disorg. Effect†
Making any Assault on a poorly-lit night turn	+10
Making any Assault or Probe into a city hex	+10
Making any Assault on a full-moon night turn	+8
Making a Probe on a poorly-lit night turn	+2
Making any Assault on a daylight turn	+1
Making a Probe on a full-moon night turn	+1
Each strength point lost by a unit	+1
Motorized unit using Tactical Movement at night	+2 to +10 ¹
Other units moving at night (any mode)	+2 to +10 ¹
Motorized unit using Strategic Movement at night	+1 to +3 ¹
Each hex retreated by an attacking unit	-1
Each hex, in excess of one, retreated by a defending unit	-1
Each turn in No Supply because its parent HQ was eliminated	-1
During a daylight turn while sitting in an enemy ZOC	-1
During a night turn while sitting in an enemy ZOC	-2
Sitting and not in an enemy ZOC during a daylight turn	-3 ²
Sitting and not in an enemy ZOC during a night turn	-6 ²

† In the 3km/hex scale, add one point to each penalty, and subtract an additional point for each recovery (i.e., +2 becomes +3; -2 becomes -3).

¹ Disorganization amount depends on the percentage of movement points expended.

² Units may recover from disorganization and fatigue and also receive replacements.



22.0 SURRENDER

If a unit's situation is bad enough, and no sign of support is in sight, most troops will eventually surrender rather than fight to the last man.

22.1 BREAKING POINTS: Each unit has a breaking point. When units are surrounded, out of supply, and under attack, they gradually lose their ability and will to fight. Generally, the larger and better prepared the unit is to hold its position, the longer it will hold out, but when all hope of breakout or rescue is gone, the officers and soldiers will begin to weigh surrender against resistance in order to save their lives.

22.2 ENEMY PROXIMITY: A unit will surrender only if it is adjacent to an enemy unit and it has no supply tonnage on hand. The following modifiers apply to troop quality for surrender determination purposes for non-HQ units only:

- ★ Increases by one if the unit or stack has a current modified defense strength of 4 or more.
- ★ Decreases by one if the unit or stack has a current modified defense strength of 2 or less.

22.3 HQ SURRENDERS: Surrender is checked for HQs first, then for non-HQ units. An HQ surrenders only if it meets the aforementioned conditions (22.2), and has no unit(s) attached.

22.4 SURRENDER PROCEDURE: For each unit eligible to surrender, a random number between 0 and 10 is generated and compared to the unit's current troop quality. If the random number is *greater* than the unit's current troop quality, the unit surrenders. Units that surrender are immediately removed from play and are considered eliminated for victory point and replacement purposes.



23.0 IMPROVED POSITIONS

Units may construct two types of improved positions, dug-in positions and fortifications. Both of these improved positions only benefit defending units; there is no advantage to attacking out of a hex containing an improved position. A dug-in position consists of foxholes, weapons pits, pre-registered targets, pre-planned fields of fire, and a prepared and organized defense. A fortification represents a more elaborate defense that also includes minefields, barbed wire, a trench system, as well as earthworks and dug-in bunkers.

23.1 GENERAL RULES FOR IMPROVED POSITIONS:



23.11 IMPROVED POSITION APPEARANCE: Each improved position appears on the map as the uppermost marker in the hex. The size of an improved position is shown

as a number at the bottom of the marker. This number shows the number of stacking points that can use the benefits of the improved position.



23.12 ENLARGING IMPROVED POSITIONS: Improved positions may be enlarged by units if they continue to build in the same hex. Enlarged improved positions have no additional effect except that more units may benefit from the position.

23.13 INTERRUPTING IMPROVED POSITION CONSTRUCTION: The construction process is interrupted if:

- ★ An enemy unit moves next to the unit digging in (**EXCEPTION:** see 23.2's special note about digging in on 400m/hex map).
- ★ The construction hex is attacked by artillery barrage or aircraft.
- ★ The constructing unit participates in any form of combat.
- ★ The constructing unit tries to recover from fatigue or disorganization or receives replacements, and/or
- ★ The constructing unit is artillery and conducts a fire mission.

23.14 EFFECTS OF IMPROVED POSITIONS: Improved positions cannot be moved, and only benefit friendly units in the same hex.

- ★ Once an improved position is completed, the unit that built it can conduct other activities or move away. Other friendly units are free to move into the hex and benefit from the improved positions.
- ★ Improved positions are removed from the map if they remain unoccupied at the end of a turn. As long as the position is occupied, the improved position's effectiveness remains intact. However, if an improved position is captured or abandoned at the end of a turn, the position is assumed to be of little use to future occupants.



23.2 BUILDING DUG-IN POSITIONS: All units, except those adjacent to an enemy unit(s) or located in a non-frozen marsh hex, may dig-in.

- ★ At least two turns are required to dig-into a position. Furthermore, an additional turn is required for every three points of fatigue a unit has when it begins to dig. To dig-in, select the unit and open its Command Window, assign the unit one of the three defensive options, select the dig-in symbol and close the Command Window.

SdKfz 10/4, German self-propelled AA vehicle



Digging in on the 400m/hex map

Even to the Germans, the Russians were acknowledged masters of utilizing the terrain (especially urban terrain) to construct quick yet effective defenses. Therefore, on the 400m/hex map, a Soviet unit attempting to dig in or fortify in urban terrain has its time requirement halved. Additionally, a Soviet unit may dig in when adjacent to an Axis unit(s) if the Axis unit(s) exert no more than 2 ZOC points into the digger's hex.

- ★ To finish digging in, dig-in orders must remain assigned to the unit on the following turn. Once a unit begins to dig-in, it continues to do so until its orders are changed. If the unit receives orders other than dig-in, the process is either interrupted or cancelled. If the unit moves out of the hex, the process is cancelled.
- ★ When units defend in a hex containing a dug-in marker large enough to benefit all the units in the hex, their defense strengths are increased 150%, their antitank strengths are increased 125%, and incoming artillery and ground support strengths are halved. If the dug-in marker is not large enough to benefit all the units in a hex, their defense strengths are multiplied by $1 + [.5 \times (\text{marker size divided by stack size})]$. Incoming artillery and air attack strengths are reduced by a proportional fraction. Antitank strengths and troop quality levels are unaffected. *For Example: Two battalion-size units with a combined defense of 7 are defending a hex with a size 3 dug-in marker:*

$$7 \times [1 + (.5 \times 3/6)] = 7 + (.5 \times 7) = 7 + (.25)$$

Therefore, their net Defense Value is 7.25.



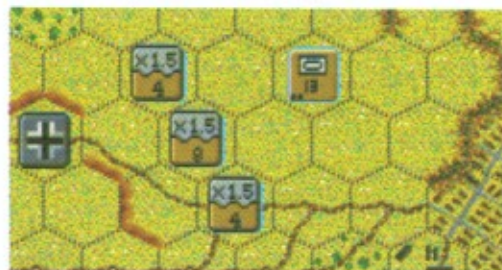
23.3 BUILDING FORTIFICATIONS:

- ★ Fortifications are constructed in the same manner as digging in, except that the first fortification marker in a hex must be built by an engineer unit. Constructing the first fortification in a hex requires four turns. A fortification may be built or enlarged in a marsh hex, but this takes eight turns.
- ★ When units defend in a hex containing a fortification large enough for all of the units to benefit from the fortification, their defense strengths are increased 200%, their antitank strengths are increased 150%, and incoming artillery and air attacks are halved. If a fortification is not large enough to benefit all of the units in a hex, their defense strengths are multiplied by 1 plus (fortification size/stack size), and their antitank strengths are multiplied by $1 + [.5 \times (\text{fortification size/stack size})]$. The

strengths of incoming artillery and air attacks are halved. *For Example: Three battalion-size units with a combined defense of 11 are defending a hex with a size 6 fortification marker:*

$$11 \times 1 + [(.5 \times 6/6)] = 11 + (.5 \times 1) = 11 + (.5)$$

Their net Defense Value is 11.5.



23.4 MULTIPLE IMPROVED POSITIONS – DIGGING-IN AND FORTIFYING THE SAME HEX:

If more than one unit constructs an improved position in a hex at the same time, only one marker appears. No hex may contain both types of completed improved position marker, although both may be under construction in the same hex at the same time (in this case, a fortification marker is shown). Either type of improved position may be under construction in a hex containing a completed improved position of the other type, in this case the completed improvement's marker is shown.

- ★ When a fortification is completed in a hex already containing a completed dug-in marker, the size of the newly completed fortification immediately increases by half the size of the dug-in marker (fractions rounded down), and the dug-in marker disappears. *For Example: A hex contains a completed "3" dug-in marker, and a "1" fortification "Build". When the fortification is complete, it becomes a "2" fortification, and the dug-in marker disappears.*
- ★ Units may be assigned to dig-in where a fortification already exists. When the units finish digging in, the fortification marker is enlarged, depending on the size of the unit that is digging in. A company size unit enlarges the size of the fortification by 1, and a battalion-size unit enlarges the size of the fortification by 3. *For Example: A hex contains a completed fortification marker of size 1, and a battalion-size unit digs into the hex. When the battalion finishes digging in, the fortification marker is enlarged from 1 to 4, and the process may be repeated to enlarge the fortification to size 7, or beyond.*

24.0 WEATHER

The weather in *STALINGRAD* can vary from a pleasant Fall afternoon to an overnight blizzard with temperatures far below zero. To get the most out of your troops and air assets, you'll need to keep a sharp eye on the weather and beware of its effects.

STALINGRAD divides weather into two components: Sky Conditions and Ground Conditions. Sky Conditions range from Clear to Storm, and represent cloud cover and/or visibility. Ground Conditions range from Normal (dry) to Muddy to Deep Snow.

24.1 SKY CONDITIONS: The degree of cloud cover during a turn is a major factor in the availability and effectiveness of air operations, and can affect ZOCs (see 18.0). Precipitation, in conjunction with the current temperature, affects ground conditions.

SKY CONDITIONS CHART	
Clear	Visibility is excellent and air missions will have their highest probability of completing assigned missions.
Light Overcast	Visibility is good and air missions are only slightly affected.
Moderate Overcast	Visibility is adequate, but air missions are much more likely to miss targets.
Heavy Overcast	Visibility is not very good. Soviet players may not fly air missions; Axis air operations are heavily affected. Precipitation is intermittent.
Storm	Visibility is poor; neither side may fly air missions. Precipitation is constant.

