

Decisive Battles on the Eastern Front

KHARKOV

Disaster on the Donets

MAY 12 -28 1942



Game Manual v1.1



EPILEPSY WARNING

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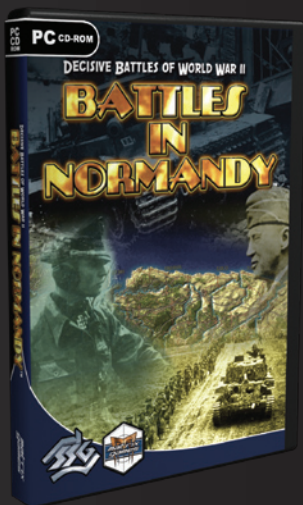
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- Use as small a monitor as possible.
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- Take care that there is sufficient lighting in the room.
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Battles in Normandy brings to you the award-winning Decisive Battles of World War II system and some seriously intense gameplay. Choose to take the Allied side and you're faced with the overpowering burden of locking into mortal combat with some of the German Army's most vicious and experienced Eastern Front veterans. Or, select the Germans and face an all-consuming Allied army that has a near-endless pool of reinforcements and supply to draw from, intent on your complete destruction. Battles in Normandy brings to you the award-winning Decisive Battles of World War II system and some seriously intense gameplay. Choose to take the Allied side and you're faced with the overpowering burden of locking into mortal combat with some of the German Army's most vicious and experienced Eastern Front veterans. Or, select the Germans and face an all-consuming Allied army that has a near-endless pool of reinforcements and supply to draw from, intent on your complete destruction.

- * New AI system
- * Special rules for Amphibious and Airborne operations
- * Extensive Rollover Help function
- * Carpet Bombing
- * Naval Bombardment
- * Mulberries (Artificial Harbors)
- * Bridge building, minefield and strongpoint creation
- * New supply rules
- * New rules for anti-aircraft and anti-partisan operations
- * New options for hidden units
- * New rules for extended movement and refitting units
- * Auto email and security functions for PBEM games
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1.0 Kharkov: Disaster on the Donets™

Thank you for purchasing Kharkov: Disaster on the Donets!

Kharkov: Disaster on the Donets May 12 - 28 1942 is a regimental level simulation of WWII combat. The battle started with a major Russian offensive, but ended with another pocket and another disaster, reminiscent of the deadly outcomes of the 1941 battles.

The game design incorporates elements from our previous successful Decisive Battles and Battlefront games, along with some new design features intended to further increase the realism, unpredictability and excitement of the game.

Players of previous SSG games should probably check out the New Features and Designer Notes section and new players should consult the Tutorial.

1.1 Minimum System Requirements

To play Kharkov, your computer system must meet these requirements:

Windows 98 / ME / 2000 / XP / Vista
Pentium III 800Mhz or Athlon 800Mhz CPU
256 MB RAM
GeForce2 or equivalent Graphics Card
Windows Compatible Sound Card
200 MB free Hard Drive space
Windows-compatible Mouse
DirectX 9.0c+

1.2 Installation Procedures

Insert the game CD into the CD-ROM drive. Setup will run automatically.
If Setup does not start, run setup.exe from the Windows directory on the CD.

When the Setup screen appears, click Install Kharkov. Once installed, double-click the Kharkov Game Menu icon. On the Menu screen, click PLAY. The Welcome screen will then appear.

1.3 Uninstalling the Game

Please use the Add/Remove Programs option from the Windows Control Panel or the uninstall shortcut in the game's Windows START menu folder to uninstall the game.

1.4 Product Updates

In order to maintain our product excellence, Matrix Games releases updates containing new features, enhancements, and corrections to any known issues. Keeping up with these updates is made easy and is free by signing up for a Matrix Games Member account. When you're signed up, you can then register your Matrix Games products in order to receive access to these important game-related materials. Doing so is a simple two step process:

Sign Up for a Matrix Games Member account – this is a one time procedure; once you have signed up for a Matrix account, you are in the system and will not need to sign up again. Go to www.matrixgames.com and click the Members hyperlink at the top. In the new window, select Sign Up Now and follow the on-screen instructions. When you're finished, click the Please Create My New Account button, and a confirmation e-mail will be sent to your specified e-mail account.

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Remember, once you have signed up for a Matrix Games Member account, you do not have to sign up again – at that point you are free to register for any Matrix Games product you purchase. Thank you and enjoy your game!

1.5 Game Forums

Our forums are one of the best things about Matrix Games. Every game has its own forum with our designers, developers and the gamers playing the game. If you are experiencing a problem, have a question or just an idea on how to make the game better, post a message there. Go to <http://www.matrixgames.com> and click on the Forums hyperlink.

1.6 Technical Support

Should you have a technical problem with the game, the best way to get help is to post a note in the Technical Support sub-forum within the Kharkov forum at <http://www.matrixgames.com>. You'll then hear back from our personnel, or from one of the many helpful players of the game. This is usually the fastest way to get help. Alternatively, you can email your problem to support@matrixgames.com.

2.0 Object of the Game

The object of the game in Kharkov is, by commanding the Axis or Allied armies, to amass more Victory Points than your opponent. This can be achieved in several ways but there are time limitations on you to do so. Victory Points are gained by destroying enemy units and capturing (or defending!) objectives. The player does this by moving friendly units on a Tactical Map and combating opposing forces.

At the end of a set period, the difference between the two side's Victory Points will decide the level of victory (or defeat!).

3.0 Getting Started

Kharkov uses a simple but powerful interface that allows players of different skills to obtain maximum control of their units. Everything you need to know to play the game is discussed in this manual, including tips on strategies and tactics. You do not need this manual to play Kharkov, but you do need to read it to fully understand everything about the game.

3.1 Welcome Screen

To begin, double click the Kharkov Game Menu icon on your desktop and then click 'Play'. This will launch the program.



The options are:

Start New Game: This starts a new game.

Load Last Game: This will bypass further menus and load the last saved game. This is useful if you are returning to a game after a break.

Tutorial: Starts the game tutorial.

Load a Game: Allows loading of save games.

Load Email Game: Allows loading of email games. Games must be placed in the \Kharkov\SaveEmail\Play\ folder to be loaded.

Go to Options Screen: This takes you to a screen with various game options:

Resolution: Toggles the various screen resolutions supported by the game. Resolution changes only take effect on the main game screen.

Music: Toggles music on or off to start the game. Also allows you to set music volume.

Sound: Toggles sound effects on or off to start the game. Also allows you to set sound effects volume.

Geographical Names: This option can display extra map information. It will not necessarily be used in every scenario.

Area of Operation Shading and Color: Allows customisation of the AO display.

Create New Battle for Edit: This option is only used for new battle creators. Everybody who just wants to play the game can ignore this option.

View Game Credits: Lists those responsible for creating the game.

Visit Matrix Website: This starts your web browser and takes you the Matrix Games Website. Matrix Games is the Publisher of Kharkov. The site has a forum dedicated to discussing the game.

Visit SSG Website: This starts your web browser and takes you the SSG Website. SSG is the Developer of Kharkov. The SSG site has forums for the game, articles explaining game concepts, tournaments and mechanisms for finding Play By Email (PBEM) partners.

PBEM details: This takes you to a screen that lists details on all current email games.

3.2 The Start Screen

To start a new game, select a battle or scenario from the list box on the left of screen. The line marked B.. will take you up one level. Lines marked F.. are folders. Selecting a battle or scenario will activate the buttons on the right hand side of the screen and display a brief description of the battle at the top of the screen.

Play Battle: Takes you to the Scenario Options screen.

Edit Battle: Starts the Editor

Go Back: This will return you to the Welcome screen.



3.3 The Scenario Options Screen

The Scenario Options Screen allows you to make many changes for the both the Axis and Allied side in the scenario you wish to play. These options will be applicable for email, hot seat or single player games and may not be changed once a game is begun.



Weather: Weather may be set at Normal (i.e. the actual historical weather) or Random weather. Random weather varies within limits that reflect historical weather patterns.

Human, Computer, +, ++, MAX: This selects either a human, computer or enhanced computer player for a side. The Computer setting has no bonuses for the AI. The Computer + setting means that the computer gets some minor bonuses to game elements such as supply distribution and is the setting that SSG recommends. On the Computer ++ setting, the computer's supply will be +25%, replacements +1 per turn per country, attacks +1, and the computer will have a reduced chance of surrender. On the Computer MAX setting, the computer gets supply 50%, replacements +2, attacks +2 and Computer MAX units never surrender!

Historic Areas of Ops, Mystery Area of Ops, Variant 1 Areas of Ops..., No Areas of Ops: Areas of Operations is a new design element in Kharkov. An Area of Operations restricts the movement of a formation. This restriction can apply to a formation's historical areas, or variant areas, as designated by the scenario designer. The player can choose a variant area for either side, or a Mystery Area which will choose a random variant from those created by the scenario designer.

Normal Replacements, +1, +2: A side may receive normal replacements or it may receive extra replacements every turn. Replacements mainly represent the rest and reorganization of a unit after it has been battered by combat.

Normal Combats, Dice Rolls + 1, Dice Rolls +2: The side may attack normally or it may have one or two added to every attack die roll. Adding one or two to the die roll in an attack increases the chance of the attacker gaining a favorable outcome.

Unknown Units On/Off: Players may choose to play with unknown units. This feature forces all combat units to randomly draw several values from a large pool of possible values at the start of the game. This adds variability and uncertainty to the game and is highly recommended. The variable values include Attack, Defense, Direct Attack, Direct Defense, Armor Shock, Anti-Shock, Sapper Shock and Step Losses. These values are shown on the unit with a '?' until the unit is adjacent to an enemy unit or Strongpoint.

Combat Advisor On/Off: This setting will allow a player to play with the Combat Advisor on or off. If this setting is set to off the in-game Combat Advisor Button will be grayed out.

Points Handicap: Sides can start the game with extra Victory Points.

Setup Email Game: This button will take you to the Setup Email Game Screen where you can set up a play by email game with the name and email address of a competitor.

Setup Hot Seat Game: This button will enable the Start Hotseat Game button.

Start Game: This button takes the player to the main game screen and begins the game.

Go Back: Returns to the Start Screen.

3.4 Setup Email Game Screen

This screen allows you to set up an Email game. The fields on the left side of the screen should be filled in appropriately. Once you are satisfied that the data in these fields is correct, you may proceed.



The scenario designer determines which side will go first in a battle. If a game is Unsecured, the player whose side is going first should set up the game. If the game is a Secure Game, then the player whose side is going second should setup the game.

Select A Profile: If you have PBEM Profiles setup on your machine, right click in the Profile field and select your player Profile if available (your name and email address will then be automatically entered)

Your Name: Your name as it appears in the game (maximum of 45 characters)

Your Address: Your Email address (maximum of 45 characters)

Select A Profile: Right click and select your opponent's Profile if available

Opponents Name: Name of your opponent (maximum of 45 characters)

Opponents Address: Email address of your opponent (maximum of 45 characters)

Email File Name: This is the file name the game will use. Each turn will use this name as the basis for the filename and in addition have the side and turn number added (maximum of 45 characters) i.e. KharkovTurn_Axs_01. These turns will be saved in the Send Email folder in the Kharkov directory.

Security On/Off: Enabling email turn security ensures that each game turn can only be opened by the player it is destined for. If this feature is set to off then all game turns can be opened by any player.

Note that a secure game must be started and finished on the same computer. Additionally, any change made to your computer operating system software such as reinstalling Windows or performing a System Restore will invalidate any secure games in progress.

Profiles: The profile button will take you to a screen whereby you can create and store profiles of PBEM players to simplify email game setup.

Accept Email Game: This will accept the information as entered in the fields above and return you to the Scenario Options Screen.

Cancel and Return: This will cancel the current email game and return you to the Scenario Options screen.

Go Back: This will return you to the Scenario Options screen but will not cancel the current email game.

Email game setup example: How to setup a secure Kharkov email game

Secure email games are always started by the second player. For the Kharkov scenario, a secure game is started by the Axis player:

1. Start the Kharkov program.
2. Select Start New Game.
3. Select the Kharkov scenario.
4. Select Play Battle.
5. Select either Normal or Random Weather as agreed.
6. Make other game option changes for both players as agreed (ie Areas of Operations, Unknown Units, Relacements, Combats, Combat Advisor and Points Handicap options).
7. Select Setup Email Game.
8. Toggle Secure On/Secure Off button to Secure On.
9. Type in and Enter your name and email address in the Axis Details area
10. Type in and Enter your opponent's name and email address in the Allied Details area.
11. Type in and Enter the file name for the game in the Email File Name text box.
12. Select Accept Email Game.
13. Select Start Secure Game.
14. Select Exit and Send.

That's it! Your email client should now appear. Email the file to the Allied player to begin. Play now alternates between players until the game is concluded.

3.5 Profile Screen



The Profile screen allows you to create and save email profiles of any number of players. These profiles can then be selected from the Set-up Email screen to save you entering the details manually.

To create your Profile, click New Profile.

In File Name, enter your name or online alias.

In Proper Name, enter your real name.

In Email Address, enter your email address - if the game does not recognise the '@' symbol, click the symbol to the right of the Email Address field instead.

Profile Info and Profile Location fields are optional but tell your opponents something about you and where you live.

Now click the Save Profile button and you are done.

Use the Get Profile menu when you want to view or edit existing profiles (right click on the box to access the drop down menu).

Profiles are saved in .PRO files stored in the \Save Emails\Profiles folder and you can swap Profiles with regular PBEM opponents via email to simplify PBEM game setup.

4.0 Sequence of Play

A single Kharkov turn consists of an Allied and an Axis turn played sequentially. During his turn, the player may watch a replay of the previous turn, move units, conduct combat, assign artillery, and assign reinforcements and transport, amongst many other facets of gameplay. The player then clicks the end of turn button and play switches to the other side. In the case of an email game, the player is returned to the email setup screen where he/she has the option to exit and send the game turn.

The game is controlled with the mouse, but many commands have keyboard shortcuts (Hotkeys) which are listed in section 35.0 and available on the separate Quick Reference Guide pdf.

5.0 Main Screen

Gameplay is conducted on the main screen. This screen is divided into several different display areas that are discussed below. Each of these display areas is explained in detail in following sections.



The first and largest portion of the main screen is the Tactical Map which displays a portion of the current map. The Tactical Map is where movement of units and combat takes place.

Playing the Game

On the left and below the Tactical Map is the Control Panel which contains buttons that control general aspects of the game.

To the right of the Control Panel are the Interdiction, Bombardment, Replacement and Transport Panels.

To the right of the Replacement Panel is the Game Control Area which contains a detail from the Tactical Map showing the currently selected unit and buttons for displaying various advisors and changing map views.

At the top right of the screen is the Information Panel which contains information about the current game. This panel includes the End of Turn button which is used to end the current turn.

Below the Information Panel is the Strategic Map which is a miniature version of the entire map, and the Off Map Display and Operational Map buttons.

Below the Strategic Map is the Command Display Area which shows information about the unit's formation and Headquarters.

Below the Command Display Area is the Unit Control Area with icons for giving various orders to the currently selected unit.

Below the Unit Control Area is the Unit Display Area with room to display up to four units and Strongpoint information.

6.0 Tactical Map



The Tactical Map in Kharkov is a hex based top down view of part of the battlefield where each hex represents approximately four kilometres, though the ground scale can be varied

by the scenario designer. The hex grid may be either displayed or not, depending on preference. The Tactical Map is where you move your forces and engage in attacks. Moving the mouse to the edge of the screen will scroll the tactical map in that direction.

6.1 Terrain Elements



The map contains many different terrain elements (eg forests, roads, villages, rivers) that affect movement and combat. Kharkov has three maps, one for Good ground conditions and two (Mud or Snow) for Bad ground conditions, though only two maps will be used in any one scenario.

A full list of terrain elements and their values is viewable using the Terrain/CRT button in the Control Panel.

6.2 Map Cursors

Map cursors play an important role in Kharkov for providing information during a turn. As you move your mouse over the map the cursor will change in response to different conditions. The possible cursors are:



Arrow – This is the standard cursor.



Gun Sight – This is the unit selection cursor. It appears over friendly units. Clicking on a stack will select a unit for movement and display the unit in the Unit Display Area on the right hand side of the screen.



Clashing Red and Blue Arrows – This is the combat cursor. It appears over enemy units or Strongpoints that you can attack with Close Combat. Clicking will open the Close Combat display.



Clashing Red and Blue Arrows with 'No Go' Symbol – The 'No Go' symbol is the standard road sign; a red circle with a diagonal red slash through it. This is the no combat allowed cursor. It appears over enemy units or Strongpoints that, for one reason or another, cannot be attacked.



Running Soldier with Green Outline – This is the movement cursor. When a unit is selected and the mouse is held over a hex that the unit can move to in the current turn, then this cursor appears. Clicking on the map will move the selected unit to the selected hex.



Running Soldier with Yellow Outline – This cursor appears when the current unit has the capability to move into a hex but cannot do so due to stacking limits.

Playing the Game



Running Soldier with Red Outline – This cursor appears when a unit may not move onto a hex because it has insufficient OPs to reach that hex. If this hex is clicked then the unit will move as close as possible to this hex.



Running Soldier with Red Outline and 'No Go' Symbol – This cursor appears when a unit or stack is selected and the mouse is held over a hex the unit could not move to because it is occupied by an enemy unit, or there is no path to that hex.



Binoculars – This is the deselect cursor. This will appear over a unit already selected. Clicking will deselect the unit, allowing you to select a new unit.



Combat Dice – The combat dice cursor will appear over an enemy unit if it is a target for an Indirect Fire attack from a selected friendly unit.



Single or double dice can be shown, depending on the target. The number displayed is the standard minimum roll required to achieve a step loss. When two dice are displayed, the number or higher must be rolled on both dice to achieve a step loss. One large die is used for Heavy Artillery attacks.



Artillery Icon animation with 'No Go' Symbol – This is the artillery maximum cursor, appearing when an Indirect Fire unit is selected and the cursor is moved over a hex that has already sustained the maximum allowable Indirect Fire attacks this turn.



Artillery 'No Go' Icon with numeral in red hex - This indicates the target is out of range and displays the range back to the firing unit in hexes.



Soldier with Yellow Outline, 'No Go' Symbol and numeral in blue hex - Indicates that a friendly unit is too close to the target for a Naval Indirect Fire bombardment to proceed. The number indicates how far away in hexes the friendly unit is to the target.



Bombardments – These are the off-map bombardment cursors and appear when you choose this mode of attack. A 'No Go' symbol will be superimposed if the bombardment is unable to be placed.



Interdiction - These are the cursors used when placing Air Interdiction, Partisan Activity, Minefields and Strongpoints available from the Interdiction Panel.



Drop Zone - This cursor appears when a Parachute Drop occurs, click the cursor on a preferred valid hex to land your Paratroopers - note that drift is common, and unpredictable.

6.3 Exposure

Not all enemy units will be visible at all times. They will become visible according to three levels of unit exposure which are Hidden, Nationality Exposure and Fully Exposed.

The closer a unit approaches or is approached by an enemy unit, the more likely its exposure level will increase. Conversely, the further away a unit moves from the enemy or the enemy moves from it, the higher the chance its exposure level will decrease.

In addition, entrenchment and both terrain and the type of unit, either combat or support, also affects the ability to expose it. The three different levels of exposure are:



Hidden level - The enemy cannot see the unit.



Nationality Exposure level - The enemy will see the unit's background with an appropriate national symbol but no indication of unit type or strength.



Fully Exposed level - The enemy will see all unit information.

The visibility of unit types is set by the scenario designer. Exposure rates for units can vary between sides and can also vary with the weather. Recon units have a much greater ability than other combat units to expose enemy units.

A move which increases the exposure level of an enemy unit cannot be undone.

7.0 The Control Panel



The control panel consists of ten buttons.

Each button will activate either an onscreen display or submenu with its function described below.

If a function has a keyboard shortcut it is listed alongside in parenthesis.

7.1 KIA Button (k)



This button removes all the units from the map and displays only those units that have been killed in the course of the battle.

In Kharkov, some destroyed units can be returned to play, and if these units are killed twice they will be displayed twice on the map.

7.2 Order of Battle Button



This button will invoke a full screen display identifying all units in the battle and their parent formations. These are viewable for all sides. Units that have been destroyed in combat will have a small skull superimposed over them.

Units that have not yet appeared in battle will have their arrival turn number below them.

If a friendly unit is on map, the Find Unit button will be lit when the unit is selected, and clicking on the Find Unit button will take you to that unit on the Tactical Map.



Note that restrictions have been added to prevent the inspection of enemy OB screens from giving away scenario variant information.

7.3 Terrain/CRT Information Button



This button toggles a screen which displays all the terrain features you will find in Kharkov and their associated movement costs. Buttons on the right hand side of the screen allow you to view screens showing Terrain data, Combat Result Tables (CRT) data, Strongpoint data and Incidental Data.

7.3.1 Terrain Data

Selecting an individual terrain element hex on this screen shows information about this terrain type. In the middle of the screen is OP cost for each movement type in Good and Bad ground conditions. Just below the OP costs are any anti-tank bonus and hidden (sighting) bonus for the selected terrain type.

The top right of the screen shows the penalty for each side for entering an enemy controlled hex, the chance of an artillery hit creating residue, the Indirect Fire Dice Roll Modifier for the selected terrain and the effect, if any, of that terrain upon Indirect Fire attacks. The bottom right of the screen shows the OP cost of the Light and Heavy Congestion and Residue penalties.



Playing the Game

Selecting an individual terrain element hex on this screen will show that terrain's following game effects in the center of the display:

- OP costs for each of the six movement types (Supply, Leg, Horse, Wheeled, Tracked and Motorised Leg) in good and bad ground condition.
- Anti-tank shock value (if any) in good and bad ground condition.
- Any bonus to sighting distances caused by the difficulty of the terrain. This is expressed as a bonus number of hexes, meaning that units in this terrain will count as being further from the enemy for the purpose of determining their exposure level.
- Details on Sealanes, Minor Rivers, Major Rivers and Cliffs.

7.3.2 CRT Data

Close Combat in Kharkov is resolved by one or two dice rolls applied to a CRT appropriate to the terrain type in the defending hex. A comparison of strength between Attacker and Defender dictates the particular column of a CRT used.

The screenshot displays the game's terrain and combat interface. On the left, a list of terrain types includes Open, Woods, Hills, Desert, Swamp, Town (Open), City, Major City, and Town (Other), each with a corresponding hex icon and a 'Map' button. The center features a 'Retreat Table' with columns for Attacker vs. Defender strength ratios (1:1 to 10:1) and rows for terrain types (1 to 6). Below this is a 'CRT Data' section with buttons for 'Res Time', 'Retreat Odds', 'CRT Data', 'Strong Point Odds', and 'Inhabited CRT'. The bottom section shows 'Hit Probability' with a list of percentages (100%, 82%, 67%, 50%, 33%, 17%) and their corresponding hit counts (100%, 68%, 44%, 28%, 11%, 3%).

Each terrain type may have its own CRT and, unless prohibited by the scenario designer, a separate retreat table. The CRT result is displayed as number of steps lost for each side, with the Attacker listed first, * meaning no effect and S meaning stack Surrenders. Retreat results are rolled separately from the combat result, on the Retreat table.

Additional terrain based data is also displayed. Selecting an individual terrain element hex on this screen will show that terrain's following game effects on Close Combat:

- The Retreat table
- Good or Bad Weather display buttons
- The name of the CRT
- Combat Residue Chance for both standard and overrun combats
- Defender combat shift adjustment bonus (if applicable) (25.6.1)
- Double Dice Chance (chance of 2 combat dice being used to resolve Close Combat based on number of defending steps in the stack, red color in the step indicates the chance).
- The CRT table itself, with additional rows to encompass Shock/Anti-Shock adjustments.

For reference, in the left hand bottom corner, a probability table shows the chance for rolling a hit for single and double dice. That is, the chance of rolling the indicated number, or better, on either single or double dice.

Note that the CRTs in Kharkov do not have to be contiguous, at the discretion of the scenario designer. For example, in the Open CRT the columns at higher odds are defined at 3:1, 5:1, 8:1, 12:1 and 20:1.

7.3.3 Strongpoint Data

Strongpoint data is similar to CRT data. The scenario designer can create a number of different Strongpoint types. A non-combat unit CRT is also listed with the Strongpoint CRTs and is used whenever an attack is made against a hex containing only enemy artillery or support units.

The screenshot displays the 'Strong Points' and 'CRT' (Combat Residue Table) interface. It features several interactive elements and a data table:

- Buttons:** DUSTED, SHOCKED, SCOUTED, Strong Point Data, SHOCKED (OOD).
- Labels:** Name: Fortifications, Residue Chance: Standard, Overrun, Shift Bonus.
- Table:** A table showing hit probabilities for various dice rolls (1d6, 2d6, 3d6, 4d6, 5d6, 6d6) across different terrain types (1-6).

	1d6	2d6	3d6	4d6	5d6	6d6	1d6	2d6	3d6	4d6	5d6	6d6
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.17	0.28	0.33	0.38	0.42	0.45	0.17	0.28	0.33	0.38	0.42	0.45
3	0.33	0.50	0.56	0.61	0.65	0.68	0.33	0.50	0.56	0.61	0.65	0.68
4	0.50	0.67	0.73	0.78	0.82	0.85	0.50	0.67	0.73	0.78	0.82	0.85
5	0.67	0.83	0.89	0.94	0.97	0.99	0.67	0.83	0.89	0.94	0.97	0.99
6	0.83	0.94	0.97	0.99	1.00	1.00	0.83	0.94	0.97	0.99	1.00	1.00
7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Playing the Game

7.3.4 Incidental Data

There are some important game elements on this screen which can vary by country. At the top of the screen are buttons which control the country data being displayed. The tactical shift bonuses display shows a series of combat rosettes as seen in the combat screen. They range from the situation where no tactical shifts apply to that where all six hex sides are green and generating shifts.



Also shown are:

- Surrender percentages
- Entrenchment/Hedgehog shift, Combat shift bonus and visibility modifier
- Maximum number of artillery units allowed to attack a hex in a single turn

The lower half of the display shows information on Parachute drops, if any are in the scenario.