24.2 GROUND CONDITIONS: Ground Conditions and temperature primarily affect movement costs, although combat can also be affected in Deep Snow. Combat can also be indirectly affected by the temperature, since Fatigue costs are doubled when the temp dips

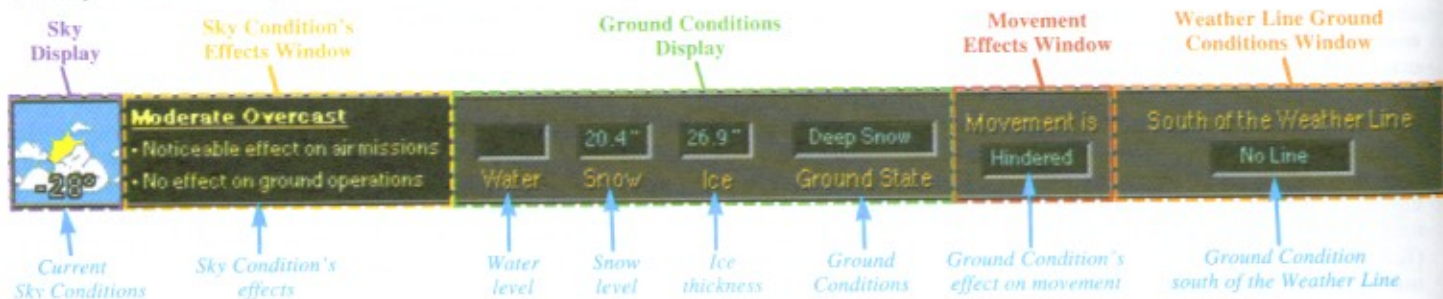
below -20° Fahrenheit. In the "Operation Uranus" scenario, there is a Weather Line extending the width of the map, just south of Tinguta Station and Nizhne Chirskaya. Ground Conditions will usually be identical on either side of the line, but if the temperature rises above 28° , the ground south of the line will become Light Mud. This condition persists as long as the temperature stays high.

GROUND CONDITIONS CHART	
Normal	Movement is unaffected; rivers/water/marsh are not frozen.
Light Mud	Results when more than 4" of water has accumulated on the ground, and the temperature is greater than 35° Fahrenheit. Roads disappear, movement is hindered; rivers/water/marsh are not frozen.
Light Freeze	Results when more than 4" of ice has accumulated. Movement costs are higher than under normal ground conditions.
Hard Freeze	Results when more than 12" of ice accumulates. Marshes and rivers (other than the Volga) are frozen. Movement conditions are good. [†]
Deep Snow	Results when more than 20" of snow has accumulated on the ground. Movement is hindered and attack strength into clear terrain is halved unless the unit is tracked or on skis.

[†] In addition to the above, the Volga and all water/lakes freeze on 19 December.

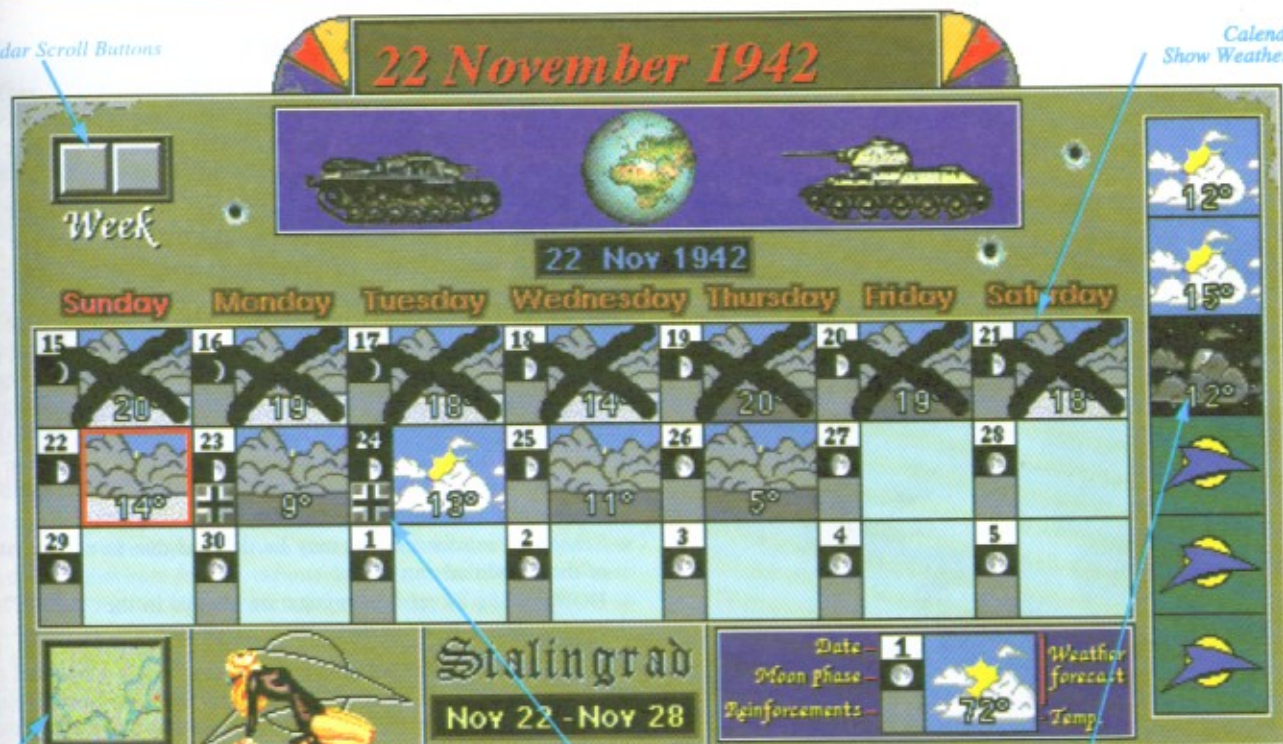
24.3 THE WEATHER BOTTOM BOX: Selecting the Weather Tool Bar button brings up the Weather Bottom Box (see illustration below). This contains detailed information about both Weather and Ground conditions.

★ **The Sky Display** graphically displays the current sky conditions and temperature.



Calendar Scroll Buttons

Calendar Squares Show Weather Forecasts



Inset Map (red dot shows reinforcements' arrival location; 25.1)

Reinforcement symbol

Weather Forecasts for the three turns of a day

- ★ **The Sky Condition's Effects Window** lists the current sky condition, and notes some of its more important effects.
- ★ **The Ground Conditions Display** shows the accumulations of water, snow and ice, and the current ground conditions. In the "Operation Uranus" scenario, this is the ground condition above the Weather Line.
- ★ **The Movement Effects Window** states if movement rates are adversely affected the current ground conditions, this box will state "Hindered" if movement rates are adversely affected by the current ground conditions, otherwise "Normal".
- ★ **The Weather Line Ground Conditions Window** ("Operation

Uranus" scenario only) will list the ground condition south of the Weather Line. In other scenarios, this box will read: "No Line."

24.4 THE CALENDAR WINDOW - WEATHER FORECASTS:

The Calendar Window displays weather forecasts. To open the Calendar Window, select the Calendar button on the Tool Bar. The Calendar Window squares display a pictorial forecast of the sky conditions for each of the next five days. To see the forecast for each turn of a particular day, select the weather picture within one of the day squares. A turn-by-turn forecast for the selected day appears on the right side of the Calendar; three or six "forecasts" will be shown, depending on the scenario's scale (see 5.0). Temperatures are shown in degrees Fahrenheit



25.0 REINFORCEMENTS

In several of the scenarios, one or both sides receive reinforcements during the game. Unless delayed for some reason, scheduled reinforcements arrive at the end of an Execution Phase. Once reinforcements arrive, they behave the same as all other units for movement and combat.



25.1 REINFORCEMENT ARRIVAL: To see a list of scheduled reinforcements and where they are supposed to arrive, select the Calendar Button. Select a day on the Calendar marked with a reinforcement symbol to view that day's scheduled reinforcements. A red dot appears on the Calendar's inset map showing approximately where the reinforcements are scheduled to arrive (see the illustration on page 65; the "inset map" is in the bottom left corner of the Calendar display).

- ★ Select any reinforcing unit to view its data. If more than nine units are scheduled to arrive that day the scroll (arrow) buttons to the left of the reinforcing units' display will be active.
- ★ Scheduled reinforcements may be delayed due to enemy control of the scheduled entry hex.
- ★ HQs arriving as reinforcements are always in the "default" supply for their side when they arrive on the map.

25.2 REINFORCEMENTS: If a reinforcing unit's scheduled entry hex is occupied by or adjacent to an enemy unit, the reinforcements slated to arrive at that hex instead arrive in the closest hex to that entry hex that is *not* occupied by or adjacent to an enemy unit.



25.3 HQ ELIMINATION: Due to its importance, after an HQ unit is eliminated it is recreated.

- ★ A recreated HQ unit has a defense value one less than that of the original. Additionally, a recreated HQ is returned to play with about 10% of the tonnage it had when it was eliminated.
- ★ An HQ unit is recreated and returned to play on the turn *after* it is eliminated. It tries to return to or near a hex containing a unit that was previously attached to it. If no unit was attached to the HQ when it was eliminated, the unit is *not* recreated.
- ★ The victory points for eliminating an HQ unit are awarded *each* time it is eliminated.



26.0 REPLACEMENTS

The Soviet and Axis armies maintained rear area replacement organizations, whose purpose was to train recruits and then process them as replacements for the various front line combat units. These replacement organizations are represented in *STALINGRAD* as replacement points, which are used to rebuild units that have suffered losses in combat.



26.1 ASSIGNING REPLACEMENT POINTS: A friendly unit may receive a *maximum* of one replacement point per turn. A unit is eligible to receive replacements if the replacement icon is visible (above the "Admin" line) in the unit's Command Window when that unit is selected. The number of replacement points currently available to your side is displayed in the "Replacements" line at the bottom of the OB screen (select the OB button in the Tool Bar). If any replacements are available for a unit type, a number appears in the small window to the left of the unit designation. If the window is empty, no replacements of that type are currently available for your side. When replacement occurs, the correct replacement type is automatically used depending on the type of unit receiving the replacement.

26.2 ELIGIBILITY: An infantry, armor or engineer unit is eligible to receive a replacement point only if its unmodified defense strength is at least one less than its normal strength. On the other hand, an artillery, antitank or anti-aircraft unit is eligible to receive a replacement point when its defense strength is at least $\frac{1}{4}$ point less than its normal strength.

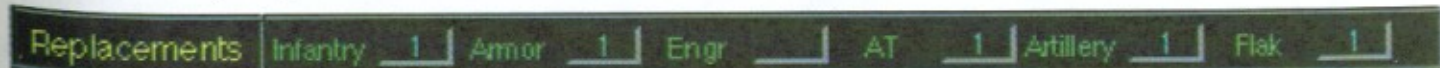
Procedure: To assign a replacement point to a unit:

- ★ Select a unit (it is eligible to receive a replacement if the replacement icon is visible in its Command Window),
- ★ Assign it any defensive action,
- ★ Select the Replacement button (above "Admin") in the Command Window (the icon color will turn from black to red).

Replacement Use Restrictions: Some restrictions apply regarding use of replacement points:

- ★ Units that have surrendered or been eliminated cannot be rebuilt with replacements.
- ★ Replacement points cannot be used to increase the strength of a unit above its normal full strength.
- ★ To receive replacements, a unit must be in some form of supply, and cannot be in an enemy ZOC. The unit cannot move, attack, or build improved positions while receiving replacements, but may be recovering from disorganization and/or fatigue.

26.3 REPLACEMENT EFFECTS: Each infantry, armor and engineer replacement point restores one point to the receiving unit's unmodified attack *and* defense strengths. Others strengths (antitank, armor, etc.) are restored proportionally. Each artillery, antitank and AA replacement point restores $\frac{1}{4}$ point to the receiving unit's unmodified defense strength, and attack strength (if applicable). Other strengths are restored proportionally.



The above Replacements box, part of the OB display (see 28.3), indicates that there is one replacement point available for each unit type except engineer.

27.0 VICTORY CONDITIONS

Victory in *STALINGRAD* is determined by a turn-by-turn assessment of each side's total "victory points".

27.1 VICTORY POINTS: In each scenario, victory points are awarded for possession of geographic objectives, and for losses inflicted on the enemy. The game keeps track of each side's victory point total, and adjusts the victory level at the end of each turn. The Victory Bottom Box displays the current victory levels and victory point totals for each side.

27.11 VICTORY POINT ADJUSTMENT PANEL: In order to facilitate play-balance, Victory Point totals may be adjusted at the start (only) of a scenario. Adjustments may be made for any type of game (PBEM, vs. the Computer, etc.). During play, the adjustment may be viewed by selecting "Review Scenario Options" from the menu, or by opening the Victory Box, and looking at the "Handicap" entry for the appropriate side.



Sign Buttons (+/-): These determine whether the next adjustment will add to or subtract from the current total.

Adjustment Display: Shows the adjustment, in Victory Points, which will be applied to the next new scenario started. If the total is a positive number, the points will be added to *your* side; if negative, the points will be added (as positive

points) to your *opponent's* total. To clear the display and reset the total to 0 points, simply click on the number in the display.

Point Buttons: Each of these buttons has a numeric value, which when clicked, will be added to the current total. If the selected Sign Button is negative, then the amount will be subtracted from the Adjustment display.

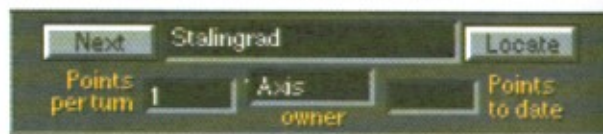


Soviet T-34 medium tank

27.2 VICTORY LOCATION BUTTONS: Once a scenario has begun, select the Victory button to open the Victory Bottom Box. Appearing from left to right:

★ **CURRENT VICTORY LEVELS:** This displays the current level of victory (see 27.5).

★ **CURRENT VICTORY POINTS:** This shows the current victory point totals for *both* sides in the scenario.



★ **GEOGRAPHIC OBJECTIVES LISTING AND LOCATION WINDOW:** This window covers the scenario's geographic objectives. Selecting "Next" toggles through the scenario's complete list of geographic objectives, listing its current per-turn VP value as well as its current owner. Select "Locate" to center the objective on the screen.

Current Victory Level

Current Victory Points



Geographic Objectives Listing and Locator Window



★ **OBJECTIVE CONTROL SIDE BOX:** This side box, located in the lower right portion of the main screen, displays the *most important* (though usually not *all*) objectives in the current scenario. These buttons also indicate, by means of a national flag, which side currently holds each objective hex. Small bar graphs show the relative number of victory points each side has gotten from each displayed objective; white bars show friendly points, red bars show enemy points. Click on the display for a particular objective and the screen will center on that objective.

27.3 GEOGRAPHIC OBJECTIVES: Each scenario has a unique set of geographic objectives, and each objective awards a certain number of victory points to the side that controls the hex at the end of each turn.

- ★ Victory points are awarded for possession of geographic objectives at the end of each turn, according to the formula: *objective point value divided by the number of turns in the scenario times the current turn number times 2. All fractions are rounded up.* This system allows for gaining victory points during a game, but the rewards increase for possession toward scenario end.
- ★ During any Planning Phase, you may examine the scenario's geographic objectives, current victory point totals for both sides, and the current victory level. Select the Victory button on the Tool Bar to open the Victory Bottom Box.

27.4 LOSSES INFLICTED ON ENEMY UNITS: Each side receives a varying amount of victory points for each unmodified defense strength point of enemy armor, mechanized recon, artillery, or HQ lost by the enemy.

Decisive	Total	2838	780	Kills	Allied	★
Allied	Cities	2058		Handicap		
Victory	Ships			Success Rate		+

27.5 VICTORY LEVELS: To assess your performance relative to the actual historical campaign or scenario, **STALINGRAD** keeps track of the current victory level and compares this level to the historical events. At the end of each turn, the current Axis victory point total is subtracted from the current Allied total, and the results

appear on the far left side of the Victory Bottom Box. The Victory Window displays the results as a graph in the middle of the window. Each blue dot on the graph represents the cumulative victory point score at the end of one turn. The number of turns represented by each dot varies, depending on the scenario's length.



The six levels of victory are described below, along with the historical implications of what that victory level would mean for the "Operation Uranus" (Campaign Game) scenario.

- ★ **Decisive Soviet Victory:** The Soviets won an overwhelming victory, crushing the Axis armies in the Ukraine. The remaining Axis forces will not be able to stop the advancing Red armies. The war in Russia might be over before the end of 1943.
- ★ **Substantial Soviet Victory:** The offensive went essentially as planned, with the Soviets suffering only minor delays. The Axis armies are forced to fall back to the west (this represents the historical result of the campaign).
- ★ **Marginal Soviet Victory:** The Axis defenses around Stalingrad were stronger than had been anticipated. The Soviets achieved most of their objectives, but are somewhat behind schedule. The Axis armies may be able to hold along the Volga for the winter.



- ★ **Marginal Axis Victory:** Axis defense in the area of operations was solid and competent. The Soviets are well behind schedule in achieving their objectives. The Axis hold on Stalingrad has not been seriously threatened.
- ★ **Substantial Axis Victory:** Despite some minor setbacks and heavy casualties, the Axis defense was a success. The Soviet offensive failed to achieve most of its objectives.
- ★ **Decisive Axis Victory:** The Axis defense against the Soviet offensive was masterful. The Soviets suffered a serious setback, having failed to achieve any of their major objectives.

Order of Battle

Front HQs

Stalingrad

Army HQs

62nd Army

HQ: Stalingrad

Corps HQs

Div/Brig HQs

244th Rifle

HQ: 62nd Army

Combat Units

3-907-244

HQ: 244th Rifle

Unit Stats

Attack	7	Defense	11	Quality	6	Armor		AT	4	Disrupt		Fatigue	
--------	---	---------	----	---------	---	-------	--	----	---	---------	--	---------	--

HQ Supply Data

On Hand	36	Need		Used		Rec'd		Flow	
---------	----	------	--	------	--	-------	--	------	--

Replacements

Infantry		Armor		Engr		AT		Artillery		Flak	
----------	--	-------	--	------	--	----	--	-----------	--	------	--

28.0 THE ORDER OF BATTLE DISPLAY

The Order of Battle (OB) Display is a hierarchical representation of your HQs and combat units. It allows you to easily view the existing chain of command of all units under your control, and provides detailed information about individual units, as well as showing what replacements points are available.

To access the display, select the OB button from the Tool Bar. The OB Display will appear. It's divided into seven levels: five levels for displaying units, one which displays detailed data about the currently-selected unit, and another level which shows (by type) all replacement points currently available.

28.1 THE LEVEL BOXES: Each of the first five boxes in the OB Display represents a level of command from Armee/Front down to combat units.

- ★ The left-hand side of the box contains the level type (in **green**), the name of the currently-selected unit in that level (if any, in **tan**), and that unit's Superior HQ (if it has one, in **blue**).
- ★ The middle area contains up to 16 counters, representing the units at that level. Above each counter is a caret (▼); if the unit is selected, the caret will be bright green, otherwise it is dimmed. Below each counter is a light which shows the unit's current Supply Level.
- ★ To the right of the counter display are the scroll buttons. These buttons are usable *only* if there are more than 16 units on the current level, in which case a black up/down arrow is shown.

28.2 THE UNIT STATS BOX: The information displayed here is similar to the information in the Unit Bottom Box, and shows the current (modified) attack, defense, etc., values of the currently-selected unit in the lowest active level box. **NOTE:** Due to space limitations in the Unit Bottom Box, the defense strength for an artillery unit is only shown in the Unit Stats box.

28.3 THE HQ SUPPLY BOX: To help you keep track of your units' supply pipelines, there is a display for an HQ's supply data similar to the Unit Stats box. When you click on an HQ in the OB Display, the HQ Supply box will be updated.

★ **On Hand:** Tonnage available for distribution to units or subordinate HQs.

★ **Need:** Tonnage that the HQ's attached units would require to get back up to the *selected HQ's* Supply Level. This figure is cleared just prior to the Execution Phase of the morning turn, and is updated at the end of every turn. **NOTE:** Since HQ Supply Levels are reset at the start of the morning turn, this amount will be zero in the morning.

★ **Used:** Tonnage used by units attached to the HQ. This figure is cleared just prior to the Execution Phase of the morning turn.

★ **Rec'vd:** A running total of tonnage received during the day minus any tons disbursed to subordinate HQs.

★ **Flow:** The amount received minus the amount used. This will let you know if the HQ is receiving enough tonnage to maintain its current Supply Level.

28.4 THE REPLACEMENTS BOX: During the course of a scenario, you will receive replacement points in one or more categories which may be used to replenish units which have taken losses. The Replacements box shows the current points available by type. This is a running total, so if you assign a unit to take a replacement during the Planning Phase, the number displayed in this box will drop by one. See 26.1 for the procedure on assigning replacement points.

An HQ Supply Data box...

HQ Supply Data					
On Hand	194	Need	62	Used	30
Rec'vd		Flow	-30		



28.5 USING THE OB DISPLAY: When the OB window is initially displayed, only those HQs which do *not* have a Superior HQ are displayed, and no HQ is selected.

★ To view an HQ's stats, subordinate HQs, and its attached combat units, click on that HQ counter in the display. The HQ's name will appear, and all level boxes lower than it will be redrawn to show only the selected HQ's subordinate HQs and combat units attached to the currently-selected HQ.

★ Clicking on an HQ resets the display for all levels lower than the selected HQ, but does not reset any higher levels. This allows you to trace down an HQ and its subordinates.

★ To view a combat unit's stats, click on the counter.