Parachute drop information displayed includes:

- **Landing information** - shows scheduled and landed Para drop information
- **Attrition Dice Roll and Range** - indicates lowest die roll required for attrition and range to enemy steps counted in determining how many attrition attacks are rolled
- **Enemy Steps Divided by** - modifies the number of attrition rolls the unit must take
- **Landing Criteria** - indicates any unit attack and movement limitations on the landing turn.

7.4 Replay Turn Button



The Replay Turn Button brings up the replay toolbar below the Strategic Map and allows you to replay your opponent's previous turn in real time on the tactical map. This is especially useful for watching an email opponent's turn before you continue.

The replay toolbar has several buttons for which to control the replay:



Run Replay – this will begin the replay running from beginning to end continuously.



Rewind Replay – this will rewind the replay to the beginning.



Play till next Action – this in effect plays each individual unit action and then halts awaiting instruction.



Play till next Indirect Attack or Combat – the replay will begin playing and halt upon reaching an Indirect Attack or Combat. The attack results will be displayed for the player to review.



Play till Combat – the replay will begin playing and halt upon reaching a combat. The combat results will be displayed for the player to review.

A summary of the results of the replayed combats will be shown under the replay buttons.



Exit – the small cross in the right hand top corner of the toolbar will exit the toolbar.



Additionally, during a email turn, a padlock symbol is displayed to the lower left of the Control Panel. A locked padlock indicates a secure game; an unlocked padlock indicates a non-secure game.

7.5 Load and Save Button



The Load and Save button will bring up a menu that will allow you to either load an existing game or save your current game. Save Games can be a combination of letters or numbers to a maximum of 45. Resume will take you back to your current game.

7.6 Victory Screen Button



This button will invoke a full screen display showing the current level of victory or defeat, a prediction of the score at the end of the game if no change takes place and a summary of selected game options for both sides.

The score necessary for each level of victory is displayed at the bottom of the screen.



7.7 Map Options Button



The Map Options button opens a pop-up menu that allows the player to change various options. The Map Options are listed below.

If the map option has a keyboard short-cut key, it is shown in parentheses.

The default state of each feature is listed in bold below.



- **Sound On/Off** – Toggles the sound on or off
- **Hex Grid On/Off (H)** – This will toggle a hex grid overlay on the tactical map.
- **Front Line On/Off (F)** – This will toggle the front line on the tactical map.
- **Artillery Radius On/Off (A)** - If an artillery unit is selected, the unit's Indirect Fire range will be shown by a line of bright green square dots.
- **Command Radius On/Off** - This button toggles the HQ Command Radius display (33.1) when a HQ's unit is selected.
- **Moved Units Normal/Darkened (X)** – This button will toggle shading for all units which have been moved in the current turn.
- **Town Names On/Off/Important (C)**– This button will toggle the names of all objectives on the tactical map. There are three levels, All Towns, Important Towns and No Towns)
- **Town Indicators On/Off (I)** – This toggle button will display a gun sight over every objective on the tactical map.
- **Units are Displayed/Hidden (U)** – This will toggle the display of all units on the tactical map to allow review of the terrain beneath.
- **Penalties are Displayed/Not Shown (P)** – This button will toggle a display of movement penalties for each map hex a player can see. If the Hidden Units option is on you will only see movement penalties for enemy hexes that have been exposed by your units.
- **Music On/Off** –Toggles the music on or off.
- **Strategic Units On/Off** - This button will toggle the display of units on the Strategic Map. Because of the size of the Strategic Map, units are shown as colored squares.
- **Strategic Front Line On/Off** – This button will toggle the display of the front line on the Strategic Map.
- **Height Display On/Off (CTRL-H)** – This button will toggle the display of Cliffsides, Cliffsides and Contours and Cliffsides and Contour Shading.
- **Integrity (Radius) On/Off (D)** – This toggle button will allow the Combat Integrity radius, centred on the unit designated as the Minor HQ, to be displayed by a line of small green squares on the map.
- **Integrity (Units) On/Off (J)** – This toggle button will highlight in red all units belonging to the currently selected formation's Minor HQ, on the Tactical Map.
- **Strongpoints Displayed/Hidden (E)** – This button will toggle the display of Strongpoints on the Tactical map.
- **Mines are Displayed/Hidden (M)** – This button will toggle the display of minefields and detachments on the Tactical map.
- **Normal Animation/Fast Animation/Fast Naval AI Animation/Fast AI Animation** – This button will toggle the display speed of units on the Tactical map. Fast Animation dramatically speeds up all unit movement, and is especially useful for players with older machines. Fast Naval AI Animation speeds up the AI's movement of naval units and Fast AI Animation speeds up movement of all AI controlled units.
- **Geographical Names On/Off** – This button toggles the display of names for geographic features. This is an optional feature and may not have any effect in some scenarios.
- **Resume** – This button takes you back to the main screen.

7.8 Show Supply Net Button (s)



The Show Supply Net button is a toggle button that displays the General Supply status of all hexes during the current turn.

Hexes shaded green are in General Supply and can supply replacements.

Hexes shaded yellow are in General Supply but can't supply replacements.

Hexes with a truck icon were supplied from a Formation HQ rather than from a map edge supply source. Hexes with a Strongpoint icon were supplied by the Strongpoint in the hex.

Note that the functions of the Supply Units (trucks) in previous games have now been incorporated into the Formation HQ unit, so there are no Supply Units in Kharkov.

The source of the supply makes no difference to the units receiving it.

Units that occupy a supplied hex or unsupplied units that move onto a supplied hex are in General Supply and will have their Defensive Bullets resupplied.

Darkened hexes mean that the hex is currently out of supply. A unit that begins its turn on an unsupplied hex cannot replenish General Supply (without moving to a supplied hex). Once an unsupplied unit uses up all Defensive Bullets, it will soon become helpless and far more prone to destruction.

7.9 Unit Roster/Interdiction Panel Button



This button toggles the display between the Unit Roster and the Interdiction Panel. The Unit Roster displays four unit types, Combat, Support, Artillery, and HQ. You can click on these to locate each unit of that type. Below the unit type locators are icons for various unit characteristics. Click on these to locate all units with the desired characteristic.

7.10 Change Countries Button



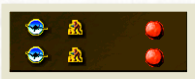
In the Kharkov scenario, there are two opposing sides, the Axis and the Allies. In some scenarios a side may be made up by one or more countries.

Many important game functions, such as combat, supply, interdiction, and replacements are not shared, but are specific to a particular country.

The Switch Countries button will change the current country, and make the new country the active selection in various displays.

8.0 Interdiction Panel

Interdiction is enemy activity which interferes with supply lines and/or which makes it more difficult for units to move. In Kharkov, interdiction is represented by four different types: Air, Partisans, Minefields and Strongpoints. The Interdiction panel is located in the same space as the Unit Locator, and its display is toggled by the Unit Roster/Interdiction Panel button.



If an interdiction type is available, its icon will appear in the Interdiction Panel. You select between interdiction types by clicking on these icons. The amount of interdiction is shown by the number of icons available.

To place an interdiction type, click on the icon. The cursor will change to show the type of interdiction being placed, and the map will highlight all legal placement hexes. To place, click on a legal hex. To cancel without placing, click again in the Interdiction Panel.

Once an interdiction marker has been placed, the icon will turn red. Clicking on the icon will centre the map on the hex where the interdiction has been placed. Ctrl-clicking on the icon will remove the interdiction marker from the map. Alternatively, the Undo Button may be used for the same result.

Right-clicking anywhere in the Interdiction Panel will bring up the Interdiction Pop-up Display:

Place/Stop	Available	Penalty Fut(K&D)	Range from Front	Radius Affected
	2	2 [1]	+4 Hexes	2 Hexes
	2	4 [0]	+6 Hexes	2 Hexes
	2	-	To Front Line	-
	-	4	-	1 Hex

Turn 5 Turn 6 Turn 7 Turn 8 Turn 9 Turn 10 Turn 11 Turn 12

Selecting a turn box on the bottom of the popup will display information for the current turn, or subsequent turns. In historical weather games, you will be able to see seven turns ahead. In random weather games you can see only two: the current turn and the next turn. For each type of interdiction capability, you are told the number available, the movement penalty applied to the target hexes, the effective radius and the distance from your front limitation, if any.

Each method of interdiction has its own characteristics that are discussed below.

Playing the Game

8.1 Air Interdiction



Air Interdiction is the ability of aircraft to attack a hex to slow movement and/or supplies. Air Interdiction imposes a movement penalty to each hex affected by Air Interdiction for the following enemy turn.

In Kharkov, the effect of Air Interdiction can be reduced by the presence of enemy flak units, or the inherent flak defenses of urban areas. The Air Interdiction penalty and its reduced state are both shown in the Interdiction Pop-up Display.

Air Interdiction can only be placed in enemy territory. Unlike previous games, Air Interdiction affects all hexes, not just road hexes, within its radius.

8.2 Partisans



Partisans act in a similar fashion to Air Interdiction, imposing movement penalties on enemy units and supplies.

Partisans can affect HQ Command Radius. Suppressed Partisans have no effect on HQ Command Radius.

Some units, typically Military Police units, have a Partisan Suppression capability (17.5), and can reduce the effectiveness of Partisan Interdiction.

Details on Partisan Interdiction availability and effect are found in the Interdiction Pop-up Display.

8.3 Minefields

In Kharkov, minefields are represented by a skull and crossbones icon. They may be present on the map from the beginning of play or placed via the Interdiction Panel.

Minefields cannot be attacked. They apply a movement penalty to an enemy unit moving through them. Enemy units attacking from a friendly minefield hex contribute no tactical shift to the combat odds. Units defending in an enemy minefield hex suffer negative tactical shifts, so attacking units on a minefield is often a good idea.

Although they cannot be attacked, Minefields can be cleared.



8.4 Strongpoints



Strongpoints represent hastily prepared fixed defensive works. Strongpoints are placed on the map in the same manner as minefields.

Units in a Strongpoint hex cannot be attacked until the Strongpoint has been completely destroyed.

Strongpoints have a defensive value that they contribute to defense and Strongpoints do not count for stacking limits.

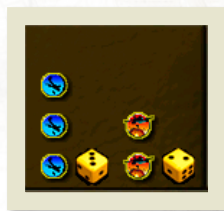
Some Strongpoints will have the ability to repair themselves but once destroyed a Strongpoint can never return.



Strongpoints come in several varieties. They include pickets, normal Strongpoints, light forts, and heavy fortifications. Terminology in this manual uses Strongpoint to refer to all of these types for the purpose of simplifying the discussion.

9.0 Bombardment Panel

In the Kharkov system, the scenario creator can specify up to two types of off-map bombardment. These can represent off-map artillery, air or naval bombardment, or a mixture of these. Each bombardment type can have its own icon, and is applied and removed in the same way as Air Interdiction.



The dice roll needed for a hit is shown. A bombardment can need one or two dice for a hit, at the choice of the scenario designer. Be aware that the effects of bombardment can be designated to scatter, so you might end up hitting your own men.

Right-clicking in the Bombardment Panel will bring up the Bombardment Popup. This shows the type of bombardment, hit chance, number available, scatter chance, strike range from your frontline and radius of effect.



10.0 Replacement and Transport Panel

10.1 Replacements

In battle, it is common place over time for a unit to decrease in combat strength. This may result from enemy action, environmental attrition, fatigue, disorganization, etc.



Replacements are a means by which a unit can regain lost strength. In Kharkov, replacements are organized in steps, and represent activities by which a unit regains its combat strength, including absorbing new troops, resting, regrouping, refitting etc. There are two types of replacements, Infantry and Mechanized, and two methods by which they can be utilised: Regular and Timed.

Regular Replacements are made available from the reinforcement schedule and are assigned by the player using the Replacement Panel and Take Replacement Button in the Unit Action Area.

Timed Replacements are handled automatically by the computer unless overridden by the player. Some units cannot take any type of replacement and are therefore quite vulnerable.

Right-clicking on the Replacement and Transport Panel will bring up the Replacement Pop-up Display. Selecting a turn box on the bottom of the popup will display information for the current turn, or subsequent turns.

The Replacement Pop-up Display shows several items of information. For replacements, you are shown the number of casualties in your army, divided into losses which can be made good only by Regular Replacements (white skull on black) and those which will be made good, eventually, through the Timed Replacement system (orange skull on red).

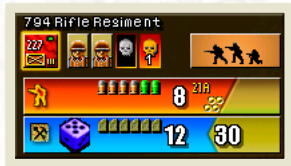


Furthermore, you are shown the replacements added to the pool in the selected turn, and the unused replacements accumulated in the pool.

10.2 Regular Replacements

When a unit takes a casualty, at least one step will be destroyed. This is displayed on the unit display as a red skull. This step is then capable of being replaced using Regular Replacements.

Regular Replacements comprise both Infantry and Mechanized Replacement Steps. Most units can use the more plentiful Infantry Replacements, but armored and mechanized units require the less plentiful Mechanized Replacements. These replacements are assigned using the Take Replacement Button in the Unit Action Area.



As in the screenshot, skulls will be white if the losses were suffered in a previous turn. If a replacement can be taken this turn, the destroyed step will be shown in green.



Step lost this turn



Step lost in a previous turn



Step can be replaced this turn

10.3 Replacement Panel Buttons



Clicking on a Mechanized or Infantry Replacement Icon in the Replacement Panel will select the current Replacement type. The amount of the selected Replacement type is displayed next to each Replacement icon.

Clicking the unit icon button will darken any units on the Tactical Map that can accept the selected replacement type.



Clicking the right-arrow button will cycle you through all available units that can accept the selected replacement type.

Playing the Game

In order to accept a Regular Replacement, a unit must:

- Be in supply, and
- Be capable of accepting replacements, and
- Have not used its Action Capability in this turn.

If a unit meets these requirements and replacements of the appropriate type (Infantry or Mechanized) are available, a Take Replacement Button of the appropriate type will become active for the selected unit in the Unit Control Area to the right of the Tactical Map . Clicking the Take Replacement Button will attach the Replacement step to that unit. This will increase the unit's strength by one step.

A Regular Replacement can be used to rebuild a step undergoing timed replacement if desired.

Some Supply Sources cannot provide replacements so a unit must also be in a hex capable of providing replacements in order to take a regular replacement.

Assigning replacements will expend the unit's Action Capability for that turn and a unit cannot take more than one replacement in a turn.

Unused replacements will accumulate if not used - refer to the Pool column in the Replacement Panel Popup display for the current unused total.

10.4 Timed Replacements

Timed Replacements are unique to each individual combat unit and represent a unit's ability to rebuild itself internally after combat. A combat unit that is capable of utilizing Timed Replacements will have a small orange circle in its unit display (to the right of the steps) with a number superimposed on it. This number is the amount of timed replacements this unit is capable of and can vary from 1 to 9.



If a unit of this type takes a casualty, at least one step will be destroyed. This is displayed on the unit display as a red skull on a dark orange background. Further to this, the skull will have a small number superimposed over it. This is the number of turns until the step is replaced automatically by a Timed Replacement. Each turn, the superimposed number will decrement by one until the dead step is replaced.

If more than one casualty is incurred and a unit has more than one Timed Replacements available, a second red casualty icon appears. This second icon always has a time frame number at least 1 more than a previous casualty.

Once all a unit's Timed Replacements are consumed, all further losses can only be made good by Regular Replacements. Recovering a step in the timed replacement procedure is 'automatic', so Action Capability for the turn is not used.

If a unit shows both types of casualties, adding a Regular Replacement will make good the black background step loss. If a unit shows only timed replacement losses, and the replacement eligibility icon is present, you may immediately make one of those losses good by adding a Regular Replacement, if you have one. This action does not waste the Timed Replacement; it is returned to the unit's pool.

Some units have only Timed Replacements and cannot take Regular Replacements.

Timed Replacement Unit Icon examples:



Step lost this turn, replaced in 3 turns time



Step lost in a previous turn, replaced in 2 turns time



Step to be replaced in one turn but can also be replaced via regular replacements this turn

10.5 Transport

In Kharkov, transport is represented by truck, rail and amphibious travel. This travel represents the vast quantities of trucks, half tracks, railcars, ferries, boats and landing craft available in the theatre to transport units to and around the battlefield.

10.6 Transport Panel Buttons

Clicking on the Truck, Train or Boat Icon in the Transport Panel selects the current transport type. The amount of the selected transport type is displayed next to each transport icon.



Clicking the unit icon button will darken any units on the Tactical Map that can accept the selected Transport type.



Clicking the right-arrow button will cycle you through all available units that can accept the selected Transport type.

Playing the Game

To allocate a transport to an eligible unit, click on the Attach Transport Button in the unit's display in the Unit Control Area to the right of the Tactical Map.

Utilizing Truck, Train or Amphibious Transport will expend the units Action Capability for that turn.

10.7 Truck Transport

In order to use motorized transport, a unit must:

- Be capable of truck movement, and
- Begin its turn on a friendly road hex, and
- Not have moved, and
- Have not used its Action Capability in this turn.



If a unit meets these requirements and Truck Transport is available, a Truck Button will become active on the unit's display. Clicking the Truck Button will attach transport to that unit for the current turn. This will greatly increase the unit's movement capability for the remainder of the turn. Units using Truck Transport cannot move into enemy controlled areas.

10.8 Rail Transport

In order to use Rail Transport, a unit must:

- Be capable of rail movement, and
- Begin its turn on a friendly rail hex, and
- Not have moved, and
- Have not used its Action Capability in this turn.



If a unit meets these requirements and Rail Transport is available, a Train Button will become active on the unit's display. Clicking the Train Button will attach transport to that unit for the current turn. This will greatly increase the unit's movement capability for the remainder of the turn. Units using Train Transport cannot move into enemy controlled areas.

10.9 Amphibious Transport

In order to use Amphibious Transport, a unit must:

- Be capable of Amphibious movement, and
- Begin its turn on a friendly hex that contains a Naval sealane, and
- Not have moved, and
- Have not used its Action Capability in this turn.



If a unit meets these requirements a Ship Button will become active on the unit's display. Clicking the Ship Button will attach Amphibious transport to that unit for the current turn. This will allow the unit to move anywhere in the Naval sealane, and to make a landing on any land hex in the sealane.

11.0 Game Control Area

The Game Control Area shows the currently selected unit and surrounding hexes in a small circular display. This display is where unit specific actions such as bridge blowing and bridge repair may be made. The Game Control Area also contains buttons enabling selection, deselection and grouping of units.



If a unit is selected it will appear in the centre of the circular display.

If a unit occupies a hex containing a town or city, the name of this town or city will appear beneath the circular display.

11.1 Bridge Blowing

Blowing bridges is an effective means of slowing enemy movement. A blown bridge can increase the movement penalty in that hex effectively slowing traffic. In addition supply, truck and rail movement cannot pass over a destroyed bridge. Therefore, blowing bridges is a vital technique in defense.

There are several ways a scenario designer can determine bridge blowing parameters.

Bridges can be assigned the following attributes:

- Start the scenario already blown
- Normal Bridge blowing chance by friendly unit, ranging from no chance or chance depending on a dice roll, including automatic blow (See F12 Hotkey)
- Automatic Bridge blowing attempt on capture, ranging from no chance to chance depending on a dice roll, including automatic blow, set by scenario designer.

All combat units and some support units (e.g. Engineer) can attempt to blow a bridge. The chance for a successful bridge blowing is displayed as a dice next to a dynamite plunger in the Game Control Area. The number on the dice is the minimum number that must be rolled for a successful bridge blowing.

Playing the Game

In order for a unit to attempt to blow a bridge it must:

- Not be adjacent to an enemy unit, and
- Not have used its Action Capability in this turn.

If a unit meets this criteria and is adjacent to a bridge that can be blown, the bridge blowing icon (a dynamite plunger on a red background) appears in the hex across the bridge from the unit, both on the Tactical Map and in the round window in the Game Control Area. If a unit fails to meet the criteria the dynamite plunger icon will be grey, or if the bridge is set by scenario designer as unable to be blown, no plunger icon will appear.

To attempt to blow a bridge, click on the plunger icon in the Game Control Area. A sound effect appropriate to the action will be heard.

If successful, the bridge will be replaced with a blue bridge blown symbol.

If unsuccessful, the dynamite plunger on a red background icon will be replaced with a grey icon denoting further attempts by that unit are not possible in that turn.

Clicking on the plunger icon on the Tactical Map will simply move the unit over the bridge.



Attempting to blow a bridge will expend the unit's Action Capability for that turn.

The chance that a bridge will be blown is not dependent on the unit, but is set by the scenario creator for each bridge in the scenario. Bridges can also be designated as unable to be blown. Refer to the Hotkey list for more information (F12).

Support units can have a bonus to the bridge's chance of being blown, but only if the bridge was capable of destruction in the first place.

11.2 Bridge Repair



Bridges in Kharkov may begin the game in a blown state or be destroyed by units as per the method above. It is possible to repair these bridges, though only units with bridge repair capability (mainly engineers, but some combat units) can do so. If a unit can repair a bridge it will be shown by a crossed spanner and hammer icon in the unit's popup display.

To be eligible to repair a bridge a unit must:

- Be bridge repair capable, and
- Not be adjacent to any enemy units, and
- Not have used its Action Capability in this turn.

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If a unit meets these criteria and is adjacent to a blue blown bridge icon, the bridge repair icon (a blue icon with a crossed hammer and spanner) will appear on the other side of the bridge to the selected unit both on the Tactical Map and in the round window in the Game Control Area.



To repair this bridge, click on the spanner & hammer icon in the Game Control Area. A sound effect appropriate to the action will be heard.

Repairing a bridge is always successful. When rebuilt, the blue blown bridge symbol is replaced by a bridge symbol.

Clicking on the spanner & hammer icon on the Tactical Map will simply move the unit over the river.



In addition congestion markers will appear on either side of the bridge and a movement penalty is imposed on any unit moving onto or through the congested hex.

The penalty lasts for the turn the bridge is repaired and the following turn. This in effect replicates the traffic congestion that a newly built bridge would suffer. Go to the Terrain Data display to observe the different penalties for repairing bridges across major and minor rivers.

Repairing a bridge will expend the units Action Capability for that turn.

11.3 Bridge Building (Pontoons)



Certain units in Kharkov are capable of building new bridges. To be eligible to build a bridge a unit must:

- Be bridge build capable, and
- Not be adjacent to any enemy units, and
- Not have used its Action Capability in this turn.



If a unit meets this criterion and is adjacent to a river, the bridge building icon (a yellow bridge symbol) will appear on the other side of the river to the selected unit both on the Tactical Map and in the round window in the Game Control Area.

Playing the Game

To build this bridge, click on the yellow icon in the Unit Control Area. A sound effect appropriate to the action will be heard. The same congestion penalties for repaired bridges also apply to built bridges.

Summary of Bridge icons on the Tactical Map:



Blown bridge that can be repaired



Blown bridge that cannot be repaired



Automatic Bridge blowing attempt on capture - unknown chance

F12 Hotkey Normal Bridge Blowing Chance icon summary:



High chance of bridge blowing



Medium chance of bridge blowing



Low chance of bridge blowing



No normal bridge blowing allowed

Note the presence of a ? icon still indicates there is an automatic blowing attempt upon capture of the bridge, even if the F12 hotkey indicates there is no normal bridge blowing allowed.

11.4 Deselect Unit (l)



The Deselect Unit Button will deselect the current selected unit.

11.5 Leave Unit and Get Next One (q)



The Leave Unit and Get Next One Button removes the current selected unit from the "Next Unit" cycle and the Next Unit Button will ignore it.

This function can be overridden and the unit can still be selected manually if required.

11.6 Next Unit (n)



The Next Unit Button will cycle the cursor through every unit on the Tactical Map by formation. Clicking on this button will take you to the next unit in a formation, Ctrl-clicking will take you back one unit.

11.7 Indirect Fire Advisor (b)



The Indirect Fire Advisor shows the best possible Indirect Fire attack for each legitimate target hex. Clicking on the target hex will highlight in green the unit(s) that can get the displayed attack chance.

Other units which can attack, but can't get the same attack chance are highlighted, and those which can't attack are darkened. Clicking on the button again will turn off the display.



11.8 The Close Combat Advisor Button (o)



The Combat Advisor is a powerful tool. When clicked, the button toggles an overlay display on the tactical map of every possible combat that may be attempted by the player at this precise moment in the current turn. Each possible combat is overlaid with an odds description that represents the maximum possible odds attainable in a combat on that hex.



To aid in your interpretation of the odds, the odds numbers are color-coded for easy reference. Good odds are yellow, reasonable odds are orange and poor odds are red. Green odds indicate an automatic overrun is possible.



A green die icon with the minimum Close Combat die roll needed for an overrun is shown under the odds numbers. To the left of the that, a red die icon is displayed with the minimum Retreat die roll required to force a retreat. If either or both of these colored dice are not present it indicates there is no chance of that particular result.

CRTs can have minimum odds set by the scenario designer, and any combat that does not meet those odds in the Combat Advisor will be displayed with a grey background and the word 'low'.

Clicking on a hex containing combat odds display on the Tactical Map will then highlight the units that are needed to mount the attack at those odds. These will be combat units. Units that are not needed for the attack will be darkened. If a stack is highlighted during this process this signifies that one or more of the units within the stack are needed to achieve the combat odds displayed. Right clicking on the stack will display which of the units are needed. Those not needed will be displayed by a generic nationality icon.

If you select a unit that has been highlighted, then the system will display a move path to the destination hex that the Combat Advisor has selected for the unit. You don't have to move the unit to that hex, but if you don't you may not get the odds that the Combat Advisor can.

Used correctly this is an extremely powerful tool for the player as it can display at a glance exactly which enemy units/hexes represent the best chance of success in a combat.

The display treats each combat individually and hence once a combat takes place the display is automatically toggled off and must be selected again for recalculation.

Some countries can combine their forces in combat. When this happens, the Combat Advisor will show the best possible results from the combined combats. When countries are unable to combine in combat, then the Combat Advisor will only show results for the currently selected country.

11.9 Undo Button (z or F1)



The Undo Button will undo the previous action made if you change your mind. The Undo Button is limited to one action only. Most actions can be undone.