★ In several scenarios, there are HQs which do not have a Superior HQ (e.g., the 35th Italian Corps in "Quiet Flows the Don") which are not at the highest level of the chart.

★ To reset the display to its original appearance, hold down the Option (Mac) or the Control (IBM) key, and click anywhere on the OB Display.

29.0 THE SCENARIOS

You have your choice of a number of scenarios, each briefly described below:

TO THE VOLGA: This scenario represents the brutal struggle for control of the Russian Red Barricades and Red October factories.



Map Size: 19 × 24 hexes
Scale: 400m/hex; battalion/company units
Size: 4 Axis divisions/5 Soviet divisions
 (71 Axis units; 61 Russian units)
Dates: 17 October to 21 October
Length: 5 days (29 turns)

A RIVER TOO FAR: This scenario represents the final days of the German attempt to break through to the isolated 6th Army at Stalingrad.



Map Size: 25 × 40 hexes
Scale: 1km/hex; regiment/battalion/company units
Size: 4 Axis divisions; 5 Russian divisions
 (81 Axis units; 76 Russian units)
Dates: 14 December to 17 December
Length: 4 days (23 turns)

MANSTEIN'S SOLUTION: This is a hypothetical scenario, using the historical forces, depicting what von Manstein might have done had he been given complete freedom of action to deal with Operation Uranus.



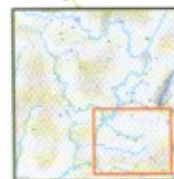
Map Size: 45 × 34 hexes
Scale: 3km/hex; regiment/battalion units
Size: 11 Axis divisions; 14+ Russian divisions
 (123 Axis units; 98 Russian units)
Dates: 22 November to 28 November
Length: 7 days (20 turns)

RATTENKRIEG: This scenario simulates the initial German attempt to take Stalingrad by storm, and soon becomes a "Rat War" among the congested terrain of the city.



Map Size: 42 × 62 hexes
Scale: 400m/hex; battalion/company units
Size: 11 Axis divisions; 16 Russian divisions
 (228 Axis units; 231 Russian units)
Dates: 9 September 1942 to 15 October 1942
Length: 31 days (189 turns)

WINTERGEWITTER: This scenario depicts the German relief attempt to save the Sixth Army at Stalingrad.



Map Size: 138 × 98 hexes
Scale: 1km/hex; regiment/battalion/company units
Size: 16 Axis divisions; 18 Russian divisions
 (257 Axis units; 273 Russian units)
Dates: 12 December 1942 to 28 December 1942
Length: 17 days (101 turns)

QUIET FLOWS THE DON: This scenario concentrates on the offensive launched to the Soviet forces to the northwest of Stalingrad. 11/19/42 to 11/24/42



Map Size: 61 × 65 hexes
Scale: 3km/hex; regiment/battalion units
Size: 24 Axis divisions; 32 Russian divisions
 (169 Axis units; 203 Russian units)
Dates: 19 November 1942 to 23 November 1942
Length: 6 days (17 turns)

OPERATION URANUS: This scenario simulates the entire Soviet "Operation Uranus" offensive, designed to encircle and eliminate the German 6th Army at Stalingrad.



Map Size: 99 × 99 hexes
Scale: 3km/hex; regiment/battalion units
Size: 65 Axis divisions/97 Russian divisions
 (572 Axis units; 534 Russian units)
Dates: 11 November 1942 to 20 January 1943
Length: 63 days (188 turns)

Einflusskräfte:

Chulikov, 64. Armee (Gen. Tolbuchin), 21. Armee (Gen. Tolbuchin), 65. Armee (Gen. Batov),

30.0 VARIANTS

Before the start of each game, you may decide to implement variants. More than one option can be selected, although not all options are relevant in every scenario. The game will only display variants relevant to the selected scenario. Each option offers a plausible alternate history and may have a dramatic affect on the historical outcome. Variants can only be selected at the start of each scenario, and cannot be changed once the scenario begins. If the Realism Options and one or more Random Variants are selected for both sides in a two-player scenario, be prepared for considerable uncertainty and surprises. To make the best use of variants when playing against the computer, select the Random Variant for the opposing side.



30.1 SOVIET VARIANTS:

★ No Soviet Purge

This raises the troop quality of all Soviet divisions by one.

★ Better Soviet Logistics

This raises the movement allowance of all Soviet artillery to eight.

★ Better Soviet Supply

This raises the Soviet supply delivery by 50%.

★ Better Soviet Communications

Soviet artillery units which normally require more than one turn to prepare will now need only one turn to "make ready".

★ More Initiative

This raises the attack Command Rating for each Soviet leader by one.



30.2 AXIS VARIANTS:

★ Sixth Army Restricted

Units starting the game attached to the German 6th Army (or its subordinates) may *not* reattach to any HQ from a different Axis army, and are restricted in movement to an area with a 78km radius around the starting location of Paulus' Headquarters.

★ German November Reinforcement

This variant assumes a more rapid deployment of units from the West. Panzer Division 6, Infanterie Division 304, and Infanterie Division 336 begin the game attached to the 48th Panzer Korps, deployed in the rear of the Rumanian III Army.

★ Release of 7th Panzer

Panzer Division 7 is released from Army Group A in the Caucasus and enters as a reinforcement.

★ Release 16th Motorized

The 16th Motorized Division is released from its garrison duty around Elista and enters as a reinforcement.

★ Early Caucasus Withdrawal

The German High Command realizes the significance of the "Uranus" offensive earlier and begins a rapid redeployment of Army Group A's mechanized assets. 16th Motorized, 7th and 3rd Panzer, and the SS "Wiking" divisions all enter as reinforcements.



31.0 THE CAMPAIGN FOR STALINGRAD

AN HISTORICAL NARRATIVE

"Here I am, still in one piece, with a fairly normal pulse, and a dozen cigarettes. Had soup day before yesterday, liberated a canned ham today from a supply canister. Am squatting in a cellar, burning up furniture, twenty-six years old and otherwise no fool, one of those who was mighty keen on getting his bars and yelling 'Heil Hitler' with the rest of you; and now it's either die like a dog or off to Siberia."

—An unknown German soldier in Stalingrad

The campaign for Stalingrad began with the German 6th Army's push from Kalach on the Don River in late August of 1942. At dawn on the 23rd of August, after securing the bridgehead over the Don, Panzer Division 16 started across the sun-baked steppes of southern Russia on a drive to the Volga River. By 6:00 PM that evening they had driven 25 miles and invested the suburb of Rynok, hitting the Volga River just north of Stalingrad. This was to be the last easy victory for the German 6th Army.

The 16th Panzer was part of the XIV Panzer Korps, the spearhead of the 6th Army. The other units of this Korps, the 3rd and

60th Motorized Infantry Divisions, were each in isolated pockets between the Don and the Volga. They could not move forward or backward for a week as the Soviets swirled around them. Finally, the infantry of the 6th Army was able to close ranks and relieve the isolated units—just before General Hube, the one-armed commander of the 16th Panzer, was about to disobey Hitler and attempt a breakout.

As these movements were taking place, the Soviet 62nd Army, commanded by Vasilii Ivanovich Chuikov, busied itself with fortifying several outer rings of defense around Stalingrad, in hopes that they could hold the German invaders outside the city, delaying them until the onset of another harsh Russian winter.

The next threat to Stalingrad came from the south, however, as General Hoth's 4th Panzer Army was sent north from the Caucasus to help take the industrial center on the Volga. Starting on 29 August Hoth swept north, and in a stunning maneuver destroyed the Soviet threat south of Stalingrad and isolated the city from reinforcement by all means except the Volga ferries.

And it is here that the Axis high command lost the battle for Stalingrad. General Hoth wanted to push hard to the north as the 6th Army's XIV Panzer Korps attacked south out of its corridor at Rynok in a move that would isolate the bulk of the Soviet 62nd Army in its fortifications outside the city. General Paulus, the 6th Army's commander, did not think that there was sufficient strength to hold the corridor and complete the attack to the south so the plan never materialized and the Soviet 62nd Army was allowed to withdraw relatively unmolested into the city—terrain imminently more suited to the savage defensive style of the Soviet soldier than the steppes west of Stalingrad.

What followed was two months of vicious, wasteful street fighting that destroyed the 6th Army's ability to fight in the winter campaign that would soon decide the fate of the Axis forces in the East. With overextended lines of supply and with flanks held by Axis-Ally troops of dubious quality and determination, the 6th Army was forced to fight Hitler's battle in Stalin's city with a slim margin for success.

Meanwhile, Joseph Stalin, the pragmatic Soviet leader, had been hoarding reserves for just such a moment. Drawing forces from every front and Military District in the Soviet Union, his plan was to deliver a devastating blow against his one-time ally Adolph Hitler. Stalin ordered a series of attacks all along the eastern front in hopes

of pinning down the Axis reserves. These attacks resulted in many local successes, and generally succeeded in preventing most Axis reserve divisions from later helping around Stalingrad.

As the cold, dry winds of November blew snow from Siberia across the frozen steppes, the stage was set for the worst defeat ever sustained by German armed forces up to that time. The Romanian 4th Army had recently taken up new positions south of Stalingrad. Since the ground was already too hard to build any kind of trench system, they had sought any available cover and settled in for what they hoped would be a long but quiet winter.

To their north, the German 6th Army was engaged in their latest "final" push to clear the Russians from Stalingrad. *Operation Hubertus* had succeeded in clearing the last of the Russians out of the Red Barricades factory. German assault engineers, specially trained and flown in from Millerova, were still busy eliminating the remnants of the Lyudnikov's 138th Rifle Division behind the destroyed factory. But the Soviets still clung tenaciously to most of the Red October factory as well as the Lasur Chemical Works in the "Tennis Racket" (so named because of the shape of the railroads encircling the area) in a narrow strip of land hugging the west bank of the Volga.

Meanwhile, further north and west of Stalingrad, the Romanian 3rd Army nervously reported Soviet troop movements and the unmistakable sound of tank engines—an obvious indication of a buildup in the Russian-held bridgeheads south of the Don River. The Romanians had wanted to clear these dangerous bridgeheads in October but the German high command had denied them the supplies, instead diverting such to the struggle in the city. Having the Don River as an antitank barrier would have helped their position greatly.

Across the lines, the Russians had massed the largest allied armored force in the field. The 5th Tank Army was making preparations for its part in what would become the first successful Russian double-envelopment operation of the war. Their mission would be to smash the Romanian 3rd Army and race across the frozen steppes to Kalach. They would be supported by units from the 21st, 65th, 24th, and 66th Armies. The start date was set for November 19th.

Mobile groups from the Soviet 64th, 57th, and 51st Armies were also preparing for the southern push to link up with the 5th Tank Army at Kalach. They would start their attack on the Romanian 4th Army one day behind their comrades in the north. The Russian 62nd



Army, still holding down the German 6th Army in Stalingrad, began its own series of counterattacks.

On the first day of the offensive, the Soviets made slow but steady progress but were denied the breakthrough needed for the encirclement. The plan had called for the infantry formations, supported by strong artillery fire, to punch gaps through the Romanian lines, allowing the tank and cavalry corps to exploit the holes and trap the German 6th Army in Stalingrad. The Romanians in the



north held their ground as well as they could on the first day, forcing STAVKA (Soviet Armed Forces High Command) to commit the tank corps to the battle to force the breakthrough. The Soviet 1st and 26th Tank Corps literally ran over the divisions of the 3rd Romanian Army on the 20th of November as the Soviet southern wing overran the Romanian 4th Army south of Stalingrad.

It would still take the Soviet armored spearheads only four more days to seal the pocket around Stalingrad. Throughout this critical

period the 6th Army, bled white by the battle for the city, was unable to send any mobile forces (with the exception of a weak *kampfgruppe* of the 14th Panzer Division) to keep its line of communications and supply open. It was trapped in a cage of its own making on the Volga with no reserves to come to its aid. Paulus asked for freedom of action but was denied it by Hitler because he was unable to reconcile giving up Stalingrad after the terrible cost that had already been paid. The 6th Army would fight and die on the

Volga with nothing but Hitler's and Göring's empty promises of aid to help them.

After the encirclement had been achieved, the Soviet forces pushed the shattered Axis front back to the Chir River and the area around Kotelnikova. What was left of the Axis forces outside the pocket rallied on these two features and stopped the Soviet advance until reinforcements could be gathered together for a relief attempt. During the period of 25 November to 8 December the front was relatively quiet while the Soviets pulled supplies forward, and the Axis turned over every rock in the Third Reich for reserves to make an airlift possible and to organize a too-little-too-late relief attempt for Paulus' beleaguered 6th Army.

The German airlift of supplies to the encircled units at Stalingrad was hampered by the terrible weather, the massed Soviet anti-aircraft guns, and a hostile Red Air Force. It was determined that the 6th Army would need a minimum of 500 tons of supplies daily just to maintain its defense. The airlift never exceeded 300 tons per day, and averaged only about 80 tons a day. The *Luftwaffe* didn't even have the capability to deliver 500 tons a day—even if they were not interfered with by the Soviets or the weather.

As the half-hearted airlift sputtered along, the Axis managed to get the 6th and 23rd Panzer Divisions started on their way toward Stalingrad in a relief operation code-named *Wintergewitter* ("Winter Storm"). They were backed up by strong corps artillery, three regiments of Cossack volunteers, and several Romanian formations of varying strength. Carrying 300 tons of supply literally on their backs, they waded through deep snow and encountered weak Soviet resistance—at least initially. They were soon reinforced by the late-arriving Panzer Division 17. The counterattack was stopped cold, however, by the Soviet 2nd Guards Army along the Myshkova River. Outflanked and forced to retreat after getting to within 30 miles of Stalingrad, the relief force would be pushed back to its starting point at Kotelnikova. A Soviet breakthrough on the upper Chir River line would strip away the 6th and 23rd Panzer Divisions and make any further attempt to relieve Stalingrad impossible.

The 6th Army at Stalingrad would be slowly starved to death and ground into submission. By 20 January they would be without a viable airfield and on the 2nd of February the last of the troops surrendered. Out of the 220,000 Axis troops in the pocket around 95,000 surrendered in February. Out of this 95,000 only a little more than 5,000 would ever see Germany again.



32.0 SAVING A GAME

When saving a game, the program creates a file that contains all the data necessary to resume the game later. Saved game files contain only this data, not the entire game program.

Save records only the static scenario situation at the end of the last Execution Phase, plus target hexes for artillery and destination hexes for movement, but not hex-by-hex movement paths. When a scenario is resumed, the automatic movement routine reconstructs a movement path for every unit with a recorded destination hex, and this new path may differ from the path previously assigned by you.

Battle reports and other orders assigned since the last Execution Phase are not saved.



33.0 TWO-PLAYER PROCEDURE



33.1: When playing against another player instead of the computer, players take turns assigning orders. The First Player selects a side from the Initial Options Screen. When the scenario is started, the First Player's side symbol appears, signifying the side that should now be preparing to play first.

33.2: When ready, the First Player clicks anywhere to begin.

- ★ When finished assigning orders in the Planning Phase, select Phase, drag the cursor down to Execution, and release. Then, select Phase again, drag the cursor down to Switch Sides, and release. The other side's symbol appears, and it is now the Second Player's turn.
- ★ The Execution Phase begins only after *both* players have selected "Execution." When ready, the Second Player clicks anywhere to begin. When the Second Player is finished and selects Execution, both side symbols appear, signifying that both players may observe the Execution Phase.

33.3: If "Limited Intelligence" is selected in a two-player game, only the units that would be visible to the opposing sides appear during the Execution Phase. Otherwise, the only information appearing on the map during a two-player Execution Phase is information known to both players. If the first player selects "Switch Sides" before selecting "Execution," the game assumes you are not finished assigning orders, and will have to return to the computer later to select "Execution".

33.4: When the Execution Phase is over, a side symbol appears again to indicate the player who's turn it is, and the game is ready to return to the one-player-at-a-time mode of operation.

33.5: The After Action Phases for the two sides are disconnected, just like the Planning Phases. When an Execution Phase is over, the First Player may review the results of the turn in the After Action Phase, and then select "Planning" to begin the Planning Phase. When finished assigning orders, select "Execution," and then "Switch Sides" to turn the game over to the other player. The Second Player's turn begins with the game still in the After Action phase of the previous turn.

34.0 HINTS ON PLAY

R&R and Replacements

One of the best ways to get the most out of your troops is to ensure that they are rested, organized and have losses replaced when possible. Fatigue and Disorganization affect both combat and movement, and high values of either can reduce a unit's overall effectiveness by one third each.



A. If you don't anticipate enemy units in the vicinity, use Strategic Movement whenever possible. This lowers both Fatigue and Disruption penalties.

B. Keep an eye out on the weather—once the temperature drops below -20°F Fatigue costs are *doubled* for performing any action. If the weather gets this bad, think twice before moving or attacking.

C. Moving at night is a double-whammy: not only is the penalty for Fatigue doubled and those for Disorganization increased, but you lose valuable recovery time. Also, since the temperature is lower at night, you stand a better chance of hitting the -20°F penalty. If you *must* move at night, use Strategic movement. (**EXCEPTION:** Soviet units in the two 400m/hex scenarios receive a lessened penalty for moving at night.)

D. Avoid firing artillery at night, except to Interdict ferries in the two 400m/hex scenarios. The effectiveness of artillery is halved at night, and not resting them will affect their performance for the coming day.

E. Avoid pounding away, turn after turn, with the same units. When their strengths are getting low, and their Fatigue and Disruption are high, pull them back from the line and let them rest and take replacements. A unit recovers from Fatigue and Disruption three times as fast when its not in an enemy ZOC. This is particularly important for Axis engineer units in the 400m/hex scenarios—they are just too valuable to be allowed to waste away in combat after combat.



BEANS & BULLETS

Keeping your HQs and combat units in good supply is the single most important thing you can do to influence the effectiveness of your forces

A. HQs should always be placed so that they have “green” supply lines to either their Superior HQs, or to a Supply Source Distribution Point. If the line gets longer than “green”, deliveries to the HQ will become attenuated, and it is doubtful that you will be able to maintain its current Supply Level the next day. Depending on the circumstances, a surrounded HQ can prove catastrophic for

its attached troops and subordinate HQs. This is especially true for Army or Front HQs, the primary conduits for Supply distribution. Under no circumstances should you place these higher-level HQs in a position where their supply line can be disrupted by the enemy.



B. Use night turns to ensure that your combat units have the best possible supply lines. Unlike HQs, combat units receive supply allocations only in the morning, and their combat effectiveness is *not* influenced by being unable to trace a supply line. This gives you quite a bit of flexibility during the day—just make sure that your guys can trace a good line by morning—because deliveries *are* dependent on the supply line. A combat unit which cannot trace in the morning is a good candidate for surrender during the day.

C. Keep in mind that all combat units recalculate their Supply Level at the end of every turn. If they have the tons on hand to maintain their current level for the rest of the day, they will do so, otherwise they will lower their level to allow them to safely get through until the next delivery. Units which have been active during the day will usually have a lower level at night, making them less effective in combat.

D. If you are familiar with *Operation Crusader*, you'll need to understand the important differences between that game's supply system, and *STALINGRAD*'s...

1. Each side in each scenario has a "default" Supply Level. Given normal wear and tear, the system will receive and allocate enough tonnage to maintain your HQs at this level throughout the scenario. In many cases, this will be Attack Supply, but in others it will be General or Defensive. Unlike *Operation Crusader*, Attack is not the "default" Supply Level across the board.

2. Your Executive Officer in *STALINGRAD* sets Supply Levels quite a bit differently from the one in *Operation Crusader*. Each HQ's status is evaluated based on tonnage on hand, instead of all HQs being assessed globally. It takes a conservative approach, and in most cases HQs will remain at the scenario default. On the other hand, it frees you to bang away with all of your units, and worry about supply *lines* instead of Supply *Levels*.

3. If your default Supply Level in a given Scenario is "Attack Supply", you really don't need to worry about setting levels for your HQs (you should instead spend your time ensuring that everyone's got a good supply line). If your default is something less, you have two options. One is to let the Executive Officer handle setting levels, and let the supply pipeline do the work for you. The second is to alter Supply Levels to suit your plan (this assumes you're not going to be moving and banging away with all of your units).

If you go for the second option, don't forget that if you raise an HQ's level above the default level, the supply pipeline is going to have to get the extra tonnage from somewhere else; i.e., deliveries to your other HQs. If you're attacking, you can simply place other HQs on a lower level and/or not utilize them as heavily as your main effort HQ(s). If you're defending, this is a little trickier because the attacker is going to be dictating which of your HQs will be bearing the brunt of the enemy's assault (and hence, supply usage).

STRATEGY & TACTICS

A. When playing the Soviets in a 3km/hex scenario, you'll need to do a bit of planning ahead when making breakthroughs due to the ponderous Soviet command system. While your Tank and Mechanized Corps are fast and capable of deep penetrations, the supporting infantry that you'll need to consolidate the breakthrough

with are slow, and tied to even slower-moving Army HQs. In addition, Tank and Mechanized Corps have small command spans, which prevents attaching accompanying infantry regiments into larger battle groups. The solution is to use your Cavalry Corps to follow up. While not as fast, they have wide command spans and if well-placed, can form a bridge between the infantry and your spearheads.