These include movement, allocation of replacements or transport and the placement of interdiction markers. The action to be undone is shown to the right of the Undo Button.

Some actions cannot be undone. These include moves that have revealed hidden enemy units, revealed unknown units, bridge repair, attempted bridge blowing, amphibious landing which suffered a casualty, and combat. Any unit that switches enemy controlled terrain to contested terrain control loses the ability to Undo its move.

11.10 Toggle Units Button



The Toggle Units Button toggles the display of all Units (u), Mines (m), Strongpoints (e), Reinforcements, Supply and OMA Exit/Entry Hexes (ctrl + u) on the map.

11.11 Refit All Available Units Button



This button will refit all available units. See 33.3 for more information.

12.0 Information Panel



The Information Panel contains many elements of information about the current game. These are listed below and discussed in detail.

12.1 Title

This panel contains the title of the current scenario.

Kharkov

Playing the Game

12.2 Minimize/Exit Game

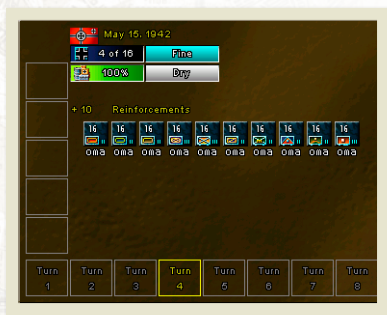


In the top right hand corner of the display are functions for minimizing the game to desktop or exiting the game. If you choose to exit the game a popup will appear to confirm this action.

12.3 Side and Turn Indicator



This panel contains an icon representing the current player's side. Alongside this icon is the current turn number and total number of turns for this battle.



Right-clicking on this panel will display a popup screen containing information icons regarding game events such as Para Drops, scheduled reinforcements, amount and name of any Special Attacks for the current Country, and list the current (game) date and time of day. Mousing over event icons will display further information.

Additionally, you can review future date information by mousing over the turn boxes. If random weather is chosen, only the current day plus the next day's weather information is revealed.

12.4 Weather

Displays the current weather conditions. Use the right-click Popup to see the weather forecast.



The method of weather forecast is based on the choice made in the Scenario Options Screen at the start of play.

12.5 Supply State



The panel displays the current Country Supply Level.

12.6 Ground Condition



This panel shows the current ground condition. Right clicking on this panel will display a popup that shows the actual ground condition expected for the next seven turns (historical) or one turn (random weather game). Ground condition can be one of two types; Good or Bad. Both types are represented visually on the map and impose different values on the terrain.

13.0 End of Turn Button



The End Turn Button is the large red button in the top right hand corner of the display. It is clicked once all actions for that turn have been made and you are ready to progress. When the button is pressed, you will move to one of the following screens:

13.1 Standard Game

If you are playing a game against the computer or a Hot-Seat Game with a friend, you will arrive at the Next Turn Screen. This screen will display a background graphic representing the next side to play and a confirmation dialogue to begin the turn.

In a game against the computer, confirming this dialogue will hand control to the computer for the next turn.

13.2 Email Game

If you are playing an email game, you will arrive at the Email Confirmation Screen. This screen contains the email information as entered in the game at Email Game Setup by yourself or the opposition. There are two buttons on the right hand side.

Resume: this is essentially a 'Back' Button and will take you back to your turn; use this when you didn't mean to end your turn.

Exit and Send: this button will close the Kharkov game and after a short period launch your default email client with a new message invoked. This new message will use the data from the Email Confirmation Screen as the basis for the message.

The Kharkov turn will automatically become an attachment to this message via in-built proprietary software: EmailSender.exe.

Your email may then be sent via normal methods.

The message created and attachment may be treated as any other email at this point including adding additional text to the message.

Playing the Game

The email game turn is located in the \SaveEmail\Send folder in your game directory.

Return to Start: This will end the current game and take you to the Main Menu. The email game turn has been created and can be found in the \SaveEmail\Send folder in your game directory if you wish to send the file manually, or if the auto-email process fails to proceed.

Computers being what they are, we cannot guarantee that the auto-email process will always work. However, you can always send the email game turn manually.

14.0 Strategic Map

The Strategic Map is a miniature version of the entire battle map. A small rectangular box within the Strategic Map shows the current area the Tactical Map represents.

As the mouse scrolls the Tactical Map, this rectangle will move to reflect the current position. Clicking on the Strategic Map will cause the Tactical Map to 'jump' to that position, centred on the cursor.

In addition, holding the mouse button down when clicked will allow the rectangle and hence the Tactical Map to be scrolled smoothly.



15.0 Off Map Display



The upper button left of the Strategic Map will bring up the Off Map Display. This button will animate if you have units in an Off Map Area (OMA) which can be given orders.

The Off Map Display represents areas outside the playing area of the map and allow more flexibility to the commander who wants to keep his opponent on his toes.

This screen allows movement of units between designated OMAs and the Tactical Map, movement of units between connected OMAs, and in some cases, from the Tactical Map to designated OMAs.



Up to twelve OMAs can be active, up to three for each board edge. If a selected unit can be moved directly to another OMA then those OMAs will be highlighted in green.

A blue OMA indicates that the selected unit can move to this OMA indirectly via another closer OMA. The unit may also be able to move to a Tactical Map hex.



Up to three Tactical Map locations can be defined for each OMA, these are color-coded and shown next to the OMA and on the Strategic Map. A zoomed map section is shown for each corresponding color-coded hex in the lower right corner to aid in navigation on the Tactical Map.

Clicking on a unit in an OMA will attach it to the cursor.

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To move the unit to a Tactical Map area, move the cursor over the color-coded hex next to the unit's OMA and left click. To move the unit to an OMA, move the cursor over the color-coded hex next to the unit's OMA and left click.



When a unit has been given a move order from an OMA, it will be overprinted with the color-coded destination hex or the OMA number of its destination. A movement order can be cancelled by selecting the unit and then left-clicking on the bar at the top of the OMA, where the Undo Icon appears.



Units can also enter the OMA structure as Alert units or Reinforcements and buttons on the screen allow you to examine the status of these units.

The Alert Status screen indicates the number of units activated by Alert points, number of points required until the next unit is activated, total number of Alert units and other information. The Reinforcement screen has arrival delay (in number of turns) overprinted on the unit.



The Formation Display Button is located on the right hand side of the OMA display. With a unit in an OMA box selected, hitting this button will have the following effects:

All units in the same formation in any OMA box will be shaded yellow. Any hex on the map containing a unit from the same Formation will be shaded yellow. Any hex on the map containing a unit from the same Regiment will be shaded green. The borders of the active Area of Operations for the unit's formation will be shaded.

Note that each OMA box can only accept a maximum of 12 units per turn. If more units are scheduled to arrive then any excess units will be delayed and will attempt to enter the box on the next turn.

15.1 Areas of Operations Report



The middle button next to the Strategic Map will bring up the Area of Operations report. These reports advise on Areas of Operations, any variants in effect and should be consulted.

15.2 Operational Map



The lower button next to the Strategic Map will bring up the Operational Map. This shows the complete battlefield on one screen, a summary of changing Victory Points over time, dice stats, Alert Points summary and Turn screen displays.

16.0 Unit and Command Area

The Unit and Command Area is below the Strategic Map. Three separate panels display information about unit command, unit actions, unit information displays and strongpoints. Up to four units and a Strongpoint can occupy any one hex.



16.1 Command Display Area

A unit's formation, the location of other elements in that formation and the location of Formation HQ units are all of vital importance in Kharkov. The first element in the display is the name of the unit's formation.

Underneath the name is a hex symbol, a range and the Attack and Defense strength bonus given to units that have Combat Integrity.



One unit is always designated as the Minor HQ, so this unit always gets the bonus. If this unit is destroyed, then another unit will be designated.

Other units get the Combat Integrity bonus if they are within the specified hex range of the Minor HQ unit.

Below the Combat Integrity details is a display showing the NATO symbols of all units in the same formation.

A formation can have a maximum of twelve units.

The leftmost symbol always belongs to the Minor HQ of the formation.

This unit gets a Dark Green star above its symbol, since the Minor HQ must always get the Combat Integrity bonus.

All other units getting the bonus have a Light Green star above them.

Minor HQ units can also be identified by their unit name printed in yellow in the top left corner of the Unit Display. Minor HQ units should not be confused with Formation HQ units which are referenced in section 17.2.

The currently selected unit is shown by a bright green bar above its NATO symbol. Any unit stacked with the currently selected unit is shown by a dull green bar.

Playing the Game

Small dots beneath each NATO symbol show the number of steps the unit has, with a red dot indicated a lost step. Any unit greyed out indicates it is currently off-map.

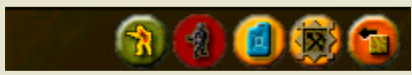
This display is active. Clicking on a unit's NATO symbol will select that unit, scrolling the map if necessary.

To the right of the display is the icon of the currently selected unit's Formation HQ. It is vital that you know where your HQ units are, and clicking on the HQ unit icon will select the HQ.

If you switch to a HQ by this method, the previously selected unit's icon will appear below the HQ unit icon, and clicking on it will return you to this unit. HQ units may also have higher level HQs, whose icons will be similarly displayed. HQ units may also have higher level HQs and these units will be displayed in the upper right.

16.2 Unit Action Area

Below the Command Display Area is a row of unit action buttons that allow advanced actions to be performed for the currently selected unit only. These will be lit if the criteria required for each is met by the unit.



Each of these buttons has a specific function that is detailed below.

16.3 Place Detachment Button (F4)



Withdrawing from contact can be a difficult and dangerous process and a time when your troops are most vulnerable. Therefore, it is often prudent to leave behind a small skirmish group to impede enemy movement. In Kharkov these are called Detachments.



Detachments are created using the Place Detachment Button. Only certain units are capable of creating detachments. These are designated by the scenario designer. Detachments may not be placed on hexes containing minefields or fortifications. Only one detachment can be placed in a single hex.



Detachments impose a penalty to enemy movement only. This penalty can be different for each side, and is set by the scenario designer. Enemy units attacking from a Detachment hex contribute no tactical shift to combat. Detachments have no inherent Attack or Defense Strength and therefore cannot be attacked.

Detachments are removed automatically a specified number of turns after they were placed, regardless of enemy activity. The number of turns left is displayed on the detachment icon.

To place a Detachment, a unit must:

- Be of suitable type, and
- Be in a friendly controlled hex, and
- Not be on a hex containing a Strongpoint or minefield, and
- Not have used its Action Capability in this turn.

If a unit meets these requirements the Place Detachment Button will become active. Clicking the Place Detachment Button will cause the unit to place a detachment. If a Detachment capable unit is destroyed it will leave behind a detachment.

Placing a Detachment will expend the units Action Capability for that turn.

16.4 Take Replacement



The Take Replacement button is used to take replacements steps of the appropriate type to a selected unit. This button will only be lit if a unit meets certain criteria. These criteria are discussed in detail in the Replacement section (10.1)

To take a Regular Replacement, click the Take Replacement Button.

Taking a Replacement will expend the units Action Capability for that turn.

16.5 Release Unit (Dismantle Strongpoints)



This button is present when a unit starts a scenario in a static position and has thrown out Strongpoints to distribute the unit over a number of hexes for defensive purposes. Clicking the button will release the unit for movement and combat, and recall all Strongpoints associated with it.

Releasing a unit will expend the units Action Capability for that turn.

16.6 Entrench Unit Button (F2)



In defense, combat units will often entrench themselves for better protection against attack. This includes digging trenches, sighting guns and husbanding resources. In Kharkov, this ability is called Entrenchment.

Many (but not all) units in Kharkov have the ability to entrench. Entrenched units have a sunken appearance on the tactical map and a scalloped edge. They receive a bonus to their Defense Strength and may also receive additional defensive shifts when attacked.

Playing the Game

For a unit to entrench it must:

- Be of suitable type, and
- Be on a friendly controlled hex, and
- Not have used its Action Capability in this turn.

If a unit meets these requirements the Entrench Unit Button will become active. Clicking this button will cause the unit to entrench.



Certain units, which are already entrenched, can improve their position into a hedgehog, and the button will change to show when this is possible.

The scenario designer may choose to prohibit hedgehogs in certain terrain, such as City or Swamp. The Terrain Popup will show whether hedgehogging is allowed in a particular hex. A red jagged edge will appear on a unit in Hedgehog mode.

Entrenching/hedgehogging a unit will expend the units Action Capability for that turn.

16.7 Attach Transport (Road, Rail or Amphibious)



The Attach Transport button is used to attach transport to a selected unit. This button will only be visible if a unit is eligible to take at least one form of transport.

To attach transport, click the Attach Transport Button.

Attaching Transport will expend the units Action Capability for that turn.

16.8 Exit to OMA Button



This button appears when the unit is able to leave the map to a connected OMA. Clicking the button will remove the unit from the Tactical Map at the end of the turn and place it in the connected OMA.

16.9 Refit Button



Refitting is now an action explicitly undertaken by the player. Hitting the Refit button will entrench the unit and accelerate any Timed Replacements by one turn. If the unit has no Timed Replacements left, and has at least one step loss then there is a chance that a casualty will be replaced by a free step. See Section 33.3 for more details.

17.0 Unit Specific Actions

In addition to the standard unit actions, some unit types have specific display and buttons in their display area that are specific to their unit types. These are explained below:

17.1 Amphibious Units

Units in Amphibious Transport mode are particularly vulnerable while landing. Units in this mode have a different display along the bottom of the Unit Action Area. When in landing close to enemy forces, these units may show a row of dice in the display.

Each dice represents the individual chance for enemy resistance to inflict a step loss on the landing unit. The number on the dice is the minimum roll needed for a step loss.

All rolls are handled by the computer once a unit is committed to land.

A unit cannot roll more dice than it has steps.



The range at which enemy forces can cause damage is displayed as a number inside a purple hex icon, similar to the way artillery ranges are displayed.

Any enemy units, of any type and any enemy Strongpoints within the displayed hex range of the landing unit will contribute to the chance of attrition.

Since only the number of steps is important, destroying a single step Strongpoint has the same effect as removing one step from a three step fort, or killing a step from a unit.

For a unit to land and exit amphibious mode it must land at a beach hex.

When a unit has reached an appropriate hex, the amphibious transport button will light in the right corner of the Unit Action Area. Depressing this button will cause the unit to land and any losses (if applicable) to be effected.

The capability of a landed unit depends on choices made by the scenario designer.

Units may have full, half or no move, and might also lose their Action Capability when landed. These details can be found in the Incidental Data screen.

Landing cannot be undone if an attrition casualty occurs or enemy units are exposed.

Note that there are no amphibious units in the Kharkov scenario, but the capacity might be used in other scenarios for the game system.

17.2 Formation HQ Units

Formation HQs are the most important units in Kharkov. They are responsible for handing out Attack and General Supply to their units, they provide important bonuses to their units that are within Command Radius and they show how the formation's Area of Operations (AOs) change as the scenario progresses.

Above the HQ Unit Display is a series of chequered buttons. Clicking on these will show you the different AOs for the formation, the turns on which they are active and how many units are in the formation.

Some AOs can be activated by taking objectives on the map and these are indicated by the numbers next to the flags in the display above the AO buttons. These flags are also printed on the Tactical Map when the HQ is selected and the appropriate AO button is clicked (you might have to remove the units from the map to see the AO objective flags). AO objectives that allow a HQ to choose a new region can be in an ALL or ANY state. If in an ALL state, all objectives have to be owned to trigger the new AO. In an ANY state, any one objective being owned will trigger validity. In any one turn, more than one AO could potentially be active, so this is indicated by priority number. At the lowest level no number is printed, then in increasing order P1, P2 and so on.



Below the AO display is the Unit Action Area. The button on the left is the Leave Formation toggle. Once set, the Next and Next/Leave buttons in the Unit Control Area will ignore the units. Once set again, Leave Formation is cleared, thus enabling all formation units to be moved again using the Next and Next/Leave buttons.

The numbered round icons show the current turn number plus the turn number for the next two turns. Clicking on these buttons will show the predicted area that will receive Attack and General Supply and HQ Bonuses from the HQ on those turns. This display is necessary because moving a HQ may mean either a reduced or zero Power Rating in the turn after it moves. This display helps to predict the likely consequences of any move.

To the right of the turn buttons is the Formation Display button. Clicking on this button will highlight, in green, all units that received Attack Supply from this HQ at the start of the current turn. It will also highlight in yellow which units missed out on Attack Supply, and in blue which units received Attack Supply from a subordinate Formation HQ instead.

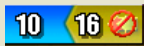
At the top of the Unit Display is the unit name. Beneath that is the unit's icon, the icon for its single step, step Refit chance and results (33.3). At the right is the unit's HQ picture.



Underneath that is a bar that indicates in green that the HQ is active and can hand out Attack Supply and

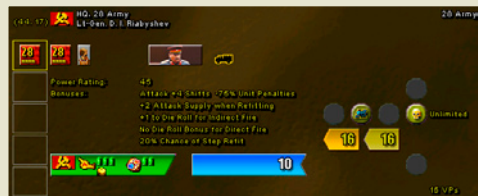
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HQ Bonuses, or will be red if the HQ is unable to do so. Active HQ Units can hand out Attack Supply to Indirect Fire and Combat units at different rates so the number of Bullets distributed to Indirect Fire and Combat units is shown next to their respective icons. HQ units can now also provide a combat bonus to their units. The yellow die under the Indirect fire bullets shows the number that will be added to Indirect Fire attack rolls made by the HQ's artillery units making it easier for them to hit. A yellow die under the Attack Bullets would show any bonus to Direct Attacks. These are powerful bonuses.



Under that, the blue bar indicates the HQ's defense value and to the right of that, its OP movement allowance. The 'no go' arrows icon on the right indicates this is a Static HQ and cannot broadcast Attack Supply and bonuses the turn after it moves. Absence of the icon indicates the unit is a Mobile HQ and may be able to broadcast Attack Supply and HQ bonuses the turn after it moves, at a possibly reduced Command Radius.

HQs are responsible for broadcasting supply to their subordinate units. The number of OPs a HQ uses to broadcast this supply is shown next to the truck symbol on the HQ's defense bar. Note: HQs now provide both Attack and General Supply, and the Supply Units (eg Supply Trucks) from previous games are no longer needed. When you select a HQ, the supply range from the HQ is shown on the map by a line of blue triangles.



Additional information is available about the HQ by right-clicking the HQ unit's hex on the Tactical Map and then mousing over the HQ unit on the left hand side of the terrain pop-up window:

Power Rating: This value in hexes determines the HQ's Command Radius and indicates how far from the HQ units can be and still receive Attack and HQ Bonuses. In the example, this unit has no Mobile Power Rating and is classed as a Static HQ - meaning that for the turn after it moves, it cannot broadcast Attack Supply and HQ bonuses. If there is a Mobile value on this line, it indicates the Power Rating for the turn after the HQ moves.

The extent of the selected Formation HQ's current turn Command Radius is displayed on the Tactical Map with a line formed by small yellow triangles.

Bonuses:

Attack: Boosts Close Combat combat odds by the indicated amount.

Unit Penalties: Reduces the terrain-based movement Penalty OP value (7.4) when moving through enemy territory by the specified percentage.

Attack Supply: Any of the HQ's units that are within its Command Radius and qualify for Refit (33.3) will receive bonus Attack Supply Bullets as specified, when Refit.

Indirect Fire/Direct Attack: Any of the HQ's units that are within its Command Radius will receive the combat die roll bonus as specified.

Step Refit: Units which qualify for Refit (33.3) have a chance to receive a step, when Refit.

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17.3 Engineer Units



Engineer units can be either combat units or support units. Most Engineer units can repair bridges, and a few can actually construct pontoon bridges. These details are shown in the unit popup. Combat engineers can also add a bonus to dice rolls against fortifications. This is shown just under their Attack Bullets.

17.4 Artillery Units

Artillery units do not have an Attack Strength like regular combat units. Instead they have a chance to cause a step loss to a unit with an Indirect Fire attack. Their basic chance to hit is shown by a yellow die in the attack bar. Certain units with large caliber guns are designated 'Heavy' and these have an artillery shell icon to the left of their yellow die. The range of the unit is shown by the figure inside the green hex icon.

Artillery units have a Defense Strength, and this is also shown in the defense bar, along with any anti-shock value they may have. Some units have a chance to cause a step loss when attacked in Close Combat, and this chance is shown by a purple dice icon on the Defense Bar.

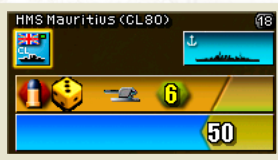


There is a limit to the number of Indirect Fire attacks that can be made by artillery units on a hex in a single turn. This is set by the scenario designer, with a maximum of four attacks.



The number of grey dots in the top left of each valid target hex indicate the number of Indirect Fire attacks that can still be made on a hex in the current turn. These dots will display on target hexes when an in-range Indirect Fire unit is selected. A red dot indicates an attack that failed to cause a step loss.

A green dot indicates a successful attack that caused a step loss. The total number of dots, regardless of color, indicate the number of Indirect Fire attacks that can be made per turn on that hex.



Naval Indirect Fire functions in much the same way as Artillery units, except the units are unencumbered with the need to worry about Attack and General Supply and HQs. A red hex behind the artillery shell icon indicates a 'no go' zone from a target hex, and the unit will be unable to fire if a friendly unit is within this no go zone.

For more information about Indirect Fire, see section 29.0.

17.5 Support Units

Support Units include Engineers, Anti-Tank, Flak, Military Police and Political Units. Some of these have special functions.



Air Interdiction Suppression: Flak units can reduce the effects of Air Interdiction. Suppression is shown by a muted version of the Interdiction icon on the Tactical Map. The range of the effect is shown on the Unit Display in a blue hex icon. Flak units can also reduce the chance of a successful airstrike.




Partisan Interdiction Suppression: Some Support units, typically Military Police, can reduce the effects of Partisan Interdiction. This is shown by a muted version of the interdiction map icon on the Tactical Map. The range of the effect is shown in the middle of the hex icon on the Unit Display.



Political Units are Support Units whose main purpose is to stiffen the resolve of units who might otherwise be tempted to indulge in unauthorised rearwards movements (otherwise known as retreats).

No retreat result will ever apply to a stack containing a Political Unit, unless the Political Unit is Isolated, in which case it loses its power to prevent retreats.

17.6 Unit Name



II/201 Panzer Regiment

Every unit in Kharkov represents an actual unit that took part in the historical battle.

The name of each unit is shown on the top left corner of each unit in the Unit Display.



I/201 Panzer Regiment

A formation's Minor HQ will be indicated by a gold rather than white name.

17.7 Unit Icon



Below the unit name is the Unit Icon. This icon is the same that appears on the Tactical Map and will contain the historical unit's insignia if it has one. The icon may appear in the normal raised manner or in a sunken scalloped form. This latter form denotes the unit is entrenched.

17.8 Unit Quality

In battle, the quality of a unit can greatly affect the skill with which it performs its duties. In Kharkov, a unit will experience differing bonuses/penalties depending on its quality. This quality is displayed to the player via the color of the unit's background in the unit display. The possible background colors and benefits (if any) are:

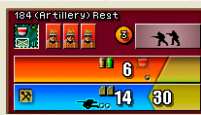
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Gold – Elite units have a gold background. For their skill they receive a +1 quality shift bonus in any combat they take part in. Note: There is a maximum of one such shift allowed in any combat and it can be used in either defense or attack.

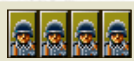


Brown – Standard units have a brown background. They receive no bonus for quality but can assist in contributing to tactical shift bonuses.



Maroon – Substandard units have a maroon background. These units receive no bonus for quality and further can never directly contribute a tactical shift bonus when attacking.

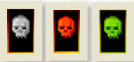
17.9 Unit Strength



To the right of the Unit Icon is between one and four boxes containing either soldier's heads or skulls. These boxes indicate the strength of the unit, measured in steps. A unit with one step is very weak and easy to destroy whereas a unit with four steps is large and difficult to destroy.

When a unit loses one or more steps in combat, it will have skulls shown in place of the heads. These losses can be one of two kinds.

17.9.1 Regular Losses



Regular Losses are displayed as skulls on a black background. White skulls indicate the step was lost in a previous turn and the red skull indicate a loss during the current turn.

To be replaced, a Regular Replacement step of the appropriate type must be used. If one is available, the step loss skull will be green.

17.9.2 Timed Losses



Timed Losses are displayed as skulls with a numeral superimposed. These losses will automatically repair themselves in time. The number of turns that this will take is shown by the number on the skull icon itself.

A red skull indicates a loss during the current turn, an orange skull indicates a loss during a previous turn, and a green skull indicates the step can be replaced straight away by a Regular Replacement if desired.



A unit's number of Timed Replacements is shown in a small orange circle to the right of the step icons. Once all Timed Replacements for the unit are used, this circle will no longer appear.

17.10 Movement Mode



To the right of the step display is a rectangular box displaying the movement mode of the selected unit. This display shows the primary means of transport used by this unit and main type of vehicle.

Each of these methods of transport has differing capabilities that vary depending on the terrain being traversed. See Section 21 for more details on movement.

18.0 Lower Unit Display



The lower part of the unit display is divided into three main sections. These deal with Attack, Defense and Movement.

18.1 Units and Bullets

In Kharkov, supply is represented by 'Bullets'. There are separate Bullets for Attack and Defense. Attack Bullets are supplied by the formation's HQ, (or by a subordinate HQ) and Defensive Bullets are supplied by any HQ from the formation's country.



Units can attack using Close Combat or Indirect Fire. All of these attack modes require Attack Bullets. These are displayed on the Attack Bar of the unit display. An attack can expend more than one Bullet and the Bullets required for an attack are shown by being shaded in green. A unit with sufficient Attack Bullets will show them shaded bright green. Non-shaded full Bullets are surplus Attack Bullets in stock and a half Bullet indicates capacity to take an additional Bullet.

Units get Attack Bullets by being both in supply and within Command Radius of their HQ unit at the beginning of their turn.



Units also have General Supply, shown by jerry can icons on the Defense Bar of the Unit Display, but referred to in this manual as Defensive Bullets. Each time a unit is attacked or performs an Action Capability (eg taking a

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replacement, accepting motorized transport, entrenching, creating a detachment, blowing or repairing a bridge) it expends a Defensive Bullet.

Only one Defensive Bullet can be expended by a unit per player turn. When a unit expends a Defensive Bullet, the Attack and Defense Bars and one jerry can will change to grey to denote its use. This unit will not be able to participate in other activity that requires expense of either Attack or Defensive Bullets for the remainder of this turn.

Bright green jerry cans indicate double capacity, so in the example above, the unit has 8 Defensive Bullets.

A unit that begins a turn on a supplied hex or moves to a supplied hex during a turn will immediately recover all expended Defensive Bullets.

A unit which is out of supply will continue to defend normally as long as it or another unit in its stack has at least one unused Defensive Bullet. When it has a single Defensive Bullet left and is attacked or otherwise uses an Action Capability, it becomes isolated.

Isolated units are shown on a red background in combat and will suffer additional combat losses; even the strongest units can quickly disintegrate when isolated.

18.2 Attack Bar



The Attack Strength of a unit in Kharkov is a measure of how strong a unit is when it attacks an enemy.

It represents the total ability of the unit to coordinate its elements in battle.

This strength is based on the type of unit, the number of steps it has, whether the unit is within the Combat Integrity Radius of its Minor HQ, and whether it is in Command Radius of its Formation HQ. Attack Strength is shown by a white number that is displayed to the right of the Attack Bullets on the red Attack Bar and is inclusive of any bonuses. This figure is the current attack value used in the calculation to determine a combat result.

Units that are within Command Radius of their HQ and are eligible to get Attack Bullets will also get a Command Bonus from their HQ. This bonus is a number of shifts in combat. It is shown to the right of the Attack Strength and the number of roundels indicate the number of combat shifts. To the right of the Command Bonus roundels is the unit's HQ patch. The roundels and patch will be dulled if the unit was not eligible for the bonus.

Some units like artillery, fortifications and support units have no attack capability. These units will not have a red Attack Bar. This means that they are either not combat units, or (like artillery) their combat strength is measured in a different way.

Presence of a Detachment icon on the left of the bar indicates the unit is normally capable of placing a Detachment.

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Some units, usually armored units, are capable of making Direct Attacks, which are resolved as part of a close combat. The Direct Attack chance is shown by a yellow die on the Attack Bar.

For any close combat, all friendly stacks that are adjacent to the defender and could gain a tactical shift, will contribute their best Direct Attack factor to the combat. Each stack can only make one contribution per combat.

This contribution is in the form of a die roll in the combat. If the die roll is equal to or better than the Direct Attack factor then the Direct Attack will cause an additional step loss, over and above any caused by the actual CRT result.

Units have a variety of Shock effects in attack and defense that are summarized here.



Armor Shock in attack is either Tank or Mechanized shown by an icon and a number of roundels from 1 to 4 on its Attack Bar.



Anti-Shock in defense can be Tank, Mechanized or Anti-Tank, shown by an icon and from 1 to 4 roundels in the Defense Bar.



In general, you compare the attacker's Armor Shock to the Defender's Anti-Shock to get a dice roll modifier, but there are specific rules for different types of confrontations.

- **Tank or Mechanized Attack vs. Tank Defense:** Maximum is +3 Minimum is -1 (i.e. inferior tanks vs. superior tanks can = a negative modifier)
- **Tank or Mechanized Attack vs. Mechanized or Anti-Tank Defense:** Maximum is +3 Minimum is 0 (i.e. no negative modifier)
- **No Armor Shock vs. Mechanized Defense:** Maximum is +0 Minimum is -1 (i.e. infantry only vs. combined arms = a negative modifier)



Sapper Shock is shown by an icon on the Attack Bar. The number of roundels next to the icon shows the plus to dice rolls against fortifications.

If a unit has expended its Action Capability for a turn the Attack Bar will be grey.

18.3 Defense Bar



The Defense Strength of a unit in Kharkov is a measure of how effectively a unit can defend itself against the enemy and is represented

by a white number that is displayed to the right of the Defensive Bullets on the Defense Bar. It represents the total ability of the unit to coordinate its elements in battle. This

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strength is based on the type of unit, the number of steps it has and whether the unit is within Combat Integrity Radius of its Minor HQ.

The number displayed is always the current strength, inclusive of any bonuses for Entrenchment and Combat Integrity.

A battered unit quickly loses the urge to attack, but can still defend itself vigorously. Therefore, though defensive strength is also reduced by step losses, it is usually not to the same degree as attack strength. A unit's defense strength can be enhanced by such measures as Combat Integrity or Entrenchment.



A unit capable of entrenching will have an entrenchment icon on its Defense Bar.



Some units capable of entrenchment are also capable of creating a hedgehog.

This increases the defensive bonuses provided by entrenchment, at the cost of a reduced ability to slow enemy movement through adjacent hexes.

These units will show the hedgehog icon on their Defense Bar.

A unit cannot hedgehog unless it is already entrenched and on terrain which allows hedgehogging.



A unit capable of Direct Defense will have a purple dice on its Defense Bar indicating its chance of causing a step loss to attackers during Close Combat.

If a unit has expended its Action Capability for a turn the Defense Bar will be grey.

18.4 Movement Section

Most units in Kharkov have the ability to move. Exactly how these units move and at what rate is determined by their Movement Values. These values represent the ability of a unit to move across terrain using organic or assigned transport.

Units in Kharkov use Operation Points (OPs) to move. Units have a basic movement allowance which they get every turn, termed Basic OPs. Units within Command Radius of their Formation HQ at the start of the turn get extra OPs, termed Bonus OPs.

The Bonus OPs are usually quite significant so units not in Command Radius will have their movement significantly reduced. OPs are not accumulated over turns and any unused OPs are lost.

Note that only a Formation HQ that is in supply can hand out Bonus OPs.

18.5 Unit Selection



Up to four units can be stacked in a single hex, however, you can only give orders to and move one unit at a time. Clicking anywhere in a unit's display on the Unit Display Area will select that unit and move it to the top of the stack.

All orders given through the Unit Action Area and on the Tactical Map always apply to the topmost unit in a stack.

Hitting the Space Bar will cycle through all units in a hex, selecting each in turn.

19.0 Units

There are many different types of units in Kharkov. These units form the manoeuvre elements in the game that you will command on the Tactical Map. Most units have inherent Attack Strengths, Defense Strengths and Movement rates, (expressed as OPs), amongst many other abilities.

19.1 Unit Icons



Units in Kharkov can be very varied. In the scenarios included with this game, units are mostly regiments, with specialised units such as armor and artillery being battalions. Units will display a divisional or other formation patch as appropriate.

Below the patch, all units have a standard NATO military symbol showing what type of unit they are. In the bottom right of each unit icon is a standard NATO military size designation; one vertical bar for a company, two vertical bars for a battalion, three for a regiment and a single cross for a brigade, etc.

Running down the right hand side of the unit icon is one to four vertical colored bars.

Each bar gives supply and Action Capability information for one unit in the stack, so the number of bars immediately shows how many units are stacked in a hex.

Each bar can be one of five different colors. The meaning of these colors is listed below.

- **Green:** A green bar means that the unit is in supply and has its Action Capability for this turn intact.
- **Yellow:** A yellow bar means that the unit is in supply but has expended its Action Capability for this turn.
- **Grey:** A grey bar means that the unit is out of supply but still has its Action Capability for this turn.

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- **Orange:** An orange bar means that the unit is out of supply, has expended its Action Capability for this turn, but has at least one Defensive Bullet remaining.
- **Red:** A red bar means that the unit is isolated. It is out of supply, has no Defensive Bullets remaining and will take extra losses if attacked.
- **Blue:** A blue bar means that the unit cannot attack but still has Action Capability for this turn.

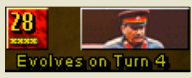
19.2 Merging Units

The Kharkov scenario designer can flag certain units as being able to combine together and form a larger parent unit at a particular point in the battle. These units start the battle as several smaller units and on a set turn will automatically combine together to form one larger unit.

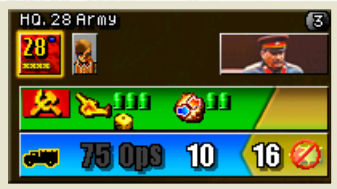
This information can be seen in the Unit popup display, as well as a color coded icon in the top right hand corner of the Unit Display. A green circle indicates this is the unit the others merge into. The number indicates in how many turns the merge will occur. A red circle indicates a unit that will be removed by the merge.

At the beginning of the turn of the units merging, the green unit will convert into the next highest unit of its type, in this case a Battalion, and the other units will be removed. Merging is delayed if any of the units are out of Supply.

19.3 Evolving Units



The Kharkov scenario designer can flag certain units as being able to develop new characteristics at a particular point in the battle.



This information can be seen in the Unit popup display, as well as a charcoal colored circle icon in the upper right hand of the Unit Display with the number indicating in how many turns the unit will evolve.

The unit in the screen shots is the Russian 28th Army HQ. For the first three turns, this unit hands out 3 Attack Bullets for Indirect Fire and 2 for Close Combat and gives a +1 bonus to Indirect Fire attacks.



By contrast, on Turn 4 the unit evolves and gives only 1 Attack Bullet per turn no bonus to Indirect Fire and is less effective in broadcasting supply. This change will have a significant effect on the capabilities of units belonging to the HQ.

20.0 Miscellaneous Unit Types

There are several other miscellaneous unit types in Kharkov. These are listed below.

20.1 Strongpoints, Fortifications & Pickets



Strongpoints come in several varieties. They include pickets, normal Strongpoints, light forts, and heavy fortifications. Terminology in this manual uses Strongpoint to refer to all of these types for the purpose of simplifying the discussion.

Strongpoints represent fixed defensive works of varying strengths. Most are present on the map from the beginning of play. They are stationary and cannot move or attack. Their strength may be from one to four steps.

Any friendly unit may move into a hex containing a Strongpoint. They do not count for stacking limits. Units stacked with the structure augment its defensive capability, but are not affected by the combat result.

Any attack on a hex containing a Strongpoint is conducted solely against the structure using a specified Combat Results Table. The structure must be cleared away before the units stacked with it can be attacked.

Losses sustained by a Strongpoint can be either permanent or timed. Strongpoints cannot take Regular Replacements, but have an unlimited supply of Timed Replacements.

The scenario designer may allow players to place their own Strongpoints. Limits can be specified for their proximity to enemy controlled territory, and they must always be placed on a supplied hex.

20.2 Minefields



Minefields are represented by a skull and crossbones icon and may be present on the map from the beginning of play or placed by the player during the game.

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Minefields have no defensive capability but slow down an attacker and hamper his attacks.

Minefields apply an OP penalty to the hex as specified by the scenario designer.

Enemy units attacking from a friendly minefield hex contribute no tactical shift to combat.

Units who are attacked while located in an enemy minefield will suffer negative combat odds shifts. This will be particularly obvious when attacking units occupy minefield hexes in front of fort lines, as they will be quite vulnerable to counterattacks.

Minefields cannot be attacked, but can be cleared. Each minefield has a duration value of one to three turns with three being the default.

As a minefield is reduced, its duration value is decreased until it reaches zero, whereupon the minefield is considered cleared and is removed from the map.

20.3 Minefield Reduction



An enemy Minefield may be reduced either by a friendly unit occupying its hex or placing its hex under friendly control.

An enemy Minefield in a friendly controlled hex will be reduced at the following rates:

- If an enemy unit is adjacent, its duration value is reduced by one per turn.
- If no enemy unit is adjacent, its duration value is reduced by two per turn.
- If no enemy unit is adjacent and it is occupied by a unit capable of repairing bridges (i.e. Engineer), it is cleared this turn.

Enemy Minefield values are reduced at the start of the enemy player turn.

21.0 Movement



In Kharkov, all units except Strongpoints have some ability to move. This is performed on the Tactical Map. Movement requires the expenditure of Operation Points (OPs) and the rate at which they are expended is dependant on such factors as terrain conditions, interdiction and zones of control.

21.1 Operation Points

45

A unit's ability to move is represented by its Operation Points (OPs). These OPs are expended as a unit moves and are replaced at the beginning of each new turn. They are replaced as two different types, Basic OPs and Bonus OPs.

21.1.1 Basic OPs

18

All units have a designated Basic OP allotment and these Basic OPs are renewed at the start of each turn regardless of unit supply status.

21.1.2 Bonus OPs

45

Bonus OPs are supplied by a unit's Formation HQ and normally provide a significant boost to a unit's movement capacity.

The following conditions must be met:

- The unit is General Supply
- The unit is within Command Radius of its Formation HQ or a HQ subordinate to its HQ.

The actual amount of Bonus OPs received depends on the values given to the HQ by the scenario designer, and these can change, for better or worse, if the HQ evolves.

21.2 Moving a Unit



To move a unit in Kharkov, select it on the Tactical Map or Unit Display. The unit will become highlighted and (by default) the region to which it may move will also be highlighted; any region that the unit may not move to will become shaded. Click on the hex where you wish it to move.

If you select a unit and hold down the mouse button on the destination hex, the path will be displayed and the destination hex will show the number of OPs remaining when the unit reaches the destination hex.

The path that a unit will take is shown by arrows. These arrows indicate the unit's movement status for each hex. If the arrow in a hex is green, the unit can reach that hex this turn.

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Red arrows indicate hexes on the unit's path that cannot be reached this turn.

A unit may remain stationary, be moved once or a number of times in any one turn.

A unit which can move 10 hexes can move 10 hexes all at once or can move one hex ten times with other units moving in between. It can stop to fight at any stage and if it has enough OPs it can continue movement afterwards.

22.0 Operation Point Expenditure

Open		
Day	OP's	Mud
3		8
2		5
2		7
2		7
2		6
2		6
-		+1
Hidden Bonus		
No Bonus		

In Kharkov, every hex on the map has an OP cost for its terrain type. In order for a unit to move from one hex to another, it must pay the average cost of the two hexes.

Moving along a road or railroad lowers the movement cost to move from one hex to the next (as the unit pays the cost of moving along the road/rail instead of the terrain costs).

The OP cost for each hex differs depending on the Movement Mode of the unit being moved (i.e. tracked, wheeled, leg, or horse) and the current ground conditions.

These costs are found in the Terrain display reached by using the Terrain and CRT Table button on the Control Panel menu.

Operation Points (OPs) are not expended in combat.

22.1 Weather Effects

The difficulty of moving and fighting during bad weather is often overlooked.



The Tactical Map will change color depending on the ground conditions present. If the theatre is experiencing bad ground conditions, the map changes to show Mud or Snow. In Mud, movement becomes more difficult and rivers become more of an obstacle for movement and combat.



22.2 Movement Type

In military organizations there are many different types of method of movement used. In Kharkov these are categorized into one of four dominant types: Tracked, Wheel, Leg and Horse. These are explained below.



Track – In World War Two, the tracked vehicle was the predominant method of movement for armored units. From the mightiest tank to the humble halftrack, tracked vehicles for the first time allowed combat units to travel off-road at reasonable speed, and bring decisive weapons to combat in a protected environment. Tracked vehicles allowed the use of Blitzkrieg tactics eventually adopted by all armies. A pitfall to their use was their inherent dependency on supplies in the form of fuel. This is reflected in Kharkov. These units form some of the strongest in the game but when caught out of supply quickly become immobilized.



Wheel – The advent of trucks into military use was a significant event. Armies could finally move both prodigious quantities of troops and equipment into battle quickly. The downside to this was that the trucks needed both quality roads and large amounts of fuel to do so. In Kharkov wheeled vehicles have high OP capabilities but suffer in poor terrain. Like their tracked cousins they are highly dependant on supply.



Leg – Since man first fought together in organized warfare, all combat in the end has come down to the common infantryman and his innate ability to hold terrain and endure punishment. In Kharkov infantry units are definitely more versatile than wheeled or tracked units. Though average in speed, they can move easily enough across all terrain. They are also not as dependant on supply for movement as their wheeled or tracked counterparts.



Motorized Leg – Some infantry units are equipped with sufficient transport to be able to move their fighting formations by truck just using their own resources. This movement mode reflects the fact that these units can sometimes move as wheeled units, and sometimes as leg.



Horse - The Russian cavalry units in Kharkov have large movement ranges but limited combat strength.

22.3 Additional Movement Modes

In Kharkov there are three possible enhanced movement modes: Amphibious, Road, and Rail Transport Modes, although Amphibious is not used.

22.3.1 Amphibious Mode



Units in amphibious mode travel in predesignated friendly areas of the ocean called sea lanes.



When a unit reaches landfall, it may then disembark from the Amphibious Mode using the Amphibious Mode Button on the Unit Action Area. The computer will then calculate any losses (if appropriate) and the unit will then function as a land unit.

All units in amphibious mode have their defense strength set to 1, so hanging around on a beach in this mode is not advisable.

22.3.2 Rail Mode



Rail Mode represents the ability to move men and material by rail. Some units appear in the game as reinforcements already in rail mode.

For a unit to use rail movement it must:

- Be allowed to use rail movement, and
- Start its turn on a friendly controlled rail hex, and
- Not have used its Action Capability in this turn.

If a unit is capable of utilizing rail mode and if there is such transport available, it may be attached using the Attach Transport Button in the Unit Action Area.

Utilizing Rail Mode will expend a units Action Capability for that turn.

22.3.3 Road Mode



Road Mode represents the ability to move men and material in trucks. Some units appear in the game as reinforcements already in Road Mode.

For a unit to use truck movement it must:

- Be allowed to use truck movement, and
- Start its turn on a friendly controlled road hex, and
- Not have used its Action Capability in this turn.

If a unit is capable of utilizing Road Mode and if there is such transport available, it may be attached using the Attach Transport button in the Unit Action Area.

Utilizing Road Mode will expend a units Action Capability for that turn.

23.0 Movement Penalties



In addition to the terrain OP costs of each hex, a unit may also have to pay additional OP penalties when moving. These OP penalties can be present in a hex from the start of a turn or be created in a hex during a turn due to combat or enemy units and are in addition to a hex's terrain OP cost.

OP penalties are usually cumulative and range from zero to 15.

OP penalties can be viewed by using the 'P' key.

23.1 Enemy-Controlled Hex

Historically, the rate of movement of units in enemy territory was only a fraction of that possible in their own rear areas. This was due to uncertainty. Nobody knew exactly whether what might lie across the hedgerow: an unoccupied stretch of farmland or an anti-tank gun!



Even when no enemy units are nearby, the anticipation of encountering unknown forces slowed the movement of units. Dispersed in tactical formations, friendly units took additional time to secure areas before moving up the entire formation.

This is reflected by an OP penalty for simply entering enemy held terrain even if no enemy units are nearby. The enemy also could leave behind rear guards that would slow a unit's advance. These rear guard actions are represented by enemy Detachments placed in individual hexes which add an additional OP penalty to that hex.

In Kharkov, every hex is always either friendly or enemy controlled. Moving onto or through an enemy controlled hex or placing an enemy controlled hex with no adjacent enemy unit in a friendly Zone of Control (ZOC) converts that hex into a contested hex.

At the end of the player's turn, all contested hexes that are occupied by a friendly unit, not adjacent to an enemy unit, or adjacent to both a friendly and enemy unit are converted to friendly control. Note: In the absence of units from either sides, front lines may adjust themselves slightly to remove salients and irregularities.

23.2 Combat Remnant



A Combat Remnant is representative of the dozens of miscellaneous small units that remain after a larger unit is destroyed. They serve to slow an aggressor's movement after a battle. If a unit is destroyed in combat, it may leave a Combat Remnant OP penalty. This OP penalty only takes effect if a unit is destroyed in combat and is set by the scenario designer.

23.3 Combat Residue



Many battles cause large amounts of firepower to be employed. This firepower not only affects an enemy unit, but terrain and surroundings as well. In Kharkov, this is called Combat Residue. Use of artillery, barrages or air power will greatly increase the possibility of Combat Residue.

Combat Residue will cause an OP penalty to be enforced on all affected hexes. The penalty reflects both the time taken for the combat to occur as well as the added physical difficulty of crossing an area recently fought over. It is represented on the Tactical Map as a series of shell craters in the combat hex and can apply to adjacent hexes as well.

Combat residue in a hex can be one of two different levels; Heavy and Light. Penalties will reduce by one level per turn so that after one turn Heavy combat residue goes to Light and Light to none.

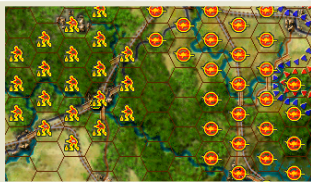
The level of residue after combat differs for different terrain types. You may view all of these penalties by opening the Terrain/CRT Information button from the Control Panel menu.

23.4 Air and Partisan Interdiction Penalty

Interdiction increases the cost of moving units or tracing supply through the interdicted hexes.

Air Interdiction can be placed in any hex and applies an OP penalty to that hex and to a variable radius of hexes.

Partisan Interdiction works in exactly the same way as Air Interdiction.



OP penalties from multiple interdiction missions are not cumulative.

23.5 Zones of Control

In Kharkov, all units and Strongpoints exert an influence or Zone of Control (ZOC) into all adjacent hexes including those containing enemy units. ZOCs cause additional OP penalties and can convert enemy controlled hexes to friendly control.

The ZOC calculations are too complex to be included here but the important point is that movement penalties are exerted by enemy combat units or Strongpoints in an adjacent hex.

If these units or Strongpoints are removed, then the ZOC penalty may well be reduced.

23.6 Minefields



A Minefield adds the same OP penalty to a hex regardless of the duration value of the minefield, until it is cleared.

This penalty only affects enemy units.

23.7 Bridge Repairs

When a bridge is repaired it continues to hamper movement to some degree for two turns. This represents the time taken to repair the bridge and the large amount of troops and materiel trying to simultaneously cross.



Both sides of a repaired bridge incur congestion symbols. These will disappear after two turns.

The OP Movement Penalty for congestion is set by the scenario designer and can be found in the Terrain/CRT Information screen.



24.0 Combat

One of the fundamental aims of warfare is to destroy the opposing army while keeping your own intact. In order to do this, you must at some point attack the enemy. In Kharkov, there are two main types of combat - Close Combat and Indirect Fire.

24.1 Close Combat



In order to conduct a Close Combat attack in Kharkov, a Combat Unit must be adjacent to the defending enemy unit or Strongpoint. Selecting an eligible unit and placing the cursor over the enemy unit to be attacked will cause the cursor to change to a clashing arrows icon. Clicking on the enemy unit will then initiate the attack.

When Close Combat is initiated, the screen below the Tactical Map will change to the Close Combat Display.



Close Combat is conducted by the computer comparing the Attacker's strength to the Defender's strength. This creates an initial expression of odds. These odds are then altered by any tactical shifts and bonus shifts affecting the combat, to produce a set of final odds.

These final odds determine what column will be used on the appropriate Combat Results Table or CRT. A random number from one to six is determined by the computer and that number, possibly modified upwards or downwards by shock factors, is applied to the CRT to produce a set of results. A second die roll is generated to determine whether a retreat is called for. Both these results are applied automatically by the computer.

Taking part in Close Combat may result in the loss of a portion of a unit's fighting power (steps) and may cause defending units to retreat. Any unit which loses all its steps is destroyed and removed from the game. A unit which is removed from the game is not considered to have lost all its men and/or vehicles but rather to have been rendered useless as a fighting force. At the discretion of the scenario designer, destroyed units may return to the game as cadre units.

A Strongpoint in a defending hex must be fought first and results will be determined using its own CRT. Defensive Strength for a Strongpoint is derived from itself or the units stacked with it - whichever is higher. Once the Strongpoint is destroyed, the remaining units can be attacked normally.

Some units, such as Indirect Fire Units, support engineers and units that have expended their attacking Action Capability are unable to participate in Close Combat.

A Close Combat attack will usually cost a unit its Action Capability for that turn.

A defending unit that has Close Combat conducted against it in a turn will expend one Defensive Bullet for the first such attack.

Attacking units are never forced to retreat.

24.2 Combat Results Tables

Each different terrain element in Kharkov has its own set of combat odds columns. These tables are called Combat Results Tables (CRTs) and they are set by the scenario designer and cannot be altered. They may be viewed by selecting the Terrain/CRT Information button on the Control Panel, or by right-clicking on the Combat Results Panel when using the Close Combat Display.

The scenario designer can allocate different CRTs to different terrain types, although Kharkov has not done this. Terrain types in Kharkov are differentiated through their resistance to Indirect Fire, which makes a big difference to the outcomes of combats.

CRT values can change between Good and Bad ground conditions.

24.3 CRT Glossary

The CRTs contain several different combinations of numbers, colors and symbols that represent the results of the combat.

The columns are arranged by combat odds and the rows by die roll.

CRT: Bad Weather
Retreat Effects: Artillery -1 Entrenchments +1 Total (None)

Roll	1-2	1-1.5	1-1	1.5-1	2-1	3-1	5-1	8-1	12-1	20-1	****	****
'0'	3-*	3-*	3-*	3-*	3-*	2-*	2-*	2-*	1-1	1-2	*-*	*-*
1	2-*	2-*	2-*	2-*	1-*	2-1	2-1	1-1	1-2	1-3	*-*	*-*
2	2-*	2-*	2-*	1-*	2-1	2-1	1-1	1-2	*-2	*-S	*-*	*-*
3	2-*	2-*	1-*	2-1	2-1	1-1	1-1	*-2	1-3	*-S	*-*	*-*
4	2-*	1-*	1-*	2-1	1-1	1-1	*-2	2-2	*-3	*-S	*-*	*-*
5	1-*	1-*	2-1	1-1	1-1	*-1	*-2	1-2	*-3	*-S	*-*	*-*
6	1-*	2-1	2-1	1-1	*-1	2-2	2-2	1-2	*-3	*-S	*-*	*-*
'7'	2-1	2-1	1-1	*-1	2-2	1-2	1-2	*-2	*-S	*-S	*-*	*-*
'8'	2-1	1-1	1-1	2-2	1-2	1-2	1-2	1-3	*-3	*-S	*-*	*-*
'9'	1-1	1-1	*-1	1-2	1-2	*-2	2-3	*-S	*-S	*-S	*-*	*-*

means that result is an overrun

Playing the Game

Close Combat step casualties are displayed as Attacker-Defender, so a result of 2-1 would indicate 2 steps lost by the Attacker and 1 step lost by the Defender. Odds displays colored in green indicate the odds column used for the current Close Combat attack.