B. In addition to looking at Supply Levels in the morning, be sure to take a look at the weather forecast so you can plan the coming day's air operations. This may prevent you from saving your planes for an afternoon attack, only then to discover that a blizzard is going to prevent your air assets from taking off.



C. Even when the weather is good enough to fly in, you still need to keep an eye on it before plotting missions. Try not to plot missions adjacent to your own troops when there is heavy overcast—mistaken air attacks go hand in hand with dense cloud cover. You should also avoid flying defensive air missions in anything other than clear or light overcast conditions. There is a *much* higher chance of mistaken attacks when flying this mission, and cloud cover aggravates this further.

D. Try to maximize Unit Integrity shifts in combat. When attacking, use units from the same Division (or Regiment, depending on scenario's scale), and strive to keep elements from the same unit within

two hexes of each other when defending. Remember that you can get multiple Integrity shifts in the same battle.

E. Since armor is relatively ineffective in the two 400m/hex scenarios, make sure you get the maximum use from your Axis engineers to offset terrain shifts when attacking in urban terrain. As noted above, don't let these valuable units get eliminated in combat.

F. *Overrun, overrun overrun!!* When used at the weak points in an enemy line, these attacks are the easiest and quickest way to achieve a breakthrough. Multiple overruns can also occur, allowing moving armored units to eliminate enemy units in more than one hex. In addition, Fatigue and Disruption penalties are reduced and supply consumption is lowered in comparison to set-piece attacks.

G. If playing the Soviets in one of the two 400m/hex scenarios, make sure you plan out your movement across the ferries at night, and avoid getting caught on them during the day. Also, keep your artillery units on the east bank of the Volga, in woods or improved positions if possible. This keeps them out of harm's way, and able to constantly fire in support.





THE SOVIET ARMY

The Soviet Army in World War II was known as "The Red Army of Workers and Peasants", often shortened to the Soviet abbreviation "RKKA." The RKKA consisted of the ground army and the Red Air Force. The Soviet Navy (or "Red Banner Fleets") was under separate organizations. There was also a separate armed forces branch for the Soviet Secret Police or "NKVD", that fielded several divisions and brigades but was under the Communist Party's direct control. These formations enforced discipline and oversaw general reliability of the RKKA. The NKVD also was in control of the border guard regiments, all of which had been eliminated by the time of the Battles for Stalingrad.



T-60 Light Tank

Weight: 5.8 metric tons

Crew: 2

Armament: 20mm ShVAK gun and one 7.62mm MG

Maximum Armor: 20mm

Horsepower: 70

Speed: 28 mph

The T-60 was developed from an earlier amphibious scout tank, the M-40, which had been built in limited numbers. In 1942 most Soviet tank battalions were supposed to include ten T-34 medium tanks and eleven light tanks, usually T-60s or T-70s, whichever was available when the brigade was formed or re-formed.

ORGANIZATION

Soviet ground forces in World War II were grouped into tank corps, mechanized corps, cavalry corps, and rifle divisions. These formations were individually designed to punch through the enemy's lines, exploit breakthroughs, and hold Soviet gains.

Tank corps were organized with three tank brigades (each with approximately 54 tanks) and one motorized infantry brigade.

A mechanized corps had the same number of tanks as the tank corps but fought alongside nine infantry battalions to create what could have been the strongest ground formations of World War II. Together, the tank and mechanized corps specialized in piercing German front lines, establishing breaches for the cavalry corps to exploit.

Ideally suited for deep penetration and operation behind enemy lines, the Soviet cavalry corps were composed of two to three cavalry divisions and a number of armored, antitank, engineer, and



T-70 Light Tank

Weight: 10 metric tons

Crew: 2

Armament: 45mm L/46 gun and one 7.62mm MG

Maximum Armor: 60mm

Horsepower: 70

Speed: 32 mph

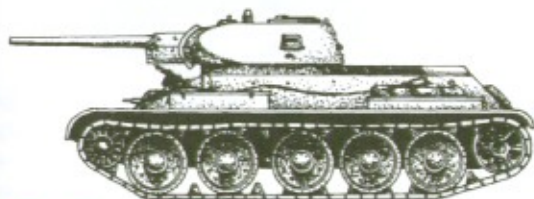
In 1942 most Soviet tank battalions were supposed to include ten T-34 medium tanks and eleven light tanks, usually T-60s or T-70s, whichever was available when the brigade was formed or re-formed. The T-70 was better armed and built in greater numbers than the T-60, and was thus the most commonly used light tank of this period.

anti-aircraft units. Cavalry divisions were made up of three cavalry regiments of three small battalions, one light artillery regiment, a recon battalion, an antitank battalion and other small service units.

The rifle divisions were composed of three infantry regiments of three infantry battalions each, an artillery regiment with three 76mm howitzers battalions mixed with three batteries of 122mm howitzers, an engineer company, an antitank battalion, one recon company and a few small support units.

COMMENTARY

Prior to World War II, the Soviets had committed themselves to designing and producing world-class armor. They learned from armor experts in the US, Great Britain, and Germany - some of whom were ignored in their own country. One result was the T-34.



T-34 Medium Tank

Weight: 26 metric tons

Crew: 4

Armament: one 76.2mm L/41.2 and two 7.62mm MGs

Maximum Armor: 75mm

Horsepower: 450

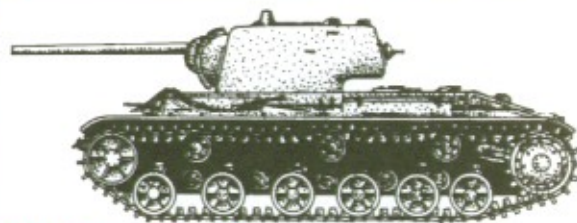
Speed: 34 mph

Built in a variety of similar models, about 19,000 T-34 tanks armed with 76.2mm guns were built. The T-34 (in the 76.2mm gun models, the later 85mm gun model and the various assault gun models) formed the backbone of the Soviet armored forces throughout World War II. A specialized version, the OT-34, was available with a flamethrower replacing the hull-mounted machinegun.

This weapon, more than any other in the Soviet arsenal, was responsible for the defeat of the Axis armies in the East.

Another Soviet strength was their vast superiority in artillery pieces. The Red Army could mass more artillery in one area than the Wehrmacht could put together in an entire army group. Though not technically proficient or even very accurate, their vast numbers made up for a lot of shortcomings.

A crippling Soviet weakness, however, was their poor supply management. Supply shortages have been credited with stopping more Russian offensives than the Axis forces ever did.



KV-1 Heavy Tank

Weight: 43 metric tons

Crew: 5

Armament: 76.2mm L/41.2 and two or three 7.62mm MGs

Maximum Armor: 100mm

Horsepower: 600

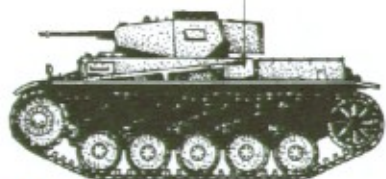
Speed: 22 mph

A nasty surprise to the invading Germans in the summer of 1941, the KV-1 was nearly invulnerable to German tank guns. By 1942, however, its armor could be penetrated by improved Axis weaponry, and it had thus lost some of its effectiveness. Too slow to operate with the faster light tanks and T-34s, KV tanks were organized into separate heavy tank units. By war's end over 13,500 tanks and assault guns based on the KV chassis had been built.



THE GERMAN ARMY

Known collectively as the *Wehrmacht*, the German armed forces of World War II, consisted of the Army (*Heer*), Air Force (*Luftwaffe*), Navy (*Kriegsmarine*), and the *Waffen-SS*. Most German units that fought on the ground in the Stalingrad campaign were part of the *Heer*, but a few *Luftwaffe Feld* (field) divisions and *FlaK* (anti-aircraft) units, as well as the 5th *Waffen-SS*, were present. Regardless of their official branch designation, all German units located near the front line usually served under the operational command and control of the *Heer*.



PzKpfw II Light Tank

Weight: 9.5 metric tons

Crew: 3

Armament: KwK30 20mm gun and two 7.92mm MGs

Maximum Armor: 35mm

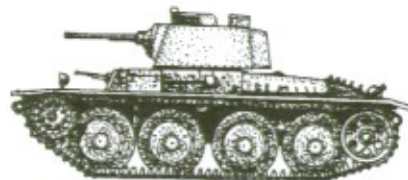
Horsepower: 140

Speed: 25 mph

The PzKpfw II (*Panzerkampfwagen* = armored battle vehicle) was originally an interim design ordered due to delays in production of the PzKpfw III and IV. The Ausf F (*Ausführung* = model) was an up-armored version of earlier types. Too weak for use as a main battle tank, and too slow to be a really useful reconnaissance vehicle (although this was its primary use by 1942), the PzKpfw II was being gradually phased out during 1942. 524 of this model were built.

ORGANIZATION

The *panzer* (armored) divisions were the glue that held the German army together. They were organized with a *panzer* regiment of two armored battalions (with about 50 tanks each when at full strength), one or two motorized infantry regiments with two or three infantry battalions each, a tank destroyer or antitank battalion, a light anti-aircraft battalion, an engineer battalion, three motorized artillery battalions, a recon battalion, and several other non-combat units.



PzKpfw 38(t) Light Tank

Weight: 9.7 metric tons

Crew: 4

Armament: Skoda A7 37.2mm gun and two 7.92mm MGs

Maximum Armor: 30mm

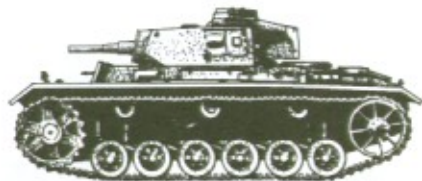
Horsepower: 150

Speed: 26 mph

The PzKpfw 38(t), an excellent light tank for its time, was designed in Czechoslovakia and entered service with the Czech army in 1938 as the LT-38. When Germany took over Czechoslovakia, the tanks and the factories making them were also taken over by the German army. The PzKpfw 38(t) equipped many German panzer units from 1939 through 1941, usually being put to use in a medium tank role. The tank continued in limited use in secondary theaters to war's end. Due to its reliability, the tank's chassis was widely used in various assault gun modifications (notably the "Bison", "Marder" and "Hetzer" and the *FlakPanzer* 38(t) AA vehicle) all of which saw widespread service. Provided to various German allies, the PzKpfw 38(t) formed a major part of the strength of the Hungarian 30th Armored Regiment.

The German motorized divisions in the Stalingrad area were some of the best troops the Germans had on the East Front. They were organized with two motorized infantry regiments with three battalions each, one artillery regiment with three battalions, one tank battalion, a recon battalion, an engineer battalion, a *FlaK* battalion, and other supply and support troops.

The *Infanterie Division* was the most common type of German division on the East front. It was organized with three infantry regiments with three battalions each, one artillery regiment with four



PzKpfw IIIH/J Medium Tank

Weight: 22 metric tons

Crew: 5

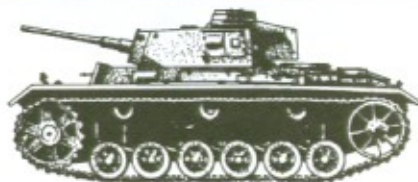
Armament: KwK38 L/42 50mm gun and two 7.92mm MGs

Maximum Armor: 60mm

Horsepower: 300

Speed: 25 mph

The PzKpfw III formed the backbone of German panzer units in 1942, establishments calling for two companies of PzKpfw III tanks of 22 tanks each per panzer battalion. A considerable number of the PzKpfw IIIs used during the summer of 1942 were of the Ausf H and J versions, which featured extra armor (face-hardened armor plates bolted onto the front and rear hull and front superstructure on the Ausf H, and thickened basic armor on the Ausf J), making them very difficult for the Russian 45mm guns to knock out at any distance. New, wider treads helped carry the extra weight and aided cross-country mobility. The Ausf H had a production run of 303, while 2700 of the Ausf J were built, and many older models were converted to Ausf H or Ausf J standards by adding the KwK38 50mm gun, new treads and/or extra armor. Also used by Romania.



PzKpfw IIIJ "Special" Medium Tank

Weight: 23 metric tons

Crew: 5

Armament: KwK39 L/60 50mm gun and two 7.92mm MGs

Maximum Armor: 60mm

Horsepower: 300

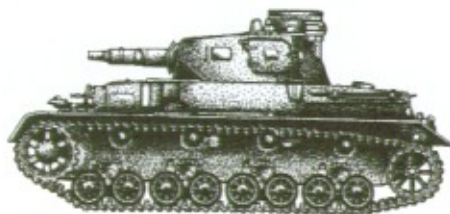
Speed: 25 mph

Sometimes called the Panzer III "Special", this variant of the Ausf J was essentially a standard "J" model with a longer and more potent 50mm gun, better able to deal with the Soviet T-34 and KV-1 tanks. Introduced in early 1942, at first just a few were sent to each PzKpfw III company as replacements, but the type, along with 650 of the later but similar (somewhat heavier armor) Ausf L and up-gunned earlier-model Ausf J, gradually became the most common type of PzKpfw III in service as 1942 by the latter half of 1942.

battalions, an *Aufklärungs* (recon) battalion, an engineer battalion, a *FlaK* battalion, and other supply and support troops. A few had some *Sturmgeschütz* (armored assault guns) and mechanized anti-tank units, but no tanks.

Along with the regular German forces of the 6th and 4th Panzer *Armees*, there was the 369th Croatian Regiment that was attached to *Jäger Division 100*. These were excellent troops that fought well until the surrender at Stalingrad. There were also a number of unof-

ficial Cossack, *Ost Truppen*, and *Hiwi* ("helper") units that fought for the Germans in 1942. The main force of Cossacks were represented by the *von Panowitz Regiment*, the *von Jungschultz Regiment* and *Kampfgruppe Lehman*. There were two *Ost* battalions of Turks that plugged some holes in the German line south of Tatsinskaya. These troops also fought well. The *Hiwi* troops were Russian men who chose to do service work for their German captors in lieu of going to prison camps. They did supply work and filled labor battalions at first, but as the manpower shortage became more acute, the *hiwi*'s with artillery experience manned whole German artillery battalions to free up manpower for the front. Some accounts state there were up to 3000 of these troops who fought at Stalingrad.



PzKpfw IV F Medium Tank

Weight: 21 metric tons

Crew: 5

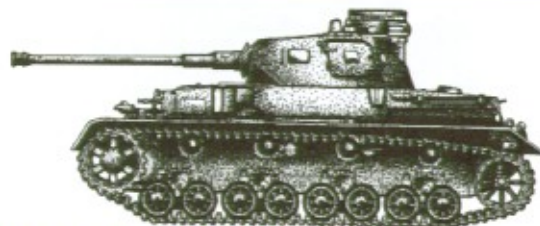
Armament: KwK37 L/24 75mm gun and two 7.92mm MGs

Maximum Armor: 60mm

Horsepower: 300

Speed: 25 mph

The earlier models of the PzKpfw IV were sophisticated vehicles designed to provide support for tank units. They fired high explosive and smoke, and also carried a small amount of AP ammunition, though its low-velocity howitzer was of limited value in an antitank role. By late '41 each panzer battalion was authorized a company of 10 PzKpfw IV. The Ausf E incorporated various minor changes from the earlier Ausf D and had appliqué armor like the PzKpfw IIIH. From September 1940 to April 1941, 223 Ausf E were built. The similar Ausf F, up-armored and somewhat improved and simplified for mass production, followed the Ausf E in production. 462 of the Ausf F with the short 75mm howitzer were built from April 1941 to March 1942. The Panzer IV also appears in the game used by the Hungarians in their 30th Tank Regiment.



PzKpfw IV F2/IVG Medium Tank

Weight: 22 metric tons

Crew: 5

Armament: KwK37 L43 75mm gun and two 7.92mm MGs

Maximum Armor: 60mm

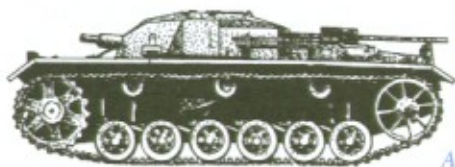
Horsepower: 300

Speed: 25 mph

Sometimes called the Panzer IV "Special", the Ausf F2 was essentially an Ausf F model with a longer and more powerful 75mm gun, much demanded by panzer crews tired of being victimized by Soviet armor. When introduced in 1942 (produced from March through July of 1942), only a few were sent to each panzer battalion. Gradually, however, the IVF2, along with the later Ausf G and re-armed earlier models, became the most common type of PzKpfw IV in service. By mid 1943 the long-barreled versions of the the PzKpfw IV had supplanted the PzKpfw III as the "standard" German medium tank.

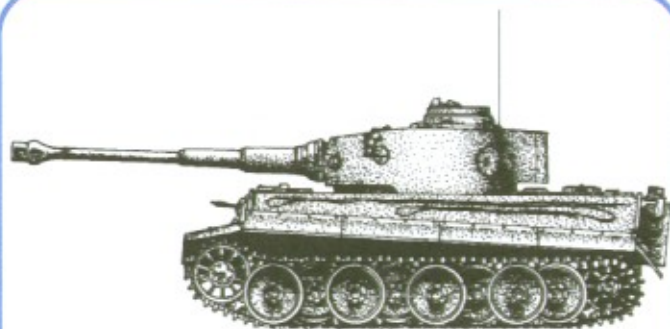
COMMENTARY

A major advantage the Germans had over their Soviet adversaries was their technical skill in armored warfare. In weaponry, the Germans had the dreaded "88", a heavy anti-aircraft gun that doubled as an extremely deadly antitank weapon. Their tanks were not the best, but were a match for many Soviet tanks. The German forces' major weakness in Russia was the nagging supply problem that plagued them throughout the campaign.

*Ausf E***Sturmgeschütz III E/F Assault Gun****Weight:** 21 metric tons**Crew:** 4**Ausf E Armament:** StuK L/24 75mm howitzer & one 7.92mm MG**Ausf F Armament:** StuK L/43 or L/48 75mm gun & one 7.92mm MG**Maximum Armor:** 50mm (Ausf E) or 80mm (Ausf F)**Horsepower:** 300**Speed:** 25 mph

Ausf E: This was a turretless gun covered by an armored superstructure placed on a PzKpfw III tank chassis. Intended for infantry support, it fired high explosive and smoke shells through a short 75mm howitzer.

Ausf F: Early production Ausf F vehicles were practically identical to the Ausf E, except for the new L/43 gun. Later production Ausf F vehicles had some redesign, extra bolted-on armor and the slightly longer and better L/48 version of the 75mm gun. Capable of infantry support like the Ausf E, the longer gun mounted on the Ausf F was also a potent antitank weapon. Both types were found mixed in most German *Sturmgeschütz* units during 1942. 221 of the Ausf E were built from September 1941 to March 1942; 693 of the Ausf F were built from March to December of 1942.

**PzKpfw VIE Heavy Tank****Weight:** 57 metric tons**Crew:** 5**Armament:** KwK36 L/56 88mm gun and two 7.92mm MGs**Maximum Armor:** 110mm**Horsepower:** 700**Speed:** 25 mph

After the tremendous shock administered by the appearance of the Soviet T-34 in 1941, Germany's hitherto relaxed heavy tank program was frantically pushed into high gear. The result was the Tiger, a unique design crippled by its rushed development. In both gun-power and sheer bulk, the Tiger outmuscled anything opponents could put in the field. Unfortunately for the Germans, mechanical breakdowns were all too common. Its massiveness also limited its maneuverability. Hitler ordered two companies of Tigers to the Stalingrad area in an attempt to stem "Operation Uranus", but teething problems and small numbers ensured that they would have a minimal impact on the campaign.



THE AXIS ALLIES

THE ITALIAN ARMY

Organization

The semi-motorized infantry division was the most prominent type of Italian formation in the Stalingrad area. It was organized with two infantry regiments of three battalions each, three artillery battalions, a recon battalion, an engineer battalion, a light anti-aircraft battalion, an antitank battalion, and one motorized machine-gun battalion.

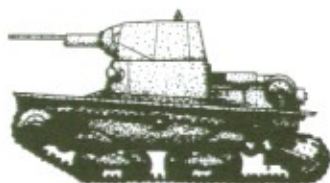
Along with its infantry divisions, the Italian order of battle also included a number of independent battalions of artillery, antitank, anti-aircraft, infantry, recon, and armor. These units were assigned

to the corps headquarters and usually attached to divisions located in the most important sectors, or those involved in the heaviest fighting.

Commentary

The Italians had many weapons systems that were on a technical par with those of the German and Soviet armies, but often their crews lacked proficiency. For instance, their 90mm anti-aircraft gun was as good a weapon as the German "88" but the Italians seemed unable or unwilling to use it in an antitank role. Likewise, the L6/40 tank was a good light vehicle for its day (but, certainly no match for a T-34 or KV-1).

The Italian forces' major weakness was, however, the social gulf that divided the officer and enlisted classes. This rift resulted in low troop quality and low effectiveness in almost all of their combat units.



Carro Armato L6/40 Light Tank

Weight: 6.8 metric tons

Crew: 2

Armament: 20mm gun and one 8mm MG

Maximum Armor: 30mm

Horsepower: 70

Speed: 26 mph

Originally designed for the pre-war export market, the Italian army ordered 283 of these vehicles, all of which were delivered in 1941 and 1942. This was the heaviest Italian tank to see action in Russia.