Small green arrows to the right of the combat result indicate an overrun on that die roll. The dice along the bottom row indicate the chance of a retreat result - a white die indicates no chance, a red die indicates the minimum retreat die roll required. The Retreat Effects summary indicates any current modifiers to the Retreat die roll. Yellow characters indicate the possible results for the current Close Combat attack column. Any defender CRT Combat shift bonus (25.6.1) is indicated in green on an orange icon at the bottom right.

24.4 Tactical and Combat Bonus Shifts

The attack and defense strengths used to determine the initial odds of an attack are the sum of the units taking part in the combat. These odds can be improved (or reduced!) by applying Combat Shifts to a battle.

Some Combat Shifts (particularly in defense) are automatic and cannot be influenced by the player (these are the Tactical Shifts and other automatic shifts). Other Combat Shifts certainly can be and their application is critical in determining the final success or failure of a battle (these are the Combat Bonus Shifts).

24.5 Surrender

Surrender Chance for Germany is 10%

Not all troops fought to the last man.

Defending units in Close Combat can surrender if the combat situation is too adverse. Surrender is judged on a stack basis, that is, all the units in a stack will have the same chance to surrender.

A stack has no chance of surrender if it meets the following conditions:

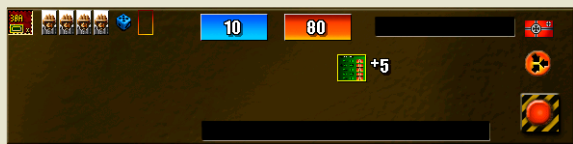
- The stack contains a Combat unit which is not Substandard and not Isolated, OR
- The stack contains an Elite unit (even if Isolated), OR
- Contains a Political unit which is not Substandard and not Isolated.

A stack which can surrender has two separate surrender chances. A stack is Supported for surrender purposes if it is adjacent to a friendly stack which can not surrender, that also contains at least one Combat unit. If a stack has no such friendly stacks adjacent to it is Unsupported, and has a higher surrender chance. Surrender chances vary by country, and are set by the scenario designer. They range from 0% to 100%. These values can be seen in the Incidental Data screen of the Terrain/CRT Information Button in the Control Panel.

If a stack surrenders then all units in the stack are removed from the game and counted for game purposes as KIA. The combat does not take place, so no combat units involved are expended or lose their combat capability.

25.0 Close Combat Control Panel

When Close Combat is initiated, the Combat Control Panel will appear directly below the Tactical Map. It contains both information and controls relating to the combat.



25.1 Special Attack Button



In Kharkov, each country may have special attacks defined by the scenario creator.

If a country has a special attack available for a combat, the button will be displayed and a number to the right of the button indicates how many special attacks of the type printed above the button are available this turn.

An asterisk indicates unlimited special attacks. The button toggles the special attack, so you can see the effect it will have by looking at the Combat Results Area. Note that not all terrain is eligible for special attacks - check the terrain pop-up for more information (34.0).

25.2 Max Button



The Max Button will assign all possible units and combat additions to give the greatest possible odds. Units may end up assigned to the combat which are not required to achieve the maximum odds, so use this feature with care.

The computer will not move any combat units but simply apply all eligible units already in contact with the enemy.

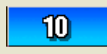
25.3 Conduct Close Combat Button



The Conduct Combat Button will carry out the attack with the currently selected units. This action may not be undone.

The Conduct Close Combat Button will only be available if the minimum odds required have been achieved.

25.4 Defender Display



The icons and steps of the defenders of a hex are displayed on the left of the display. The final defense strength is displayed on a blue background. If the hex contains a

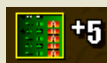
Strongpoint it must be attacked first before any other attacks on this hex may take place. If the unit has a Direct Defense capability, this is shown to the right of the unit steps by a blue die.

25.5 Attacker Display



The final attack strength of the attackers is displayed on an orange background.

25.6 Final Combat Shifts



Close Combat calculations start with the odds ratio of attack to defense strength but there are many factors that affect the final odds. These are resolved and the final adjustment to the combat odds is shown.

(40:33) COMBAT ODDS CALCULATION Overruns against this target expends 1 bullet

	Units Strengths	Attack 80	Defense 10 (+10 for next)	[8 - 1]
	HQ Bonus	+2		[10 - 1]
	Tactical Bonus	+3		[13 - 1]
	CRT Adjustment	-		[13 - 1]
	Unit Quality	Attack 0	Defense 0	[13 - 1]
	Minefield Effect	-		[13 - 1]
	Entrenchment Effect	-		[13 - 1]
	Minimum Combat Odds			[1 - 2]
	Special Attack Effect	-		
	Final Combat Odds (next is [20 - 1])			[12 - 1]
	Combat Table Used	Fine Weather		

To see more details on the combat odds, right-click on the Combat Control Panel to bring up the Combat Odds Calculation Popup. If the Special Attack icon is shown, mousing over it will display Special Attack details.

25.6.1 Defender Combat Shifts

Elite Units: Having a defender who is an elite unit (one with a Gold background) is advantageous. A Combat Shift in favor of the defender is applied.

Entrenchment/Hedgehog: Defending while entrenched is advantageous, and a Combat Shift in favor of the defender will be applied.

CRT Adjustment: The scenario designer can designate a Combat Shift in favor of the defender on nominated CRTs.

25.6.2 Attacker Combat Shifts

Elite Units: Having an attacker who is an elite unit (one with a Gold background) generates a Combat Shift in favor of the attacker. This is shown in the attacker's Combat Strength icon.

Minefields: Defending in an enemy minefield is definitely disadvantageous. A Combat Shift in favor of the attacker will be applied.

HQ Combat Bonus: Attacking while in Command Radius of your HQ is advantageous. The most advantageous shift from all eligible attacking units will be applied.

25.7 Final Dice Adjustment



Units can have tank shock or sapper shock factors which adjust the dice roll. These are resolved and the final adjustment is shown on the Combat Results Panel. This final adjustment can range from -1 to +3 to the combat dice roll.

25.8 Final Odds Adjustment

In Kharkov, the CRTs are not contiguous, especially at higher odds. In the screenshot in section 24.3 the current odds are 12:1 but the next odds column is 20:1. If you achieve odds between those two columns then they are rounded down to the lower odds.

26.0 Close Combat Display Panel



When Close Combat is initiated, the Close Combat Display Panel appears beside the Close Combat Control Panel.

Alongside the circular display is a display that shows exactly what Tactical Shifts and Direct Attack factors the attacking units are contributing to the combat.

26.1 Tactical Factors

An attacker can potentially receive a positive tactical odds shift for each different hex from which he is attacking. The Tactical Shifts that apply in combat vary by country.

Defenders will normally start a combat with combat shifts in their favor, so the final shift may be a positive or negative shift. **Green** arrowheads mean attacking units are contributing normal tactical shifts from that hex side.

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Orange arrowheads signify attacking units are contributing no tactical shifts.

Red arrowheads indicate the Attack Strength is halved for units attacking from this hex and no tactical shifts are added. In addition, the display will indicate why no shifts are being contributed from a hex side such as the defender having too many steps adjacent, a riverside intervening or the attacker attacking from a hex that contains a minefield or detachment.

Attacking units which are adjacent to enemy units (other than the defending stack) can only contribute a Tactical Shift if the number of attacking steps is equal to or greater than the number of adjacent enemy steps (excluding the target hex).

Units attacking across a river or from a minefield or detachment hex do not contribute a Tactical shift. Also, a stack where a substandard unit is the only type of attacking unit cannot receive the Tactical Shift for that hex (i.e. a standard or elite unit must also be attacking from the hex to get the Tactical Shift for that hex).

Attacks against a hedgehogged defender can never get any Tactical Shifts, regardless of any other tactical factors.

The final Tactical Shift is resolved with all other odds shifts to determine the final shift applied to the raw combat odds. The text box at the bottom of the display shows the CRT type being used. If a Special Attack is being used, the text will be green.

26.2 Direct Attack



Some armor and mechanised units can have Direct Attack factors, shown by a yellow die on their Attack Bar. If these are present, their effect is shown by dice behind the tactical shift arrowheads. The dice are colored as follows:



A **Green** die indicates that a unit will contribute the Direct Attack shown on the dice to the combat

A **Blue** die indicates that a Direct Attack unit could contribute to the combat but it is currently not included in the combat.

A **Grey** die indicates that a Direct Attack unit is present but the target is not eligible for a Direct Attack.

Note: A stack is not an eligible target for Direct Attack unless at least one unit in the stack is unentrenched. Only unentrenched units can suffer casualties from Direct Attack. Strongpoints and units stacked with them, (regardless of entrenchment), are never eligible targets for Direct Attack. HQs are immune to the effects of Direct Attack.

27.0 Close Combat Results Panel



To the right of the Combat Display Panel is the Combat Results Panel. The Combat Results Table lists the final odds for the combat and the six possible combat results. The combat dice roll can be modified from -1 to +3 by shock factors, so there are always ten combat results of which six are possible in any one combat.

Results that are not possible are printed in grey, ordinary results in white and overrun results in green with a red panel to the right. This red panel will indicate whether an Attack Bullet will be used in the attack or not.

All results that begin with an A refer to the Attacker. Any number after the letter is the number of steps the Attacker loses in this combat. All results that begin with a D refer to the Defender. Any number after the letter is the number of steps the Defender loses in this combat. For example, A1 - D2 means that the attacker loses one step, and the defender loses two. A 'Sur' result indicates the defending stack will surrender.

Retreat in combat is determined by another dice roll that is not connected with the combat results roll. The possible retreat dice rolls are shown in red to the right of the combat CRT. If a step loss caused by an Indirect Fire attack had been suffered by a defending unit in the same turn but prior to Close Combat, +1 will be added to the Retreat die roll. A DR result indicates the Defender will Retreat.

The shock die roll adjustment (if any) is shown just above the CRT in the top left corner. If the defender has a large number of combat steps (this number varies with the terrain), then there is a chance that two combat dice will be rolled, generating two combat results. If there is a chance then two blank dice are shown, overprinted with the two dice chance.

27.1 Close Combat Resolution



Once the Conduct Combat button is pressed, one or two combat dice and one retreat die are rolled, and the results are shown on the Combat Control Panel and highlighted in yellow in the Combat Results Panel.

One or two dice are shown for combat results – white for ordinary combats, green for overruns and red if all defending units are isolated.

A separate single red die with yellow dots to the right of the combat dice shows the retreat result. An Overrun result will not remove a unit's combat capability for that turn.

However, Overruns against combat units will use an Attack Bullet, thus placing a limit on the number of overruns that a unit may conduct in a single turn. Overruns against Strongpoints only will not use an Attack Bullet.

27.2 Losses



Combat losses for defenders are displayed on the unit icons on the Combat Control Panel and underneath the combat dice. Losses for attackers are shown underneath the combat dice and directly on the Unit Display for each unit. Losses are shown by the heads displayed on steps being replaced by skulls.

On the Unit Display, white skulls are losses that have occurred in a previous turn, red skulls are losses that have been incurred in the current turn and both may be replaced by normal replacements. Losses with a number overlaid are timed losses and will replace themselves over time. If a stack of units is required to take losses, the first loss is suffered by the unit with the greatest number of steps, the second loss by the unit with the second greatest number of steps etc.

If a stack of units is required to take losses, a loss is first suffered by the unit with the greatest number of steps, except if two or more units share the greatest number of steps, then the unit with the lowest attack value (in the case of an attacking stack) or defense value (in the case of a defending stack) loses the step.

The above process is repeated as required to first allocate all Direct Attack losses against Direct Attack targets (only), then is repeated against all units in the stack for Close Combat losses. This may result in units being killed and removed from the Tactical map.



Casualties caused by Direct Defense are shown, along with their dice rolls, next to the unit icons, and are included in the display of attacker casualties under the combat shift display. Casualties caused by Direct Attack are included in the defender casualties listed under the combat dice, and the dice rolls are shown in the Close Combat Display Panel.



27.3 Retreats



Sometimes the retreat dice will call for a defender to retreat. A retreat is always one hex. Retreats are handled automatically by the computer and are made according to Retreat Priorities. The unit with the greatest number of steps will retreat first.

27.4 Retreat Priorities

Units will attempt to retreat to the most favorable hex. Exactly which hex is considered the most favorable is decided by the computer based on the following criteria (from most favorable to least favorable):

- Not occupied by a friendly unit, friendly controlled and not across an intervening river/stream (non-bridge)
- Not occupied by a friendly unit, friendly controlled and across an intervening river/stream (non-bridge)
- Occupied by a friendly unit, friendly controlled and not across an intervening river/stream (non-bridge)
- Occupied by a friendly unit, friendly controlled and across an intervening river/stream (non-bridge)
- Occupied by a friendly unit, contested hex and not across an intervening river/stream (non-bridge)
- Occupied by a friendly unit, contested hex and across an intervening river/stream (non-bridge)
- Vacant, contested or enemy controlled and not across an intervening river/stream (non-bridge)
- Vacant, contested or enemy controlled and across an intervening river/stream (non-bridge)

If there are two or more possible retreat hexes of equal favor, the computer will choose the one which will be closer to the nearest friendly controlled town.

Units can never retreat across a cliff hexside.

27.5 Additional Losses Due to Retreat



If no legal retreat hex is available, the defending unit or stack will remain in place and each unit may lose an additional step. If the hex to which a unit or stack retreats is adjacent to an enemy unit and is not occupied by a friendly unit, then the retreating unit or stack may lose an additional step.

The chances of losing an additional step depend on the quality of a unit.

An Elite unit only has a 30% chance of losing the step and a Standard unit a 50% chance. Substandard and Isolated units always lose the extra step.

If all units in a stack are isolated then an extra step is added to all Defender losses and a Retreat result is automatic.

Note that units forced to retreat lose any entrenchment they had. This makes them much more vulnerable to artillery fire and close combat.

27.6 Advance After Close Combat

There is no formal advance after combat. If attacking units have enough OPs available, they may continue to move. This can allow a defender to be attacked multiple times in a turn, upon which the results will usually be devastating.

27.7 Isolated Units

If a unit has no Defensive Bullets and is out of supply at the start of a friendly turn, or a unit expends its last Defensive Bullet during a friendly turn, it becomes Isolated.

Isolated units appear on a blood-red background in the Unit Display Area and the unit



popup on the map. They defend at half strength, lose all anti-shock capability and suffer additional losses in Close Combat. If all units in a defending stack are isolated and there were no losses and no retreat, the unit(s) still retreats.

If there was a retreat, then an additional step loss is applied. If there were also losses, then these are increased by one.

Since units are most likely to be in this state through being surrounded, the results can be catastrophic.

28.0 Direct Attack

Direct Attack is a mechanism by which designated armored and mechanised units can cause extra casualties in close combat.

Units capable of Direct Attack have a yellow dice on their Attack Bar.



For any close combat, all friendly stacks that are adjacent to the defender and could gain a tactical shift, can contribute a Direct Attack to the combat. Each stack can only make one contribution per combat and only from units that are actually attacking, using the best factor from the attackers.

This contribution is in the form of a dice roll in the combat. If the dice roll is equal to or better than the Direct Attack factor then the Direct Attack will cause an additional step loss, over and above any caused by the actual CRT result.

See previous sections for more details.

29.0 Indirect Fire

Artillery and Naval units have the ability to conduct Indirect Fire at eligible targets.

This ability is indicated by the presence of a yellow die in the gold Attack Bar of the Unit

Display, with the number indicating the lowest standard roll required to inflict a step loss on the defending unit.



Indirect Fire targets include most Fully Exposed units, including Strongpoints. Indirect Fire units have a green range icon in their Attack Bar and the number indicates maximum range in hexes that the unit can fire.





Naval units may also have red 'no go zone' icon in their Attack Bar. A red hex behind the artillery shell icon indicates a 'no go zone' from a target hex, and the unit will be unable to fire if a friendly unit is within this no go zone.

There is a limit to the number of Indirect Fire attacks that can be made by artillery units on a hex in a single turn. This is set by the scenario designer, with a maximum of four attacks.



The number of grey dots in the top left of each valid target hex indicate the number of artillery Indirect Fire attacks that can still be made on a hex in the current turn. These dots will display on target hexes when an in-range Indirect Fire unit is selected. A red dot indicates an attack that failed to cause a step loss. A green dot indicates a successful attack that caused a step loss.

The total number of dots, regardless of color, indicate the number of artillery Indirect Fire attacks that can be made per turn on that hex.

Naval units have no limit to the number of attacks they can perform on a Strongpoint.



To conduct an Indirect Fire attack, select the firing unit and mouse over the target hex. The cursor will turn into a combat symbol with one or two dice on it. This indicates the lowest roll required (on both dice if two are present) to inflict a step loss on the unit. Click to prosecute your Indirect Fire attack.

Certain terrain has Indirect Fire attack die modifiers and the attack cursor display will take this into account. The presence of an entrenched unit or Strongpoint in the target hex will add a second dice to the attack and in doing so reduce the odds for a successful result. Note: The dice roll required for a successful Indirect Fire attack can be modified. An artillery unit's Formation HQ can reduce the roll required and terrain and entrenchment effects can increase. The entrenchment effect varies by country.



Certain large caliber artillery units can be designated as 'Heavy' by the scenario designer. The presence of an artillery shell icon to the left of the yellow die in the Unit Display indicates a Heavy Artillery unit. Heavy artillery units always use a single die for attacks, regardless of the status of their target.

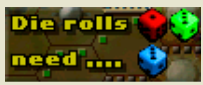


Friendly Heavy Artillery units can be located by using the button in the Unit Roster panel.



If a Heavy artillery unit is selected in the Indirect Fire Advisor it will show a single die larger than that shown for regular artillery units.

29.1 Indirect Fire Results



Indirect Fire results are displayed briefly on the Tactical Map via a small overlay. At the top right, one or two dice are rolled and the result displayed. If the attack is successful, all dice are colored green, the target hex is superimposed with a skull icon and the Defender loses a step.

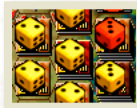
If the result is a miss, one or both dice are colored red. Below the result die is a blue die that indicates the minimum roll on both dice in order to inflict a step loss.

An Indirect Fire attempt will cost a unit its Action Capability for that turn.

The sighting rules allow enemy units to be in one of three states: Fully Exposed, Nationality (you can see a unit but no details about it), or Hidden. Sometimes a stack will contain units, some of which are Fully Exposed and others which are Hidden.

This is most likely to be the case when an Artillery Unit, stacked with other units behind the front lines, has been exposed for Counter Battery fire. In this case, any casualties from Indirect Fire will be allocated by the normal rules, with casualties taken first by the unit with most steps, and if equal, then by the unit with the lowest Defense Strength.

When these rules apply to a stack which is an Indirect Fire target, the attacker will see his Indirect Fire dice colored orange.



30.0 Counter Battery Fire



When an artillery unit conducts Indirect Fire, there is a chance that it will expose itself in the next enemy turn and become Fully Exposed. This allows the enemy player to target the revealed unit with Counter Battery Fire - using Indirect Fire principles as described above.

If an artillery unit is spotted for Counter Battery fire, for each hex that it moves into after firing, it has a 25% chance of losing the Counter Battery spotting. The owning player never knows whether a unit has been so spotted.

As a player you have critical choices to make regarding your artillery units. Units which move after firing are unable to entrench and are more likely to be sighted by virtue of their proximity to enemy units, especially enemy recon units. Units revealed through the Counter Battery mechanism will be attacked with two dice, but unentrenched units revealed by proximity will be attacked with one dice, and are especially vulnerable.

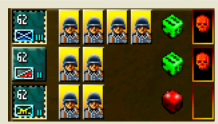
A Counter Battery Fire attempt will cost a unit its Action Capability for that turn.

31.0 Direct Defense



During a Close Combat attack, it is possible for selected defending units to automatically attempt to Direct Defense fire. Units capable of doing this have a purple dice in their Defense Bar showing the minimum roll required to inflict a step loss on the attacker.

31.1 Direct Defense Results



The Close Combat Control Panel displays the chance of a step loss due to a defending unit able to use Direct Defense and this chance will be displayed by a blue die to the right of the defending unit icon. After Close Combat is initiated, a die is rolled for each Direct Defense attack and any step loss is shown as a red skull to the right of the dice.

Eligible units have a purple dice in their Defense Bar, are attacked in Close Combat and have at least one Defensive Bullet. Units can attempt use Direct Defense each time they are attacked in Close Combat, and as there is no limit to the number of Close Combat attacks a unit can defend against in a turn, it follows there is also no limit to the number of times a unit can use Direct Defense in one turn.

For attack resolution against multiple eligible targets in the same hex, the target selection criteria as per the Losses section are applied.

32.0 Bombardments

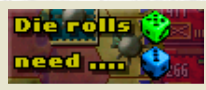
The Bombardment Panel displays the type and number of available off-board bombardment assets available to the player for the turn. These often take the form of tactical and medium bomber strikes but can be defined by the scenario designer.



The yellow die to the right of the bombardment type indicates the standard minimum roll to cause a step loss. Right-clicking on the Panel also displays additional important information such as hit chance, number available, scatter chance, strike range from your frontline and radius of effect.

Conducting a Bombardment is similar to conducting an Indirect Fire. Click on an available Bombardment icon and place over any valid hex on the map; the game will darken any unavailable hexes. Click to prosecute your attack.

32.1 Bombardment Results



Bombardment results are displayed briefly on the Tactical Map via a small overlay. At the top right, a die is rolled and result displayed. If the Bombardment is successful, the die is colored green, the target hex is superimposed with a skull icon and the Defender loses a step. If the result is a miss, the result die is colored red.

Below the result die is a blue die that indicates the minimum die roll needed to inflict a step loss.

Note that Bombardments may scatter depending on the effectiveness of local AA efforts.



If this occurs, a green arrow will be overlaid on the intended target hex pointing to the hex where the bombardment scatters to (which is denoted by a yellow cross). Any occupants of the new target hex (and adjusted new radius if applicable) will be affected.

One hex per turn can be designated the recipient of a Bombardment. For attack resolution against multiple eligible targets in the same hex, the target selection criteria as per the Losses section are applied but a Strongpoint in the hex will always be the first target.

33.0 Supply and Refit



All armies need supply to operate, and being out of supply is always a negative. In Kharkov, supply is centered on Formation HQs and the system has been simplified from that used in previous games.

33.1 Supply Definitions

Attack Supply: A HQ authorizes a unit to receive two items, Attack Bullets and Bonus OPs which are referred together as Attack Supply. A unit cannot get Attack Supply unless it starts the turn within Command Radius of its own HQ, or a HQ subordinate to its own HQ.

The rules for Attack Bullets and Bonus OPs are slightly different and are explained below, together with other useful definitions.

Attack Bullets: A unit will almost always use one or more Attack Bullets when attacking. Although it can start the game with bullets stored up, these will likely be used at some time. A unit can only get more Attack Bullets if it starts the



turn on a hex within Command Radius of its own HQ, or a HQ subordinate to its own HQ and in General Supply.

A unit not meeting those conditions gets no Attack Bullets and will not be able to get Attack Bullets until the next turn.

Bonus OPs: A unit will always use Operations Points (OPs) when moving. Units get some OPs, called Basic OPs, at the start of every turn and regardless of its supply state. A unit can get extra OPs, called Bonus OPs, which will greatly increase its effectiveness.



To get Bonus OPs a unit must start the turn on a hex within Command Radius of its own HQ, or a HQ subordinate to its own HQ and in General Supply. It must **also** either start the turn on a hex that is in General Supply or move onto a hex in General Supply in which case it gets the Bonus OPs the instant it moves onto such a hex.

Command Radius: A unit must start the turn within Command Radius of its HQ to be eligible for Attack Supply. Command Radius is broadcast by a HQ using its HQ Power Rating (See HQ Popup display in 17.2) and can be thought of as in some ways similar to a radio broadcast.



The broadcast is centered on the HQ and can travel through enemy units, although it travels further in friendly territory. The end result is that a HQ can provide its bonuses to units some distance behind enemy lines and a greater distance behind its own lines.

Note: A HQ that is Out of Supply will still broadcast its Command Radius. Units belonging to that HQ who are themselves In Supply and within the HQ's Command Radius will get Attack Supply as normal. They are regarded as being supplied by elements of the supply system that are not located with the HQ itself.

General Supply: General Supply is provided by HQs or Supply Sources who broadcast a Supply Burst to every hex they can reach. This is done at the start of the turn and as a result every hex on the board is either supplied or not. It doesn't matter which HQ or Supply Source supplies an individual hex. A hex must be in General Supply for a unit to receive Defensive Bullets.

Defensive Bullets: A unit replenishes its Defensive Bullets by either starting the turn on a hex in General Supply or moving onto such a supplied hex, in which case it gets all its Defensive Bullets replenished the instant it moves onto such a hex.



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A unit that starts a turn in an unsupplied hex has a chance each turn of losing a Defensive Bullet, (as if it had been attacked), even though it wasn't attacked in the previous turn. This chance is highest for Sub-standard units, and lowest for Elite and varies by Country. The rule that limits the loss of Defensive Bullets to one per turn, regardless of cause, still applies.

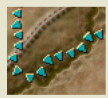
Supply Source: A Supply Source is an independent supply location, that can provide supply to HQs and through them to units. Map edge supply locations are always Supply Sources, but Supply Dumps and Drop Zones can also fit into this category. The scenario designer can designate a Supply Source to belong solely to a particular country or to supply an entire side.



Supply Trace: The process by which a HQ traces back to a Supply Source. The trace can be of any length and can, at the scenario designer's discretion, be restricted to roads.



Supply Burst: Each HQ or Supply Source broadcasts supply to as many hexes as it can reach. The scenario creator designates the number of OPs and the Movement Type used to make this burst. The Supply Source or HQ calculates all possible movement paths from themselves using their allocated OPs at their Movement Type costs and so reach all possible hexes, which are then In Supply.