Semovente L40 da 47/32 Assault Gun

Weight: 6.7 metric tons

Crew: 3

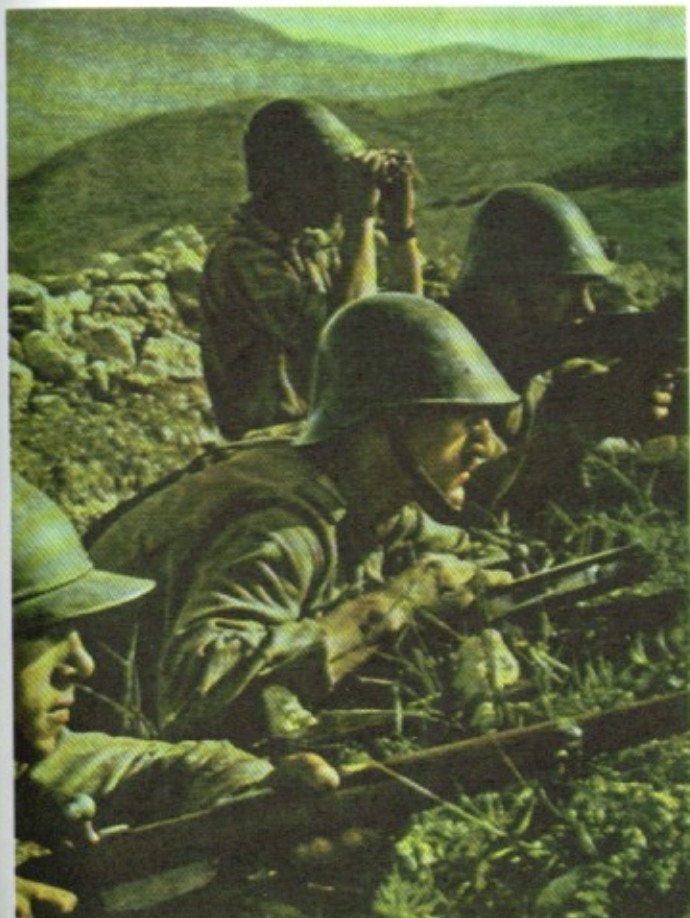
Armament: 47/32 47mm gun

Maximum Armor: 30mm

Horsepower: 70

Speed: 22 mph

This vehicle, first produced in 1941, used the L6/40 light tank's chassis. Mounting the standard Italian 47mm antitank gun, the *Semovente* L40 was standard equipment in Italian assault gun battalions in 1942. Seventeen of these were in the Italian 13th *Alessandria* Assault Gun battalion in the game. A total of 300 were built.



THE ROMANIAN ARMY

ORGANIZATION

There were three basic types of divisions employed by the Romanian forces in the Stalingrad area during the winter of 1942-1943. The first and most numerous was the infantry division.

The Romanian infantry division was organized along German lines with the exception that Romanian formations had two artillery regiments in each division. The first artillery regiment had three battalions of 75mm guns for close support of the infantry regiments. The second artillery regiment was a two-battalion unit composed of 100mm and 150mm guns for "heavy" artillery support.

The second type of division was the cavalry division. These were organized much the same as their infantry divisions except the battalions were smaller and they had no "heavy" artillery. The cavalry divisions did have more highly trained men than the basic infantry units, and were considered by the Germans to be the one of their most valuable units contributed by an Axis "minor" nation.

There was one Romanian armored division in the area which was part of the 48th Panzer Korps. This unit was a carbon copy of a German panzer division in organization but was equipped with Czech 38(t) and German Mark III tanks. The Romanian 1st Armored Division had just completed re-equipping and training from German instructors and was at full strength at the beginning of "Operation Uranus". Nevertheless, it could do little to stop the hordes of Russian T-34s it encountered in its first action.

COMMENTARY

The Romanian Army in World War II suffered many of the same problems that the Italian Army suffered, but to a lesser extent (in some areas). Their armaments at the beginning of the Russian campaign were of low quality and for the most part were of World War I vintage or of obsolete inter-war design. During the first campaign season (summer of 1941) these problems were identified and resulted in the wholesale withdrawal of almost all Romanian forces back to Romania for retraining, reorganization and re-equipment with surplus German stocks. This resulted in a much better showing during their second season on the Russian Front.





STALINGRAD DESIGNER'S NOTES

by Eric Young

The battle of Stalingrad, in most peoples' minds, was a grueling death match between two armies: the Soviet 62nd Army under Chuikov and the German 6th *Armee* commanded by Paulus. But there is much more to this action than the battle for the city. The encirclement of the 6th *Armee* in Stalingrad was the first of many successful Soviet operations that led to the defeat of the Axis forces that invaded the Soviet Union in 1941. This much more important mobile action will be the focus of the second *World at War™* title, *STALINGRAD*.

In *Mein Kampf* Adolf Hitler foretold "the fact of a treaty with Russia embodies the declaration of the next war. Its outcome would be the end of Germany." This line was directed at Gregor Strasser, Hitler's greatest rival in the Nazi party at that time, who was in favor of a Russo-German Pact aimed at the Allied powers who had a stranglehold on the German economy at that time. Hitler also predicted, "The present rulers of Russia do not at all think of entering an alliance sincerely or of keeping one." These "predictions" make me think of Hitler as a great oracle instead of a

great orator. Although he made these predictions, he failed to heed their warnings.

Hitler went on to make that very alliance that he predicted would spell Germany's doom. His prediction that it was "naive to think that, in such an event, England and France would wait a decade" to take up arms against this alliance also came true. The partition of Poland, the overrunning of Scandinavia, the destruction of the Low Countries, and the defeat of France all followed and only served to create a myth in Hitler's own mind that he was a great military genius and that he could lead Germany to world domination. He then went on to abrogate that treaty and made war against the Soviet Union.

In Hitler's writings about the reasons for the loss of the First World War he criticized the near powerless parliament of the pre-war period by stating, "The loss of the fight for the freedom and independence of the German nation is the result of the half-measures and weakness carried out even in peace in drafting the entire force of the people for the defense of the Fatherland." He himself doomed Germany to that same fate by not mobilizing the economy to total war footing until 1943. While the German 6th *Armee* was dying at Stalingrad the Steinway piano factory was still working at full tilt to replace the instruments lost to allied bombing instead of working to build useful war materials.

He went one step further in his predictions by condemning the lack of responsibility of those in charge of the German government in 1914 by writing, "One of the worst symptoms of decay was the increasing cowardice towards responsibility as well as the half-heartedness in all things resulting from it." This "cowardice" was enforced on his commanders in Russia when he robbed them of freedom of action after the winter campaign of 1941 and rejected the sound military advice given him by his generals who had been reduced to automatons doing his bidding.

It was under these restrictions that he sent Friedrich Paulus and the 6th *Armee* to its destruction on the Volga. The fact that almost half of these men surrendered against his orders goes against one last passage from *Mein Kampf* that reads, "Naturally: cringers and flunkies do not let themselves be killed for their master. That monarchs never know this and on principle fail to learn this has been their doom of old." Once the combat units of the 6th *Armee* had been destroyed these "cringers and flunkies" surrendered rather than die for a man they felt had left them in the lurch.

When we at Atomic Games and Avalon Hill first began designing **STALINGRAD** we were of many different opinions as to how to portray the battle, what the game's focus should be, and the scales needed to create the best scenarios possible. I decided to design a game that would have historical options as its soul and the "big picture" as its focus. Later this decision proved correct when it became clear to me that the Axis side lost this battle because they were out-generated more than they were out-gunned.

It ended up that we would depart from the "standard" battalion/one-kilometer-per-hex scale of **Operation Crusader** and the previous Atomic releases with other publishers. It was decided to multiply the scale for the campaign game by three to regimental level and three kilometers per hex. The standard battalion/one-kilometer-per-hex scale would be used for the relief attempt and another new scale (four hundred meters per hex with battalions and companies for the unit scale) would be used to portray the city fighting.

Some of the other major design changes that became necessary were a revamped air supply system and air reconnaissance system. These will be new air missions for the **World at War™** series with the user making decisions as to dare the weather and try to push more supply into the pocket at the risk of higher plane attrition. Targeting areas for intense aerial reconnaissance will allow you more information in areas where you suspect enemy buildups.

You will also notice a lower number of antitank units in the game. These have been factored into the other units to more realistically reflect the spreading out of these assets to the larger units of a division. The Corps- and Army-level antitank units will still be present.

Another aspect of the campaign that I have not witnessed so far in any other wargame was the ability of the Romanian 3rd and 4th Armies to put up the fight that they did during the first day of the offensive. The Romanian 3rd Army was considered by their German Allies as the best of all the minor power armies and broke only after the Russian second echelon tank attacks came to full effect on November 20th. The strength and performance of the Romanian 1st Armored Division was also a surprise to me as they were organized on the German panzer division model and had just finished refitting with Czech 38(t) and German Mark III tanks.

As I stated above, the heart and soul of **STALINGRAD** will be the variants, not so much from the Soviet point of view, but more as a way of showing just how badly the Axis effort at Stalingrad was mismanaged. Several of the German Army's best units did little or nothing while the drama unfolded on the Volga and to me this is what the game is all about. Be ready for lots of options that will make the Axis side much stronger without departing too far from a historical point of view.

The general trend in my theory of game design is not to tie the players down with historical limitations that tend to make the game unbalanced. For the player who feels that the Germans should be held to their historical fate the game should be played with only the first option (6TH ARMEE RESTRICTED) which will anchor the German 6th Armee to Stalingrad—and most likely seal their doom.

For more exciting and original play there are four other options to choose from. The next option is called **NOVEMBER REINFORCEMENTS**, which gives the Axis side the 6th Panzer Division and two German infantry divisions as backup for the Rumanian 3rd Army. The German High Command historically cut the orders for these units to leave France on November 1st but they were delayed. The third Axis option is **RELEASE OF 7TH PANZER DIVISION**. Historically, the 7th Panzer milled around at Rostov for most of the campaign and could have been very useful in the relief attempt. The fourth option, **RELEASE OF 16TH MOTORIZED**, brings it into play on the southern map edge. The premise behind this is that the 40th Panzer Korps in the Caucasus has pulled back enough to cover its own flank, allowing this very strong unit to enter play. The fifth and most exciting option is **CAUCASUS WITHDRAWAL**. This assumes that clear thinking prevailed at all levels of command on the Axis side and the SS **Wiking** Motorized Division, the 16th Motorized Division, the 7th Panzer Division and the 3rd Panzer Division are all pulled out of the Caucasus and can be used to battle the Soviet counterattack.

There will also be five Soviet options dealing with fuel supply, organization, a no purge option, logistics, and communications but these only make for a less balanced scenario and are included to please players who wish to really punish the Axis for their crimes of the 1940's.

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