In Supply: If a hex has been reached by at least one of your Supply Bursts then it's In Supply. If not, it's Out of Supply. An In Supply hex provides General Supply to all friendly units.

33.2 Supply Summary

Each hex on the map is either In General Supply or Out of General Supply. This is determined at the start of the turn and does not change during a turn. A supplied hex may also allow a unit to take replacements, but this is not automatically so. A unit gets General Supply by either starting a turn on a supplied hex or moving onto a supplied hex during a turn.

Each unit on the map belongs to a HQ (or is itself a HQ). At the start of the player turn, the HQ broadcasts its Command Radius to as many hexes as it can reach. Hexes within Command Radius and in General Supply are eligible for Attack Supply.

There are several important points to note about the supply system. Any Supply Source or Supply Point can hand out General Supply to any unit of the same country. The scenario designer controls whether different countries can share General Supply.

Attack Supply can only come from unit's Formation HQ and HQs will only ever give Attack Supply to their own units, except that units can get Attack Supply from any HQ subordinate to their own HQ.

Power Rating: 20 (Mobile HQ)

Many Formation HQs are rated as Static HQs. In the turn after a Static HQ moves, even if it is only one hex, it will hand out no Attack Supply at all. HQs that are rated Mobile can hand out Attack Supply the turn after moving but will probably have a reduced number of Attack Supply Burst OPs and thus will only supply a reduced number of hexes.

33.3 Refit

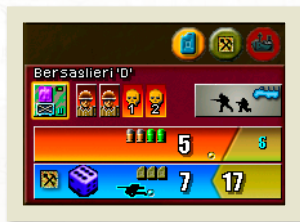


Refitting is now an action explicitly undertaken by the player.

Only Combat and Artillery units can Refit.

To be eligible for a Refit, a unit must meet the following conditions:

- have a Combat Action
- have not moved in the current turn
- be in Supply
- be in HQ Command
- be not adjacent to enemy territory (not just enemy units)
- be in a state where it can benefit from the Refit action



The Refit action delivers the following benefits:

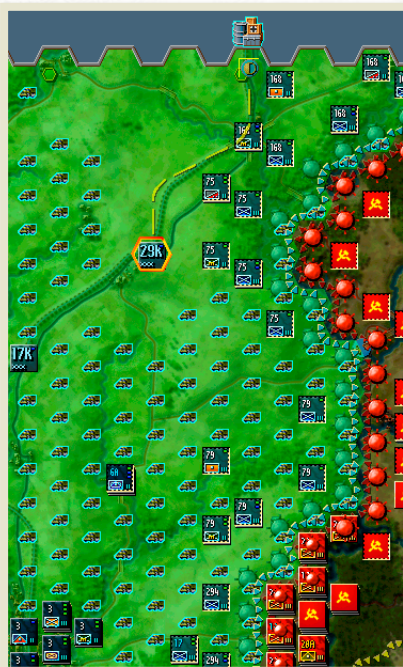
The unit will Entrench (but will not Hedgehog). Any Timed Replacements will be accelerated by one turn. If the unit has no Timed Replacements left, and has at least one step loss then there is a chance, that a casualty will be replaced by a free step, this chance is specified by the unit's HQ Unit Display (17.2). The unit will receive a number of bonus Attack Supply Bullets (as specified by its HQ popup display). Steps received during the Refit process will be denoted by a small country icon on the step in the Unit Display and summarised on the HQ Unit Display.



33.4 Supply Display

To see which hexes are supplied, hit the S key or the Show Supply button on the Control Panel. Hexes shaded green are in supply and can supply replacements. Hexes shaded yellow are in supply but can't supply replacements.

Hexes with a truck icon were supplied by a Formation HQ rather than a Supply Source and hexes with a Strongpoint icon had their own supply from the Strongpoint there. Unshaded hexes are Out of Supply.



33.5 Supply Guidelines

The supply system in Kharkov is not complicated and is intended by the designers to accomplish a few simple tasks, over and above the obvious of determining if units are in or out of supply.

Firstly, the supply system enforces a realistic tempo on your attacks. Most HQs, most of the time, hand out less Attack Bullets than your attacking units will use in a turn. This means that you can attack continuously for three or four turns at most, before the supply system enforces a pause. If you plan for this you won't be surprised. In contrast, some Soviet HQs at the start of the game hand out massive amounts of attack supply, but only for a few turns before reverting to a more normal state. You should take maximum advantage of this bonus supply.

Secondly, the system enforces cohesion. Units out of Command Radius of their HQ won't get any Attack Bullets, or their HQ's combat shifts in attack, greatly limiting their utility. You must keep your units together and within Command Radius to be effective.

Units can get attack supply from any HQs subordinate to their own formation. Many formations have no subordinate formations, but the higher level HQs such as the Soviet Southwestern Front and the German Army Group South and Sixth Army certainly do. Units and formations belonging to these high level HQs are therefore very valuable, as their supply flexibility allows them to operate in concert with a large number of formations (subject to any restrictions imposed by their areas of operations). These are your fire brigade units, so treat them accordingly and don't waste them on routine defensive or offensive tasks.

Finally, you must look after your HQs. If a HQ is pocketed or otherwise cut off, life becomes much harder for its units. A dead HQ will always return to the map, but that will mean a delay of at least one turn before order is restored.



34.0 Information Pop-Up Display

To assist the player to make the right decisions in the game, there is further information available for both units and map hexes via the Tactical Map display.

By displaying the Information Pop-up window, you may view information about the terrain, units present and other information for that hex.

This information will be complete for friendly units but may be only partially complete for an enemy unit. Terrain and Objective information is always complete.

To view advanced information for a hex, right-click and hold the mouse button over a hex in the Tactical Map display. This will display a pop-up window on the Tactical Map. Releasing the right mouse button will cause the display to close.

The Information Pop-up Display incorporates many boxes that contain elements of information that may be viewed. To view these elements, guide the mouse cursor over the boxes. The display will change to show information about the current box.



The box in the bottom left hand corner of the popup display always shows the terrain that the hex contains. Above the terrain element are boxes containing from one to four units that may be situated in the hex. The boxes running from bottom left to right show firstly supply, objectives, reinforcements, and finally

strongpoints present in the hex. These different elements are discussed in detail below.

Remember the right mouse button must continue to be depressed during this operation.

The type of information present in the boxes is hex dependant therefore all items shown here may not appear in any one given Pop-up window.

34.1 Friendly Hex Terrain Information

Placing the mouse cursor over this box will cause Terrain Information to display in the main pop-up screen. This information is:



Hex Location, ownership and name – These are the map hex co-ordinates for the selected hex. They allow you to identify a specific location.

A country flag identifies current hex ownership (two flags indicate a contested hex) and a name identifies a victory location.

Terrain Icon – This icon is an exact replica of the terrain icon in the selected hex. It is enlarged for easy viewing.

Anti-Shock Modifier – To the right of the small AT gun icon is the terrain anti-shock modifier (if any). This die roll modifier is used in the calculation of anti-shock in a defensive combat.

Unlike the anti-shock values inherent in some combat units, terrain anti-shock modifiers are cumulative in a combat. This represents the benefits of defending in good terrain.

Height and Terrain Type – The height level of the hex followed by the name of the type of terrain present in the hex.

The descriptive name is the most prominent type of terrain in any given hex.

CRT – This is the Combat Result Table type that will be used in any combat that takes place in the selected hex. Refer to the values in the CRT data section in the Terrain/CRT display in the Control Panel.

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IF Modifier - this is the number deducted from any Indirect Fire die roll attack on this hex.

Hedgehog Status – Reports whether units can hedgehog in this hex.

Hidden Bonus - indicates by how much the terrain reduces the distance at which a unit can normally be spotted by an enemy unit.

Special Attack Status - indicates whether Special Attacks can be used in this hex.

Valid HQs - this indicates that this hex is within the listed HQs current Area of Operations.

Supply and Replacement status - Supply and Replacement Icons will indicate whether the hex is In Supply and units are normally able to take replacements. A 'no go' icon will indicate if either is unavailable.

Hex OP Penalty – This is the Hex OP Penalty (if any) which applies to movement of units. It may be anywhere in the range of zero to fifteen, depending on influences from enemy units or other factors.

The Hex OP Penalty is used in addition to the hex's terrain OP cost when moving. It will usually be present in hexes that are enemy controlled, subject to an enemy zone of control or have some form of interdiction or detachment in them. Hex OP Penalties usually subside as territory becomes friendly.

Sealanes – If any Sealanes are present in the hex, their distinguishing numbers are displayed in blue hexes in the top right.

Tactical Display – On the right of the information area is a graphic display which shows you graphical information about the current hex such as roads and railways that move through it and any hex sides that contain rivers.

The type of information is dependant on the type of terrain therefore all items shown here may not appear in any one given hex.

Minefield – If there is a friendly or enemy minefield in the hex, it will show in the tactical display with the duration of the minefield, which may range from one to three.

Movement Values – The OP cost for the hex for each movement type is displayed in the bottom right. If the hex has transport lanes such as roads, their presence is also noted along with the costs for using that transport lane.

34.2 Enemy Hex Terrain Information

Placing the mouse over the terrain icon on an enemy occupied hex will display quite different information. In addition to the terrain data as discussed above, the player is also provided with detailed combat related information pertaining to the ability to generate tactical shifts from the target hex. These hex sides are indicated by colored arrowheads and include a small icon to illustrate why a shift cannot be achieved (if applicable).



A **green arrowhead** indicates that attacking units will receive normal tactical shifts from the hex side. This is a favorable position to attack from.

An **orange arrowhead** indicates that this hex side will not currently provide a tactical shift, but that this situation is variable. This may be because of an enemy minefield in the hex which can eventually be cleared, a detachment in the hex which will disappear after a set time, or too many enemy steps adjacent to the hex.

In the latter instance, a small soldier's head icon will accompany the orange arrow. It may be nullified by moving an equal or greater amount of attacking steps as adjacent enemy steps into the attacking hex.

A **red arrowhead** indicates that this hex side will never provide a tactical shift from this direction. This is most likely because of a river intervening.

The terrain OP cost and transport information for the hex is also displayed.

34.3 Unit Information

Placing the mouse cursor over a unit in this pop-up display will cause Unit Information to display in the main pop-up screen. In the case of friendly units, this information will be complete unless the unknown setting is enabled, whereby information will be disguised by a question mark until the unit makes first contact with enemy forces.

If the unit is an enemy unit, many basic items will be revealed as long as the unit has been contacted by friendly forces. Some items such as current supply level will not be revealed (i.e. you'll see the maximum number of Bullets but will not see how many are currently left).



The type of information is dependant on the type of unit and therefore all items shown here may not appear in any one given pop-up window.

Hex Location - These are the map hex co-ordinates for the selected hex.

Country Flag - This is the flag of the unit's country.

Unit Name - This is the name of the selected unit. The color of the unit name corresponds to it quality. Red is substandard, white is standard, and gold is elite.

Unit Equipment - Specifies the predominant equipment type for the unit

Formation HQ - On the right hand side the name refers to the unit's formation HQ and the unit's Minor HQ.

Combat Integrity Bonus - shows the unit's Minor HQ patch, Combat Integrity bonus percentage to Attack and Defense values, and the number of hexes from the Minor HQ that the unit needs to be within to receive the Combat Integrity bonus.

Unit Icon - This is the unit icon for the selected unit.

Unit Steps - This is the current number of steps possessed by the selected unit.

Timed Replacements - This disc displays the number of Timed Replacements the selected unit has remaining.

Unit Type – This icon is a rectangular box displaying the movement mode of the selected unit. This display shows the primary means of transport used by this unit and main type of vehicle.

Movement Type – This is the movement class of the unit and it determines which movement costs the unit will pay when moving.

Hedgehog/Entrenchment bonus - An entrenchment Icon indicates the unit can entrench and displays the Close Combat defensive bonuses, expressed in positive shifts and Defense strength percentage increase. If the unit can hedgehog, the hedgehog values are enclosed in square brackets.

Combat/Defensive Strength – This is the base Attack and Defensive Strengths of the selected unit displayed on red and blue sections of a rung respectively. Each rung displays information about one of the unit's steps with the top rung being the unit's current combat strengths. This rung will also have the unit's capability to place a Detachment and Entrench, and supply status expressed in Bullets overlaid. The rungs for any steps that have been destroyed will be greyed out but still contain possible strengths (i.e. if the steps are replaced).

Shock/Anti-Shock Modifiers – These are the shock and anti-shock modifiers applicable for the unit (if any). The modifiers are shown as roundels in the unit's Attack and Defense Bars. Shock values are shown in the Attack bar, and Anti-Shock in the Defense bar.

Movement Values – These are the Formation HQ Bonus (on the orange arrow) and Basic OPs for the unit (on the green arrow), expressed in OPs.

Unit Value – This is the game value of the unit. It is the Victory Point value to the enemy if this unit is destroyed in combat.

34.3.1 Miscellaneous

The Unit Pop-Up display may also feature several icons in round button displays on the right hand side. Each of these icons signifies a different capability of the unit. These are:



Replacement Type – denotes the type of replacement a unit may use.



Bridge Repair Capability – denotes if a unit is capable of repairing bridges.



Detachment Capable – The unit is capable of placing detachments



Bridge Blowing specialist - A yellow die to the right of this icon indicates the number to add to a bridge blowing attempt die roll.



Truck Capability – denotes if a unit can use Truck transport.



Train Capability – denotes if a unit can use Train transport.

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Ship Capability – denotes if a unit can use Ship transport.



Cadre Lives - Description to the right of the icon indicates the number of times the unit can return to the battle as a cadre unit once destroyed.



Recon Bonus - Description to the right of the icon indicates hex spotting bonus for Recon units.



Direct Attack Armor Defense bonus - Description to the right of the icon indicates the die roll modifier when attacked by Direct Attack.

34.4 Supply Information

Placing the mouse cursor over this box will cause Supply Information to display in the main pop-up screen. This information is:



- **Hex Location** - These are the map hex co-ordinates for the selected hex.
- **Supply Type (Source or Dump)** – A Supply Source has a solid green circle in the top left hand corner when operating. A Supply Dump that can trace to a Supply Source has a truck in the green circle. A Supply Dump that is using its on hand stocks (can't trace to a Supply Source) has crates in the green circle while it's still providing supply.
- **Name** – The name of the Supply Source.
- **HQ and Replacement Supply** –Icons show whether the Supply Source can or can't supply HQs and Replacements.
- **Eligible Countries** – Multiple countries can be eligible to use a supply source. The flags of all eligible countries are shown.

- **OP Burst and Burst Type** – This details the Burst OPs for the Supply Source, and the icon identifies the Movement type for the Supply Burst.
- **Road Effect** - Depending on the Burst Type, there can be a reduction in Burst movement rates when able to use roads to deliver supply.
- **Dump Turns** - indicates how long a Supply Dump will last
- **When Captured** – Details the reaction of the Supply Source to enemy encroachment.

34.5 Objective Information

There are two objective boxes in the bottom left of the popup for each objective – one Axis and one Allied.

Each will display side specific information about the objective in the current hex.

Placing the mouse cursor over these boxes will cause Objective Information to display in the main pop-up screen. This information is:



- **Hex Location** - These are the map hex co-ordinates for the selected hex.
- **Axis/Allied** - Indicates side information to be displayed.
- **Name** – This is the name of the objective.
- **Intrinsic AA** –This is the AA capacity that is inherent to objectives that are controlled by their original owner. It is lost if the objective is captured, and is not restored, even if the objective is recaptured. The number in the blue hex icon is the range of the AA capacity.
- **Bombardment attack AA modifier** - The number superimposed on the white die indicates how much is deducted from a Bombardment attack die roll due to either Intrinsic AA or Unit AA (whichever has the better modifier).
- **Turns Owned** – This is the number of turns the objective has been owned by the appropriate side.

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- **Points** – This is the number of Victory Points a side has accrued from this objective to date.
- **Score** – This is the current lead for the winning side in the game to date.
- **Active** – This group or groups of turns indicates the period during which an objective is active for a given side. A side will receive the VP value of the objective for each turn it controls the objective during this period.
- **VP's/Turn** – This is the number of victory points awarded per turn for ownership.
- **Owned** – This is the number of turns the objective has been owned by the appropriate side.
- **Capture** – This is the VP value of the objective for capture only.

The Capture value is a one time event. Even if you lose control after capturing the hex, you cannot get a second capture value for retaking the hex.

- **Alert Units** – Some objectives are detailed to release Alert Points to friendly or enemy forces upon their capture. Alert Points serve to accumulate and trigger reinforcement units when a certain level has been reached.
- **Replacements** – Some objectives are detailed to release Replacements to friendly or enemy forces upon their capture. See 10.1 for more information.

34.6 Reinforcement Information

Placing the mouse cursor over this box will cause Reinforcement Information to display in the main pop-up screen. This information is:

- **Number of Turns till Reinforcement** – This is the number of turns remaining until the adjacent reinforcement(s) appear.
- **Reinforcement Units** – These are the unit(s) that will appear on this hex once the number of turns has expired.

Moving the cursor over the unit icons will display details on the reinforcing unit in the popup.

Note that in Kharkov all reinforcing units arrive through the OMA structure.

Reinforcement Hexes that are overrun by the enemy will still supply reinforcements but at an alternate location, specified in the popup.

34.7 Strongpoint Information

Placing the mouse cursor over this box will cause Strongpoint Information to display in the main pop-up screen. This information is:



- **Hex Location** - These are the map hex co-ordinates for the selected hex.
- **Supply** – Some Strongpoints can provide supply.
- **Strongpoint CRT** – This is the CRT any combat against this Strongpoint will use to determine a result.
- **Autorepair** - Some Strongpoints are able to regenerate lost steps.
- **Number of Steps** – This is the number of steps a Strongpoint contains.
- **Defensive Strength** – This is the defensive strength of the strongpoint.
- **Victory Points** – The number of Victory Points awarded for destruction of the strongpoint (if any).
- **Direct Defense** – Strongpoints can have a Direct Defense factor, if present it is shown by a blue die.

Strongpoints are discussed in detail in the Miscellaneous Unit section.

35.0 Hotkeys

'w'	Clear Map
'e'	Strongpoints Displayed/Hidden
'r'	Highlight hexes containing units that can take Replacements
'u'	Units Displayed/Hidden
'i'	All Town Indicators On, Important Town Indicators On, All Town Indicators Off
'o'	Close Combat Advisor On/Off
'p'	Show/Hide movement penalties in hex
'a'	Artillery Radius On/Off
's'	Show supplied hexes On/Off
'd'	Combat Integrity Radius On/Off
'j'	Combat Integrity Indicators On/Off
'f'	Front Line On/Off
'h'	Hex Grid On/Off
'k'	KIA Units Displayed/Hidden
'l'	Deselect Unit
'x'	Show Moved Units Normal/Darkened
'c'	All Town Names On, Important Town Names On, All Town Names Off
'n'	Next Unit
'm'	Mines and Detachments Displayed/Hidden
'b'	Indirect Fire Advisor
'q'	Leave Unit and Get Next Unit
'z'	Undo last action if allowed
'space'	In close combat screen selects all of stack and in game cycles through stack units.
Alt	Magnifying glass, use the mouse scrolling wheel to zoom
Alt F4	Exit immediately to desktop without saving game.
Control A	Toggles AI display
Control M	Switches music track
Control Z	Undo – like F1
Control U	Shows/Hides supply, Reinforcement and OMA Tactical Map Entry/Exit icons
Control P	Dumps map to disk
Control D	Turn highlighting of movement area On/Off
Control S	Saves game (unless email game is being played)
Control H	Toggles Cliffsidess, Cliffsidess and Contours, Cliffsidess and Contour Shading and No Height Display
Control O	With a combat selected in the Combat Advisor, move all units chosen by the CA to their attack positions
F1	Undo last action if allowed
F2	Entrench currently selected unit, or Hedgehog unit if possible
F4	Place detachment from selected unit
F5	Display AA zone. Cyan = active AA unit Red = Town AA range Yellow = Unit AA unit range. Colors lighter on roads.
F6	Display attack strength of all capable units in hex , Gold = Elite unit in stack Red = No Elite unit in stack
F7	Display total defense strength of all units in hex, Dark grey bar = all possible units entrenched Gold bar = Elite unit in stack Green sunken bar = Elite unit in stack and at least one unit entrenched.
F8	Display vulnerability, Gray cloud = contains Combat units Orange = no combat units in hex therefore vulnerable
F9	Display total Objective VP's gained from the current turn to the end of the game for both sides (Axis=blue, Allied=yellow) - color of hex also indicates current hex ownership
F10	Shows railways and rail bridges Yellow = friendly control, red = enemy control
F11	Shows roads and road bridges, Blue = Major Road, Brown = Minor Road, Yellow=Lesser Road Yellow Outline= friendly control, Red Outline = enemy control
F12	Show all bridges, Green Outline = High chance of bridge blowing Yellow Outline = Medium chance of bridge blowing Red Outline = Low chance of bridge blowing Whole bridge Red = Can't be blown

36.0 New Features and Designer Notes

Kharkov: Disaster on the Donets May 12 – 28 1942 is a regimental level simulation of WWII combat. The battle started with a major Russian offensive, but ended with another pocket and another disaster, reminiscent of the deadly outcomes of the 1941 battles.

The game design incorporates elements from our previous successful Decisive Battles and Battlefront games, along with some new design features intended to further increase the realism, unpredictability and excitement of the game.

Here at SSG we are realistic enough to know that not everybody reads all of the manual. But if you're only going to read part, please read this. It introduces the game, showcases all of our new design elements, so players of our previous games will be able to jump right in after reading this and it also incorporates designer notes, so everybody can understand the thinking behind our decisions.

What is Kharkov?

Kharkov is a blend of our Decisive Battles and Battlefront systems, together with some important new features. The Kharkov system can be used to make battles at either regimental or battalion scale and is therefore a successor to both Battlefront and the Decisive Battles systems.

What does the game cover?

The game covers the doomed Soviet counter offensive at Kharkov between May 12th and May 28th, 1942. The Red Army's offensive was intended by Stalin to crush the fascist invaders, and start the process of their eviction from all Russian territory. The battle started well for the Red Army and some substantial territorial gains were made. However, the inconvenient and unknown presence of two fresh Panzer divisions in Kharkov itself, combined with Stalin's willful refusal to admit reality, led ultimately to a recreation of the dismal encirclements of the previous year, and opened the door for Army Group South's drive to Voronezh and ultimately on to Stalingrad.

The battle is definitely fun for both sides. The Soviets start the game with enormous combat power and can make life very difficult for the Axis defenders, especially with Russian cavalry regiments free to roam through lightly defended areas behind the front and powerful Tank Brigades poised to exploit breakthroughs. Unfortunately for the Russians, the Germans were planning an offensive of their own on the Russian southern flank, and this kicks off on the fifth day of the battle. Provided the Axis defenders have managed to prevent disaster during the initial Russian push, they then get to mount a powerful attack of their own, and it is the Russian's turn to scramble in defense.

What are the main design innovations?

A fundamental problem in wargame design is the iron grip of hindsight. The player knows, or can easily find out, what happened in the course of the historical battle that we are trying to recreate. Hindsight allows him to perform many actions that his historical

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counterpart could never do. Quiet sectors of the front can be completely stripped of men, leaving large sectors guarded only by historical knowledge. Orders from Hitler or Stalin, historically disregarded at extreme peril, can be safely ignored.

There are two solutions to the problem. One involves erasing your memories of the battle and frankly we don't have the technology and in any case we're not confident of speedy regulatory approval even if we did.

Our second solution lies with the twin innovations of Areas of Operations and Mystery Variants. With Areas of Operations (AOs) all units in each formation in the game are prevented from moving outside the AO designated by the scenario designer.

While our previous games tied a formation's Attack Supply to its HQ, and imposed penalties for HQ movement, a determined player could still uproot a formation from its proper place in the front line and send it halfway across the map to fight elsewhere. With the AO system, this simply can't happen.

How Does the AO System Work?

To illustrate, let's consider the Russian 21st and 23rd Tank Corps, which are part of the Russian 6th Army and which start the game in reserve behind the front lines south of Kharkov. Their task was to exploit holes in the Axis defenses created by the 6th Army's infantry formations and form the southern pincer of the drive on Kharkov. With no AO restrictions, you can undertake a number of ahistorical and unmilitary operations with them.

Firstly, you could throw them immediately into the breakthrough battle, even though the Russian orders were to wait for the infantry to create the breakthrough.

Secondly, and even more drastically, you could dash off a short (and surely suicidal) note to Stalin informing him that his cherished summer offensive was cancelled because you 'knew' that the Axis would be up to something bad on the southern front five days from now and you were moving all his precious Tank Corps south to meet the looming threat (that only you knew about).

The AO restrictions prevent both of these undesirable eventualities, but naturally these AO restrictions work both ways. Just as the Russian player can't strip his front lines to pile units in the way of the Axis, the Axis are prevented from doing the same to block the Russian thrusts on Kharkov. Instead, both players must solve the problems they face with the forces that they have to hand as best they can, just like their historical counterparts, while still retaining militarily sensible defenses in other sectors of the front.

Naturally, the AOs change with circumstances and time. In our example, the Tank Brigades will have a much expanded AO the turn after the infantry formations capture two designated objectives, or on Turn 5 regardless of the infantry's progress. So if your infantry does well you are rewarded by the early release of the Tank Corps but if they are blocked then the tanks will eventually show up to try and force the issue.

KHARKOV

In general, AO restrictions are eased over time. Also, reserve formations, especially those off map at the start of the battle, or alert formations released if the enemy captures important objectives, will have wide AOs so that they can perform their historical role as fire brigades, plugging gaps or countering breakthroughs.

What Do the Mystery Variants Do?

Gamers, being gamers, will naturally try to exploit the system. What is to stop them from learning the other side's AOs and exploiting that knowledge? This is where the Mystery Variants come in. Each side has ten Mystery Variants. In each variant, each formation could have a different set of AOs, or different timing on existing AOs.

In general, these variations will enlarge AOs over those found in the Historical Scenario, so you will never be sure of where enemy forces have been ordered to go and you will be unable to base your actions on the AOs found in the Historical Scenario.

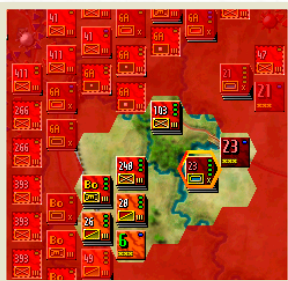
Some variants are combinations of changes found in other variants so even if you work out that one enemy formation has new orders, you won't be sure that other formations haven't been given similar freedom.

The result of the Mystery Variants is to more or less eliminate the benefit of hindsight (without messy surgery or experimental drugs). You will have to react to events as they unfold and make sensible decisions for all your forces. For instance, the northern sector of the battlefield is normally quiet for both sides. However, one or more variants will allow a subsidiary Russian drive on Belgorod. If all the German defenders have migrated as far south as possible to help out at Kharkov then the results could be very embarrassing for the Axis player.

So How Does the System Work?

You can choose to play the Historical Scenario or the Mystery Variants at startup. Similarly, use of the AOs is optional, although highly recommended. Let's take one of the Russian Tank Corps mentioned above as our example.

On the first turn, the 23rd Tank Corps has a very restricted AO, as shown by this screen shot. The area in which the formation is prohibited from moving is shown in red (and it's almost all of the map).



New Features and Designer Notes

To find out more about the AOs we go to the HQ for the formation.
This HQ is the 23rd Tank Corps and it is shown below.



The row of checkered buttons in the top panel shows that the current AO applies from Turn 1 to Turn 4. If we click on the second button (immediately to the right of the small highlighted black and white checkered button), we get a different picture.



On the map, we can see that the new AO is much larger, and it actually extends outside of this screen shot. The two Russian flags on the map, behind the German lines, indicate the objectives that must be held in order to enable this larger AO.



Looking at the HQ picture above, we can see that there is the numeral '2' next to the Russian flag. This means that the AO can be achieved by taking 2 objectives, indicated on the map by the Russian flags. So the deal for 23rd Tank Brigade is as follows. For Turns 1 to 4, its AO is very restricted, and is greatly expanded on Turn 5.

However, if the two objectives indicated by the Russian flag are taken, then the extended AO becomes available the turn after the objectives are taken which could enable the early release of the Tank Corps.

So What Does It All Mean?

For some time now, we have been adding design elements that simultaneously enhance realism and excitement. The closer coupling of units to their HQs and the provision of attack supply through HQs has enforced a more realistic tempo of operations, as units can no longer attack every day. Now, the combination of AOs and Mystery Variants restricts the location of operations as well as the tempo, while at same time increasing uncertainty and tension by removing the dead hand of hindsight.

The new system has many benefits. The AOs act as a battle plan, leaving the implementation up to you. At the start of a scenario, you will know exactly what you have to do, and which forces have been allocated to achieve your objectives.

You won't know what your opponent's orders are, or where his forces are allocated, which prevents scripted openings and greatly enhances the excitement of the game in both single player and PBEM games. You are now much closer to stepping into the shoes of your historical counterpart than you have ever been before.

New Features and Designer Notes

Further Design Changes

We have made a number of other changes from the Battlefront/DB design, and these are listed below.

Discontiguous Combat Tables

Military operations, like so much in life, are subject to diminishing returns. We have changed the CRT system so that, especially at higher odds, not every odds level needs to be listed in the CRT. For instance, the next odds column after 5:1 might be 8:1 and the one after that 12:1. Naturally, if you don't have the numbers to reach the next odds column, then the odds will be rounded down. This allows us to make a meaningful distinction between each odds column and is a reminder that sometimes adding a few more troops to an assault will make no difference whatsoever to the outcome, and you just have to take the result as is.

We have done this because it reflects the reality of military operations. The best planned and led attacks could still miscarry and the occasional reverse is not only to be expected but could not have been avoided by the simple addition of a few more troops, as was often the case under our previous system.

Please remember that your opponent is likewise suffering, and that, over time, every setback on your side will be matched by life saving blunder from your enemy. Also, for the record, the computer has no idea of what constitutes a 'critical' combat and adjusts no combat rolls in its favor at any time.

Direct Attack

We have removed the mechanism for ranged Direct Fire in attack and replaced it with a simpler system. Now units are rated for Direct Attack shown by a yellow dice on the unit information panel.



The II/201 Panzer Regiment shown above has a yellow dice showing a '4' on its attack bar. This is its Direct Attack factor. For any close combat against an eligible defender, all friendly stacks that are adjacent to the defender and could gain a tactical shift, will contribute their best Direct Attack factor to the combat. Each stack can only make one contribution per combat. This contribution is in the form of a dice roll in the combat. If the dice roll is equal to or better than the Direct Attack factor then the Direct Attack will cause an additional step loss, over and above any caused by the actual CRT result.

Strongpoints and entrenched units are not eligible defenders but any unentrenched units in a stack are.

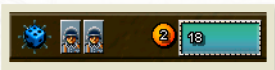
This change reflects the extra lethality of armored attacks on men who are unprepared to receive them. Men can be unprepared because they have been driven from their prepared positions by a previous attack, because they are advancing into contested ground and have no opportunity to entrench or because they have chosen to reorganise and accept replacements instead of entrenching.

The change will also reward the careful player, who distributes his armored units to attack from as many directions as possible, (remembering that the chosen direction must gain a tactical shift), which will maximise the number of dice rolls made in the combat.

You can find the Direct Attack factor as the DF Attack entry in the Edit Combat Units section of the Editor.

Strongpoints Improved

A Direct Defense Fire value (Direct Defense) can be assigned to any strongpoint, shown by a blue dice superimposed on the strongpoint icon. We have done this to reflect the simple fact that no matter how many men you have, the first ones to leave their trenches and assault a defended and fortified position are going to take some casualties.



Supply System Simplified

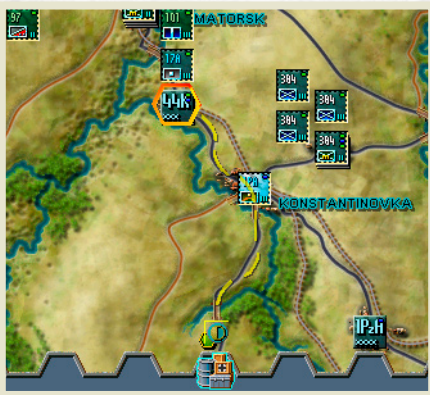
We have removed the Supply Trucks from the system. Now, Formation HQs give General Supply to any unit belonging to the HQ's country within their OPs broadcast range, regardless of whether the units belong to the HQ or not.

Units get Attack Supply from their immediate HQ, or any HQ subordinate to their HQ that belongs to their country. In Kharkov, there are two countries on the Axis side; Germany and Romania, and HQs will only supply their own countries. The three Hungarian units in the game are classed as German because there is no Hungarian HQ.

To be in supply, HQs themselves must trace a supply line of any length to a Supply Source, typically on the map edge, shown by a dashed yellow line when the HQ is selected. Supply Sources can supply a single country or an entire side, at the choice of the scenario designer.

New Features and Designer Notes

We have done this to simplify the system and make life easier for the player.



It produces the same results as the previous system but makes supply much easier to understand. You now only have worry about a single factor, the position of a HQ relative to the units it commands.

So, in summary, the first thing that happens in a turn is that each HQ establishes whether it is in supply. If so, it functions normally; if not, it doesn't function at all. A functioning HQ distributes both General Supply and Attack Supply.

Each HQ has a General Supply broadcast capability, measured in OPs. Since a unit can draw General Supply from any HQ of the same nationality, a supply net is applied to the battlefield. You can see this net by pressing the 's' key. The supply net never changes during a turn. Any unit that starts the turn within the net gets General Supply, as does any unit able to move inside it.

Attack Supply is more restrictive. To get Attack Supply a unit must be in General Supply at the start of the turn. Units which draw General Supply by moving inside the General Supply net during the turn, do not get Attack Supply. Furthermore, units must start the turn within the Command Radius of their formation HQ, or a subordinate HQ, to be eligible for Attack Supply.

Movement System Simplified

We have removed the system of Reserve OPs and Extended Movement and replaced it with a simplified system. Units now get a basic movement allowance which is increased, often substantially, if the unit is within Command Radius of their HQ at the start of the turn. Units outside of Command Radius will find that their movement is quite restricted. Remember, if you are careless enough to lose your HQ in combat then there will be at least a one turn delay before it can be back on the map again, so avoid careless errors.

KHARKOV

HQs do have strong survival instincts though, and can only be spotted by an enemy unit that is adjacent to them, regardless of terrain or recon bonuses.

The previous system was used to restrain formations from cruising across the map in blatant contradiction to the laws of logistics. This function is now provided by the AOs which reflect logistical limits equally as much as command decisions.

It takes a vast mountain of materiel to supply an army, even when it is stationary, and this logistical burden is greatly magnified if it has to move for any reason. Since the AOs now limit progress to a logistically feasible area, we have no need for other restrictions and can therefore simplify the system.

You will find this function in the Editor as OPs Resupply % in the Edit HQs screen.

Other HQ Changes

HQs can now hand out a large range of bonuses to their units. Two new additions to their functions include a modifier to Indirect Fire and a modifier to Direct Attack.

These bonuses, up to +2 for both are quite significant. For example, the Russian 21st Army HQ near Kharkov has a +1 bonus to Indirect Fire and enhanced resupply for Attack Bullets. This happy state only lasts for the first few turns. Compare the 'Before' and 'After' shots here.



Note that HQs only change after they have performed all their supply and command functions, so the display is essentially showing how the HQ will perform next turn.

We have done this in order to reflect the necessity to prepare for large offensive operations, and the benefits that accrue when this is done. In this case it reflects the added power of Russian artillery at the start of a set piece battle, when the guns are ranged, the targets plotted and ammunition stockpiled and the similar affect on combat units when a large offensive has been planned and the requisite supplies have been accumulated and can be easily distributed.

This type of maximum effort was unsustainable, and the HQ evolves, (devolves really), to a more normal state which cause the tempo of combat operations to slow.

You will find these functions in the Editor as IF Bonus and DF Bonus in the Edit HQs screen.

New Features and Designer Notes

Hedgehogs

We have added the ability to create a Hedgehog to the game. Hedgehogs can be thought of as a step beyond entrenchments, and a unit cannot hedgehog unless it already entrenched. As with entrenchments, not all units can create a hedgehog.

A hedgehog has the same type of bonuses as entrenchment, with the important exception that no tactical bonuses can be gained against a hedgehogged unit.

Hedgehogs do exert less of a penalty to enemy movement in the surrounding hexes. This is to reflect the fact that a hedgehogged unit has organised itself for all round defense rather than linearly, and thus is less capable of restricting movement.



We have done this to reflect the ability of German units to construct very tough defenses which were very difficult to directly assault. To deal with a hedgehog either deluge it with artillery or attack elsewhere and induce the defenders to leave their positions because they fear encirclement.

You can find the entry for this in the Entrenchment Rules section of Country Data in the Editor.

37.0 Credits

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Gregor Whiley

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Art Direction

Steve Ford

Executive Producer

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Scenario Design

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Our Strength

We thank God for giving us the ability and strength to complete this project and follow our dream.

We would also like to thank our families and friends for giving us their non-stop love and support during this project.

KHARKOV: Disaster on the Donets

May 12 – May 28, 1942

Tutorial

Introduction

Kharkov is played in a series of unstructured turns. Moving units, fighting, reorganising, entrenching, blowing bridges, and a lot more besides, are done in whatever order you choose. Only when you are satisfied you have done everything you can, do you press the 'End Turn' button. Your opponent, whether human or computer, then gets the same opportunity.

There are eight lessons in this tutorial, each one showing you how the various game mechanics work. Each lesson begins with table of contents identifying the topics covered. While each lesson is independent of the others, we recommend you tackle them in order if you're new to the game.

For players familiar with our previous games in the Decisive Battles and/or Battlefront Systems, text highlighted in Italics refers to new material.

Finally, the main purpose of this tutorial is to show you how to do things. Other sections in the manual will help you with descriptions of game screens, strategy, etc.

Getting Started

Install the game and open the application.

The first screen to appear is the Startup Screen.

Click on the Tutorial button and you'll move on to the Tutorial Selection Screen.

All lessons are listed on the left. Pick one to activate the Start Lesson button, then click it.

Lesson One

Topics Covered

- Surveying the Battlefield
- Viewing the Terrain Effects/Combat Results Table Screens
- Identifying Units
- Viewing the Order of Battle Screen
- Areas of Operations
- Selecting/Deselecting Units
- Moving Units

● Surveying the Battlefield

(No changes.)

You'll see a top-down view of the battlefield on the main screen. You are in command of the Soviet 6th Army, and it's your duty to destroy the fascist forces opposing you.

There is a hex-grid superimposed over the battlefield. Its purpose is to help with orientation. You can turn it off from the Options menu. There's a panel of nine, small circular buttons in the lower left corner. This is the Control Panel. Right-clicking the mouse over a button will identify it. Find the Options button. (Middle row, far right.) Click on it to bring up the Options menu. The Hex Grid toggle is second from top, on the left. Click on the Resume button to return to the battlefield.

If you move the cursor over any of your units, it will change to a cross-hair; otherwise it's a solid arrowhead.

This small section of the Kharkov battlefield fits the monitor, so no scrolling is necessary.

To scroll the map when you're playing the full battle, move the cursor to the far left or far right of the screen, or to the top or bottom.

Right-clicking anywhere on the battlefield will activate the Battlefield pop-up describing the contents of that location.

The front line (that's the two lines of triangles; one red, one blue) shows you where the territory you control ends and the territory controlled by the enemy starts. Any territory in between is contested. You can move much further in your own territory than you can in enemy territory.

● Viewing the Terrain Effects/CRT Screen

(No changes.)

Go to the Control Panel again. Find the Terrain Effects/CRT button and click on it. (Top row, right.) Here you will find a great deal of useful information.

On the left is a list of the terrain features found in the game. Click on the hex picture representing Woods terrain. Try clicking on each terrain type. The display changes each time. From time to time during these tutorials you will be asked to look at the Terrain

Effects/CRT Screen to help you with the various game mechanics. Click on the Resume button to return to the battlefield.

● Identifying Units

(Minor changes.)

The military size of the units appearing in Kharkov are regiments and battalions, with the occasional brigade and ad hoc formation included. The identifier in the lower right of the unit icon tells you the military size of the unit. For example, III = regiment and II = battalion.

The weapon type with which a unit is equipped is represented by the appropriate NATO military symbol found in the lower left of the unit icon. Furthermore, the weapon type, or role, of a unit is usually found in its name, along with a numeral to distinguish it from similar units in the army.

The only units which do not have size identifiers or NATO military symbols are HQ units. All units belong to a formation controlled by a HQ unit.

● Viewing the Order of Battle Screen

This section has been completely revised.

An Order of Battle (OB) is a military term used to describe the forces available to each side.

Locate the 'Order of Battle' button in the Control Panel. (Top row, centre.) Click on it.

The first forces you see are those belonging to Southwestern Front. SW Front's HQ is off the map to the east and is not used in the tutorial. However, several non-divisional assets are available for use.

Subordinate to SW Front is 6th Army and Army Group Bobkin. Click on the 6th Army HQ.

The forces attached to 6th Army are displayed, along with the HQs for 21st and 23rd Tank Corps. 6th Army has available 6 rifle divisions and 12 supporting assets. Use the 'Next' and/or 'Previous' buttons in the top right corner to page through all your forces. Clicking on the Axis flag in the bottom right of the OB page will bring up a similar display for the enemy forces.

This will be covered again later, but it I'll mention it now because of its importance.

Units can draw general supply (used when defending) from any HQ of the same nationality on their side. Units can draw attack supply (necessary for combat and artillery units to attack) if they meet the conditions necessary for general supply, and they are within the command radius of their own HQ, or the HQ of any formation subordinate to it.

For example, the 123rd Regiment of the 26th Cavalry Division can draw general supply from any Soviet HQ on the map. It can only draw attack supply from the 6th Cavalry Corps HQ (there are no formations subordinate to the 6th Cavalry Corps).

The rules for how a unit traces a supply path from its HQ are covered in a later tutorial.

Click on any of the units and you'll be told where they are, and some other information which we'll get to later.

If you are unfamiliar with NATO military symbols, try clicking on each unit in the OB; it doesn't take long to get the hang of which symbol relates to which name. Click on the Resume button to return to the battlefield.

● Selecting/Deselecting Units

(Minor changes.)

You can only select units from your own army. You need to select a unit before you can do anything with it, such as moving, blowing bridges, taking replacements, laying detachments, fighting or whatever.

Right-click on the battlefield until you find hex (16,12). (You can find the location of any hex in the top left corner of the Battlefield pop-up). The top unit in that hex is the 7th Tank Brigade, a non-divisional asset of Army Group Bobkin. Click on it to select it.

The first thing to note is that the unit appears in the Unit Control Area below the battlefield. It is centered within a circular section of the immediately surrounding terrain. To the right of this circular section is a group of buttons. Click on the 'Binoculars' button. The 7th Tank Brigade is deselected.

In addition, tapping the 'l' key (that's the el key, not the one key) will deselect any selected unit.

Click on the 7th Tank Brigade again. To the right of the battlefield, information about this unit is presented in the Unit Display Area. Right-click on the 7th Tank Brigade's icon on the battlefield to bring up the Battlefield popup, then position the cursor over the 7th Tank Brigade's unit icon in the popup and you will get additional information. We'll deal with this information as we need it. Deselect the 7th Tank Brigade.

In Kharkov, up to four units can be present in a hex. Only one unit can be selected at a time. Tapping the space bar will select the next unit in the hex, moving the top unit to the bottom. Try it and you'll see the 3rd Sapper Regiment is now the top unit in the stack, both in the display and on the battlefield.

Have a look at all the units in 6th Army, and practice with the selection and deselection mechanics.

• Areas of Operations

This section is brand-new, and a vitally important feature. Here at SSG we have finally developed a structure that restricts formations to their axis of operations and, combined with an extensive variant overlay, both prevents historical hindsight from unduly influencing the battle or familiarity from game experience doing the same.

Click on the stack of units in hex (21,9). They are the 4 combat units of 21st Tank Corps. Most of the map is tinted red. Map areas tinted red are off-limits to all units of that formation. Historically, both 21st and 23rd Tank Corps were held in reserve until certain objectives were captured. Now click on the 21st Tank Corps HQ, in hex (22,9).

In the centre-right of the screen is the HQ Operations Panel. The highlighted button in the bottom right of the display shows the Area of Operations to which the formation is currently restricted; not very much and no help at all in combat!

Information in the HQ Operations Panel informs the player that this area is in effect until Turn 5, and that no objectives need to be under friendly or enemy control for it to be active.

Click on the button immediately to the right. The Area of Operations has greatly expanded. This area can be active from Turns 1 through 6 but requires 2 objectives to be under friendly control before that can occur. The Soviet flags on the map show the location of the required objectives. Note that this 2nd area has a priority of 1 compared to a priority value of 0 for the previous area. If the conditions for both areas are met, the highest priority has precedence.

Finally, the 3rd and last button in the row shows an expanded area for Turns 5 and 6 which will be in effect, regardless of any objectives.

In summary, then, 21st Tank Corps sits idle until two objectives are captured, or until Turn 5, whichever comes first. Furthermore, once you start playing the game using our Variant Areas of Operations feature, you will never be sure just when or where your opponent's forces might turn up!

• Moving Units

(Minor changes.)

The military units in the Decisive Battles system use different modes of locomotion. For convenience, we have divided these modes into five distinct categories; leg, horse, wheel, track and motorised leg.

Select the 7th Tank Brigade, hex (16,12).

The cursor changes to an animated, marching soldier over every hex except the one containing the 7th Tank Brigade.

A green keyline around the soldier means the chosen unit can move to that location, and can do so right now. A red keyline around the soldier means the chosen unit can move to that location, but will not reach its destination until a later turn, because either it is too far away or there are enemy forces blocking access. To help with navigation, only that area of the battlefield to which the chosen unit can move this turn is highlighted.

A red keyline, and no-go icon, around the soldier means the chosen unit cannot move to that location, because either there is no legitimate path (e.g. major river) or the destination lies outside that formation's current Area of Operations.

An orange keyline around the soldier means the chosen unit cannot move to that location because it already contains the maximum number of friendly units. Of course, if you move a unit out of the destination hex, the chosen unit will be able to enter it. Select the 7th Tank Brigade and move it to any hex on the front line.

Once the move is complete, look in the Unit Control Area. The undo button is activated (bottom row, left). Click on it to take back the move you just made. Remember that it is only the last move (or activity) you made that can be undone.

Units expend Operation Points (OPs) as they move across the battlefield.

You can find out how many OPs a unit has in the Unit Display Area. Look for the yellow panel in the bottom right of 7th Tank Brigade's Unit Display. 45 OPs are available. This number has been increased by Army Group Bobkin's HQ by 150% over the base value. Right-click on the 7th Tank Brigade's location to bring up the Battlefield Pop-up.

Mouse-over the brigade's icon in the pop-up and look at the 2 yellow arrows in the bottom right of the display. The arrow to the right shows the brigade's Base OPs (18); the arrow to the left shows the OPs available this turn provided the brigade is in general supply and within the Command Radius of a suitable HQ.

If a unit uses all of its available OPs, or it doesn't have enough left to move further, it will be deselected automatically at the end of its move. Otherwise, it will remain selected. Rather than using the Deselect Unit button (binoculars) to deselect the unit, then selecting a new one, there is a handy shortcut. Holding down the Control key when you select a new unit will automatically deselect any unit currently selected, at the same time selecting the new unit.

Up to 6 division groups (or equivalents) can be assigned to a formation, along with 12 ungrouped units. 6th Army has the maximum allowed. Select the 102nd Rifle Regiment from the 41st Rifle Division, hex (17,7). The Organisation Panel (which appears in same location as the HQ Operations Panel) supplies the following helpful information.

There are 3 units in the division, all infantry regiments as shown by the small NATO symbols in the bottom left of the panel. The HQ unit of a division (or equivalent) is always on the extreme left. We call this unit a Minor HQ. The panel also tells you that the combat units of the division

will receive a 65% combat integrity bonus if they are within 4 hexes of the Minor HQ. A minimum of 2 combat units must be present for the integrity bonus to be awarded. It applies to both attack and defense strengths. If a star appears over any of these NATO symbols, that tells you that unit is currently entitled to the integrity bonus. Only combat units can earn the integrity bonus. Artillery units, support units and HQs cannot earn an integrity bonus, regardless of their location.

A bar under the NATO symbol identifies the unit currently selected, along with any other units from the division that happen to be in the same hex. Clicking on any of these NATO symbols takes you directly to that unit. Keeping the units of each division within the specified integrity radius will improve your combat power significantly. It is really helpful to get into the habit of moving your forces by division, and this method of unit selection makes that easy. Use this technique to move all units of the 41st Rifle Division to hex (17,6).

Go ahead and move all your units anywhere you wish. Towards the enemy is a good idea. Don't forget the undo button. Use the Movement popup to check OP expenditure. When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Two

Topics Covered

- Off Map Areas
- Blowing Bridges
- Repairing Bridges
- Building Bridges
- Deploying Detachments
- Entrenchments
- Hedgehogs
- Interdicting the Enemy
- Laying Minefields
- Constructing Strongpoints
- Displaying Changing Ground Conditions

• Off Map Areas (OMAs)

(This feature was introduced in our Battlefront game. Only minor changes have been made to it since.)

Unlike the games in the Decisive Battles series, reinforcements almost always appear in an OMA, and from there the player can assign them to a hex on the map. These units become available for use on the following turn.

Access to the OMA Display is enabled by clicking on the flashing OMA button found in the top right of the screen. This button only flashes when there are units in the display ready to be placed on the map. Click on it now.

Up to twelve OMAs can be assigned to each side, arranged around a reduced scale image of the battlefield, and numbered in the same way as the hour hand of a clock. In this tutorial, only OMAs 9 (Krasnograd) and 12 (Kharkov) are used by the Germans. Click on the Krasnograd OMA.

The 6 units of the 305th Infantry Division are ready to enter the battlefield. There are three possible destinations, two of them on the battlefield and the third to another OMA (Kharkov).

In this tutorial, 5 units are going to the battlefield, 1 is going to the Kharkov OMA. Click on the 576th Infantry Regiment. An image of the chosen unit is attached to the mouse. Move the mouse over the big yellow hex graphic next to the Krasnograd OMA and click. A much smaller yellow hex graphic appears on the unit in the OMA and this confirms that the unit is assigned to the selected hex on the battlefield.

It will appear there next turn. Any number of units can be assigned to each battlefield destination, but only four of them can appear in a single turn. If more than 4 units are assigned, the excess will appear in subsequent turns. So, assign another 3 units to the 'yellow' destination, and 1 to the 'green' destination.

Select the final unit and move the cursor over the Kharkov OMA. Click inside the OMA box and a '12' will appear over the unit in the OMA, confirming that the unit will appear in the Kharkov OMA on the following turn.

To view future reinforcements, click on the Reinforcement button on the right of the display. The only future reinforcements available to the Germans arrive in the Kharkov OMA; 2 units on the next turn, 1 unit on the following turn and a final unit on the turn after that.

• Blowing Bridges

(No changes.)

The only units which cannot attempt to blow a bridge are artillery units and Formation HQ units.

The I/43 (mot) Light FlaK Battalion is in hex (9,15). Move it to hex (12,14).

Blowing bridges is not automatic! The likelihood of successfully blowing a bridge is shown in the Unit Control Area below the battlefield. The I/43 will blow up the bridge on a roll of 4 or greater.

All combat units on a side will have the same chance. Each support unit may have a different chance. You can try to blow up the same bridge as many times as you can get an eligible unit into position. Note that units adjacent to enemy units cannot be eligible. If a

unit is not eligible to blow a bridge, the Blow Bridge icon in the Unit Control Area will be greyed out.

You can only blow bridges from the Unit Control Area!
Click on the Blow Bridge icon in the Unit Control Area. If the attempt is successful, a blown bridge graphic will appear. Whether successful or not, the unit uses its one action for the turn.

You cannot undo a blow bridge order.
If the bridge doesn't blow, use nearby units to try again until you succeed.

● Repairing Bridges

(No changes.)

There are always a few units in your army which can repair bridges. They are usually engineers of some type. The 113th Pioneer Battalion in hex (7,11) is one such unit. Right-click on it and move the cursor over the Battlefield Popup until it's on the 113th Pioneer Battalion's unit icon. The roundel sporting a crossed hammer and spanner indicates this unit is capable of repairing destroyed bridges.

Select the 113th Pioneer Battalion and move it into hex (7,14). A hex-shaped Repair Bridge icon appears, both on the battlefield and in the Unit Control Area below the battlefield. You can only effect repairs on the bridge from the Unit Control Area!

Click on the Repair Bridge icon in the Unit Control Area. The blown bridge graphic disappears, to be replaced by congestion graphics on each side of the river. These congestion markers will add to the OP cost for all units to cross the river for this turn and the next. One turn of heavy congestion followed by a turn of light congestion occurs when a bridge across a major river is repaired.

One turn of light congestion occurs when a bridge across a minor river is repaired. The light and heavy congestion OP penalties for the scenario are found in the Terrain Effects/CRT Screen. Click on the minor and major river icons respectively.

Repairing bridges is not a chance event. An eligible unit, in the right place, will effect the repair unless it is adjacent to an enemy unit. If a unit is not eligible to repair a blown bridge, the Repair Bridge icon in the Unit Control Area will be greyed out.

The green dot in the unit icon has changed color to yellow. This means the unit has used its one action for the turn.

You can cancel the order with the Undo button.

● Building Bridges

(No changes.)

There may be 1 or 2 units in your army with the tools and equipment needed to build a temporary bridge. They are particularly useful when the rivers you must cross have few bridges, or cannot be crossed. The 655th Bridge Construction Battalion in hex (6,10) is one such unit. Right-click on it and move the cursor over the Battlefield Popup until it's on the 655th Bridge Construction Battalion's unit icon. The roundel with the dismantled pontoon bridge indicates this unit is capable of building temporary bridges.

Select the 655th Bridge Construction Battalion and move it into hex (5,8). Possible bridge icons appear on the battlefield over hexsides across which the engineer is eligible to build. Khaki pontoon icons appear in the Unit Control Area.

You can only build bridges from the Unit Control Area!

Click on either of the two build bridge icons in the Unit Control Area. The build bridge graphic disappears, to be replaced by a temporary bridge, and congestion graphics on each side of the river. The congestion is the same as it is for repairing bridges.

Building bridges is not a chance event. An eligible unit, in the right place, will build a temporary bridge unless it is adjacent to an enemy unit. If a unit is not eligible to build a temporary bridge, the Build Bridge icon in the Unit Control Area will be greyed out. The green dot in the unit icon has changed color to yellow. Again, this means the unit has used its one action for the turn.

You can cancel the order with the Undo button.

Once a temporary bridge has been built, the engineer unit that built it must remain stationary. The only action the unit is allowed to perform is a Dismantle Bridge action which removes the bridge and allows the unit to move again on the following turn.

● Deploying Detachments

(No changes.)

Most combat units, other than pure armor types, can deploy detachments. A detachment is nothing more than a small group of men left behind to delay the enemy who, once their job is done, will hopefully find their way back to their unit.

Deploying a detachment does not in any way weaken a unit, other than using up its one action for the turn.

The 261st Infantry Regiment from the 113th Infantry Division is in hex (7,10).

Right-click on it and examine the unit icon in the popup. The drab-green roundel with the orange uniformed soldier pointing a rifle indicates this unit can deploy a detachment.

Select the 261st Infantry Regiment. Click on the Leave Detachment button in the Activity Panel which appears above the 261st Infantry Regiment's Unit Display. A detachment graphic is placed in the unit's location. You can't really see it until you move the unit away, or you right-click on the location and observe it in the Battlefield popup.

Move the 261st Infantry Regiment one hex to the north. That's what a detachment looks like. As shown in the graphic itself, the detachment will last for 1 turn.

The Undo button will cancel the order. Of course, once you move the unit away from the location, or do something else, you won't be able to undo the detachment.

You cannot deploy a detachment in enemy or contested territory, on top of a minefield, or with a strongpoint.

We'll look at the benefits of deploying detachments later, when we analyze the enemy's movements. In short, detachments increase the OP cost for enemy units moving through the affected hex, and negate any tactical benefit attacking from that hex might provide.

● Entrenchments

(No changes.)

Most units can entrench. Formation HQs and a few types of support units cannot.

The 268th Infantry Regiment from 113th Infantry Division is in hex (8,6). Right-click on it and examine the unit icon in the battlefield popup. The drab-green roundel with the crossed pick and shovel indicate this unit can entrench. For the moment, ignore the values that appear in brackets to the right of the roundel; they refer to Hedgehogs, which are covered in the next section. Entrenching will provide 3 combat shifts in the unit's favor as well as adding 70% to its regular defense value.

Click on the Entrench Unit button in the Activity Panel which appears above the 268th Infantry Regiment's Unit Display, and the unit will dig in. The unit 'snuggles' into the battlefield and the icon's edges become scalloped.

The Undo button will cancel the order.

A unit cannot entrench in enemy or contested territory, or if it has already used its one action capability this turn.

We'll discuss the benefits of entrenching later, when we work out how best to attack entrenched enemy units.

All units of the 113th Infantry Division begin this tutorial not entrenched. Cycle through them using the small NATO symbols in the Organisation Panel (see Moving Units, Lesson 1). Entrench them wherever you like. Note that only the 3 infantry regiments are capable of forming a Hedgehog. The pioneer battalion, recon battalion, anti-tank battalion and artillery regiment are not capable, so no bracketed values appear beside the entrenchment icon in the unit popup. These units can only entrench.

All units stacked with a unit in an entrenchment, take on the benefits of the entrenchment, except the bonus to defense strength.

● Hedgehogs

(This is a completely new feature.)

Beginning early 1942, Germany developed a new defensive tactic to deal with Soviet breakthroughs. This involved forming a 360° perimeter while waiting for relief (hopefully!).

In game terms, Hedgehogs confer additional defensive benefits on those units employing them, at the expense of freeing up enemy movement adjacent to them.

Only German infantry regiments can use Hedgehogs in Kharkov.

The 190th Infantry Regiment from 62nd Infantry Division is in hex (12,10). Right-click on it and examine the unit icon in the battlefield popup. The drab-green roundel with the crossed pick and shovel indicate this unit can entrench. The second set of values to the right of the roundel confirm that this unit can also form a Hedgehog. Forming a Hedgehog will provide 4 combat shifts in the unit's favor as well as adding 80% to its regular defense value.

Select the 190th Infantry Regiment. Click on the Entrench Unit button in the Activity Panel which appears above the 268th Infantry Regiment's Unit Display, and the unit will form a Hedgehog. The unit 'snuggles' into the battlefield and the icon's edges become scalloped, this time with a prominent red fringe rather than a grey/white fringe.

The Undo button will cancel the order.

You must be entrenched before you can form a Hedgehog.

All 3 infantry regiments of the 62nd Infantry Division begin this tutorial entrenched and therefore eligible to form a Hedgehog. Cycle through them using the small NATO symbols in the Organisation Panel (see Moving Units, Lesson 1). Form a Hedgehog with all three.

All units stacked with a unit in Hedgehog mode, take on the benefits of the Hedgehog. Hedgehog defensive values take precedence over entrenchment defensive values.

● Interdicting the Enemy

(Minor changes.)

There are two types of interdiction. Air interdiction, which represents planes harassing rear area movement, and partisan activity, which represents marauding bands of guerillas doing much the same thing.

Germany has interdiction available this turn, air only. The Soviets usually have both. (There were not too many pro-German partisans in Russia.)

The Asset Placement Area is under the battlefield, between the Control Panel and the Air Support Area. There are 4 types of assets which may be available for placement each turn.

From left to right, they are air interdiction, ground interdiction, minefields and strongpoints. We'll deal with minefields and strongpoints later in this lesson.

There are 2 air interdiction missions available to the Germans. Right-clicking anywhere in the Asset Placement Area will bring up the Asset Placement Popup. Here you will find details about each type of asset available from this area. Air interdiction details are as follows.

Each hex affected by air interdiction will increase the OP cost for an enemy unit to enter that hex by 4 OPs when the skies are 'clear', or 2 OPs when the skies are 'overcast'. These air interdiction missions must be placed in enemy territory, within 5 hexes of a friendly unit. The final detail identified tells you these missions will affect the chosen hex, and every other hex within 2 hexes.

Mousing over the Turn boxes at the bottom of the Asset Placement Area will provide information on the availability of your assets in future turns.

Click on either of the circular icons showing a plane. The cursor changes to an aircraft graphic inside an animated hexagon. It can be placed on any non-shaded hex on the battlefield.

Position the cursor in hex (18,7), and click. For a radius of 1 hex from the point of placement, every hex has an interdiction marker, and an OP cost penalty applied to it. The blue roundel in the Asset Placement Area changes color to orange, signifying the mission has been placed.

When air interdiction is placed by the second player in the turn, the radius and OP penalty effect will be determined by the next turn's air condition. In this example, the next turn is 'Overcast' weather so the interdiction radius is reduced from 2 hexes to 1 hex. The Undo button will cancel the order.

Interdiction missions are used to delay the arrival of enemy forces and/or add extra congestion to the battlefield in areas you may feel are vulnerable.

● Laying Minefields

(No changes.)

Minefields must be laid in friendly territory. Only 1 minefield can be present in a particular hex. Look in the Asset Placement Area. There is one minefield available at the moment and you select it just as you do interdiction markers.

You can remove it with a 'control-click'.

Minefields have 3 nasty effects for your opponent. They never adversely affect friendly units.

They deny tactical combat shifts.

They add OP penalties to units entering them.

Enemy units attacked in friendly minefields can suffer up to 3 adverse combat shifts.

For practice, place the 1 minefield available in any legitimate hex.

● Constructing Strongpoints

(No changes.)

Strongpoints must be constructed in friendly territory. Only 1 strongpoint can be present in a particular hex. Note that a minefield and a strongpoint cannot be placed in the same hex, on the same turn. Look in the Asset Placement Area. There are 2 strongpoints available at the moment and you select them just as you do interdiction markers.

You can remove them with a 'control-click'.

The effect of strongpoints is discussed in a later lesson.

For practice, place the 2 strongpoints available in any legitimate hex.

● Displaying Changing Ground Conditions

(No changes.)

It just so happens that the weather is about to take a turn for the worse.

Click on the red 'End Turn' button in the top right-hand corner of the screen.

Click 'Yes' if you get the warning about not using all your assets. After all, this isn't a 'real' battle.

The splash screen for Soviet Turn 2 appears. Start the turn.

The first thing you will notice is the startling change in the map. The ground condition has changed from 'Dry' to 'Mud' and the map mirrors the change. The air condition is 'Overcast', which usually means fewer air missions.

Check the Terrain Effects/CRT screen to see the effect of 'Mud' on movement and combat. The Turn popup is found in the top right of the screen. Right-click on it. The row of numbered boxes across the bottom of the popup corresponds to the turns in the tutorial. Run the cursor along the boxes and you'll see the air and ground conditions for future turns.

When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Three

Topics Covered

- Engaging the Enemy
- Reviewing Your Troops
- Artillery Fire Missions
- Air Support Missions
- Anti-Aircraft Operations
- Using the Combat Display

• Engaging the Enemy

(Minor changes.)

Before you can attack enemy troops, you have to move your units adjacent to them. The more units you have, and the fewer your opponent has, then the better your chances.

Artillery units are the only units which can attack from a distance of two or more hexes from the target. As you'll see in coming lessons, proper use of artillery is vital to success. Not to put too fine a point on it, but about 70% of combat casualties in World War II were due to artillery fire.

What we're going to do now is move our combat units adjacent to the enemy, and get our artillery into handy supporting positions.
Select the 37th Tank Brigade, hex (20,7).

Before we move the tanks into position, now's a good time to get an introduction to the OP penalties which inevitably slow down movement near the enemy, or behind enemy lines. Tap the 'p' key. I know; it's a frightening sight. All these penalties are in addition to the regular OP cost for entering a particular terrain type.

Enemy units, strongpoints, minefields, detachments, interdiction markers, enemy territory alone, even the congestion markers appearing astride a repaired bridge will slow you down. That's war!

Tap the 'p' key again. You don't really need to know at the moment! Fortunately, just selecting a unit will let you see at a glance where it can get to.
[Note that the 'p' key is a shortcut from the Options menu (one of the ten buttons in the Control Panel). You can leave it active, I don't!]

Move the 37th Tank Brigade adjacent to an enemy strongpoint. I chose hex (17,6).

Note that the units belonging to 21st and 23rd Tank Corps cannot move adjacent to the enemy. They are restricted by their current Areas of Operations.

That's all the non-artillery units dealt with.
Now for the artillery units.

Select 116th Gun Artillery Regiment, hex (19,7). The information we want to know about here is the artillery unit's range and firepower. In the unit display on the right of the screen, we can see a gold bar (which displays the offensive characteristics of artillery units) and a blue bar beneath it (which displays defensive information).

For the moment, all we are interested in is the 3 pieces of offensive information. From left to right, they are chance to hit, 2+ on a 6-sided die (a hit kills one step), ammunition expenditure, 3 Attack Bullets out of the 6 Bullets currently available and range to target, 5 hexes.

There is no need to move any of your artillery units, they are all in range.

● Reviewing Your Troops

(Pretty much completely revised.)

Let's start by looking at a typical division or equivalent.

Select the 199th Tank Brigade from the 21st Tank Corps, hex (21,9). All 4 units belonging to the tank corps are conveniently present in the same hex. The Organisation Panel below the mini-map describes details about the tank corps, not the individual units which comprise it. We learn the division's Name (21st Tank Corps), its Integrity (50% combat bonus to all component units within 4 hexes of the Minor HQ (always the leftmost of the small, green NATO symbols in the bottom-left of the panel), and the graphic of the unit's Formation HQ.

The condition of each combat unit in a division or equivalent is summarized by the colored dots underneath the NATO symbols. There is one dot for each step in the unit. Green indicates that step is healthy. Orange indicates that step is being repaired by a timed replacement. Red indicates that step is dead.

(A). Combat Units

Combats are fought between your units and enemy units adjacent to your units. Strongpoints, a sort of stationary unit, cannot attack but they can defend. Let's look at some typical combat units and evaluate their fighting prowess.

Select the 199th Tank Brigade from the 21st Tank Corps, hex (21,9). Here's what you learn from examining the data in the Unit Display Area. In the top left corner is the unit icon which you are already familiar with. The unit's name is directly above it.

To the right of the icon is a row of four soldier silhouettes. We measure the size of a unit by the number of silhouettes, or steps, allocated to it. As a unit takes casualties, these steps are

replaced by skulls. As soon as all the steps have been replaced by skulls, the unit is eliminated (KIA).

The next graphic to the right is an orange circle, overprinted with a white numeral (2 in this example). This number measures the resilience of the unit to the rigors of combat.

In game terms, it means the unit can replace 2 casualty markers without drawing on the Soviet pool of replacements.

The final graphic in the top row is a pictorial image of the main equipment used by the unit. Here you see the silhouette of a KV heavy tank.

Below this line is the red attack bar, which can display up to 7 pieces of information.

(1). The yellow die describes the unit's Direct Fire (Attack) value. In this case, the tank brigade will cause an additional casualty in close combat on a roll of 4+. This roll is in addition to the close combat die/dice rolls. Direct Fire (Attack) casualties can only be caused in conjunction with a close combat. This is a change (and we think a big improvement) from the Direct Fire (Attack) mechanics used in our Battlefront game. Direct Fire (Attack) cannot be used against strongpoints, or against hexes where all the defenders are entrenched, or hedgedhogged.

(2). The row of up to 6 Bullets describes the unit's current combat capability. The number of Bullets shaded green tells you how many Bullets will be expended by each attack the unit makes. The number of Bullets shaded green or unexpended tells you how many Attack Bullets you have available. The number of Bullets shaded green, unexpended or expended tells you the maximum number of Bullets the unit may carry in any single turn. In this example, the 199th Tank Brigade expends 2 Bullets every time it attacks, has 3 Bullets available this turn and can carry up to 6 Bullets at any one time.

(3). The large, white numeral is the unit's combat attack value. Basically, a close combat involves summing participating attack values and comparing them to participating defense values then reducing that comparison to an odds ratio where a die roll will determine the outcome in steps lost for each side. The 199th Tank Brigade's combat attack value is 24, which includes the 50% bonus for integrity.

(4a). The tank silhouette below the Bullet row informs us the 199th Tank Brigade has a tank shock value. The size of this value is shown by the small red dots to the right of the silhouette, in this case +2. In any close combat, all attacking forces are evaluated and the unit with the highest tank shock value will add this value to the close combat die roll. Of course, defending units usually have a competing anti-tank value which is subtracted from the die roll.

(4b). Sapper shock is similar to tank shock. It is used only against strongpoints, and there is no counter-measure which can reduce the die roll bonus. In order to see an example, we will have to look at a different unit. A unit cannot have both a tank shock value and a sapper shock value.

Select the 2nd Sapper Regiment in hex (19,7). The hammer and spanner icon identifies the unit as having a sapper shock capability. The 3 red dots immediately to the right identify the size of the die roll bonus, in this case +3.

(5). Back to the 199th Tank Brigade. All units belong to a specific formation. The small graphic immediately to the upper right of the tank brigade's combat attack value identifies the brigade's formation, in this case the 21st Tank Corps.

(6). The grouping of yellow dots further to the right describes the number of attacking combat odds shifts which this unit will get provided it is in attack supply. The 199th Tank Brigade gets 3 such shifts to the combat odds column used in a close combat. The maximum value is 8.

(7). An orange soldier silhouette identifies a unit as capable of creating a detachment. The 199th Tank Brigade cannot do it, so we need to look at another example. Select the 148th Rifle Regiment from the 47th Rifle Division, in hex (21,7). Detachments are useful for slowing down your opponent when your forces are retreating.

Below the red attack bar is the blue defense bar. Up to 5 pieces of information can appear on the defense bar. Select the 199th Tank Brigade again.

(1). On the far left of the defense bar is a small entrenchment icon, a crossed pick and shovel. This tells you that the unit is capable of entrenching. Whether it can entrench at any given time is shown by the Entrench button in the Activity Panel immediately above the Unit Display. Units in contested territory, or that have performed some other action in a turn, cannot entrench.

(2). The blue die describes the unit's Direct Fire (Defense) value. In this case, the tank brigade will cause an additional casualty in close combat on a roll of 4+. This roll is in addition to the close combat die/dice rolls. Direct Fire (Defense) casualties can only be caused in conjunction with a close combat. Every unit defending in a hex gets the opportunity to cause an additional casualty. Nothing can negate a unit's ability to use its Direct Fire (Defense) capability.

(3). The row of up to 6 jerrycans describes the unit's current general supply state. Each turn, every unit which can trace a path of any to a functioning HQ will replenish its general supply to the maximum value allowed. This path cannot include any enemy controlled hexes, or any hexes containing enemy units. In this example, the maximum allowed is 6. Whenever a unit performs an activity, 1 jerrycan is expended.

(4). The large, white numeral is the unit's combat defense value. The 199th Tank Brigade's combat defense value is 26, which includes the 50% bonus for integrity.

(5). The tank silhouette below the jerrycan row informs us the 199th Tank Brigade has a tank defense value. The size of this value is shown by the small red dots to the right of the silhouette, in this case -2. In any close combat, all defending forces are evaluated and the unit with the highest tank defense value will subtract this value from the close combat die roll. Tank defense values cannot be negated.

Armoured units use a tank defense value. Mechanised units usually use a half-track defense value while all other units use an anti-tank defense value. Select the 148th Rifle Regiment, hex

(21,7) and you can see the tank silhouette is replaced by an anti-tank silhouette, with a die roll modifier of -2.

There are minor differences in how these 3 types of anti-tank values can affect a close combat. Tank defense allows a full subtraction. For example, if the best tank shock value among the attacking units is +1, and the best tank defense value among the defending units is -4, then the net modifier is -3. Half-track defense allows a maximum subtraction of -1.

So, in the above example, the net modifier would be -1. Anti-tank defense cannot reduce the final die roll modifier to less than 0.

Should all 3 types be present in the same defending hex, the defender gains the benefit of whichever type is the most advantageous.

(B). Artillery Units

Select the 3rd Guards Artillery Regiment, hex (19,8). Here's what you learn from examining the data in the Unit Display Area.

In the top left corner is the unit icon which you are already familiar with. The unit's name is directly above it.

To the right of the icon is a single soldier silhouette. Artillery units never have more than one step, and never have timed replacements.

The final graphic in the top row is a pictorial image of the main equipment used by the unit. Here you see the silhouette of a 122mm cannon.

Below this line is the gold attack bar, which always displays 3 pieces of information.

(1). The yellow die describes the artillery unit's Indirect Fire value. Rolling this number or better will cause a single casualty to the target hex. Artillery attacks distant target hexes independent of close combat. If the target hex contains a strongpoint or any entrenched units, 2 dice are rolled instead of 1 and both dice rolls must be equal to or better to cause a casualty.

Furthermore, this number can be modified (usually for the worse) by entrenchment and/or terrain. Make sure the artillery regiment is still selected, then mouse over the 9th Infantry Regiment from the 108th (H) Light Division, hex (15,6). A single die roll of 2 or better is needed to cause a casualty. Mouse over any of the strongpoints within range. Two dice are rolled on these targets, and both rolls must be 2 or better to cause a casualty.

Up to 4 artillery units are allowed to fire at a particular target hex. This is allocated on a turn-by-turn basis. Mouse over any target hex in range, and the number of small grey squares across the top of the hex tells you how many are allowed this turn, 4 in this case.

Once an enemy occupied hex has been attacked by a close combat, no further artillery attacks are allowed against it. There is no limit to the number of times a particular enemy unit can be attacked, just the number of artillery attacks against a single hex and the prohibition on shelling hexes that have already been hit by a close combat. Artillery units can never make more than 1 attack per turn.

(2). The row of up to 6 Bullets describes the artillery unit's current combat capability. The details are the same as those for combat units. An artillery unit with insufficient Bullets on hand cannot attack.

(3). The yellow number inside the khaki hex-shaped icon is the artillery unit's range. In this example, the 3rd Guards Artillery Regiment can shell targets up to and including 4 hexes distant from its location.

Below the gold attack bar is the blue defense bar. The 5 pieces of information shown here are exactly the same as combat units.

(C). Support Units

Select the 2nd Heavy Anti-Aircraft Regiment, hex (20,7). Here's what you learn from examining the data in the Unit Display Area.

In the top left corner is the unit icon which you are already familiar with. The unit's name is directly above it.

To the right of the icon is a single soldier silhouette. Support units never have more than one step, and never have timed replacements.

The final graphic in the top row is a pictorial image of the main equipment used by the unit. Here you see the silhouette of an 85mm Anti-Aircraft Gun.

Below this line is the light blue attack bar, which displays either 1 piece of information, or none at all. Support units with an anti-aircraft capability display a hex icon overprinted with a range. Any enemy air missions falling within the units zone have their effect reduced. Other types of support units have no information at all.

Below the light blue attack bar is the blue defense bar. The 5 pieces of information shown here are exactly the same as combat units.

(D). Headquarter Units

Select the HQ, 23rd Tank Corps, hex (21,11). Here's what you learn from examining the data in the Unit Display Area.

In the top left corner is the unit icon which you are already familiar with.

The unit's name is directly above it.

To the right of the icon is a single soldier silhouette. HQ units never have more than one step, and never have timed replacements.

The final graphic in the top row is a pictorial image of a typical Soviet staff officer.

Below this line is the green attack supply bar, which displays 2 pieces of information. The number of green shell icons beside the small artillery icon tell you how many artillery Attack Bullets have been handed out to eligible units this turn. The number of green shell icons beside the small combat icon tell you how many close combat Attack Bullets have been handed out to eligible units this turn. In this case, both values are 2.

The blue defense bar displays 2 pieces of information.

(1). Every HQ broadcasts a general supply radius, originating in the hex it occupies at the start of the turn. The broadcast is measured in the same OPs a unit uses to move. The mobility icon to the left of the OPs value tells you the type of movement used to broadcast the OPs.

In this example, the supply radius extends out 60 OPs from the HQ using wheel movement. At any time you can hit the 's' key. Those hexes shaded green are within your side's general supply net. All units which begin a turn within that net, or which move within it during a turn, are provided with general supply.

(2). The large, white numeral is the HQ's combat defense value. The HQ, 23rd Tank Corps' combat defense value is 10. HQ units never get an integrity bonus.

Finally, the OPs available for movement for all units is shown in the yellow bar alongside each unit's defense bar.

● Artillery Fire Missions

(This feature was introduced in our Battlefront game. Only minor changes have been made to it since.)

It's time to shell the enemy!

Select the 8th Gun Artillery Regiment, hex (17,9). It has a range of 5 hexes so just about every enemy unit is within range. Most of the possible targets are strongpoints, and strongpoints always require a 'double' hit to cause a casualty. Shell the strongpoint in hex (15,8). You will probably destroy it; if not, select another artillery unit and try again. Each artillery unit can fire once each turn, provided it has enough Attack Bullets.

Next, shell the strongpoint in hex (14,7). Keep shelling until you destroy it. Before you can shell the enemy unit in that hex, it has to be spotted. Select the 678th Rifle Regiment from 411th Rifle Division, hex (16,8), and move it 1 hex northwest, into hex (15,8). Two units from the German 62nd Infantry Division are spotted. Shell them with every artillery unit you can.

There are 2 things to note. The target units benefit from a -1 die roll modifier (entrenchment), making them harder to hit and a maximum of 4 artillery units may fire at this hex each turn. Once you have reached this maximum, the cursor changes to a 'no more fire allowed' icon. The 4 small boxes across the top of the hex display the effectiveness of your shooting. Hits are colored green, misses red.

Fire all of your artillery at whatever target you choose.

There are some important things to keep in mind when using artillery. Whenever possible, entrench your artillery before firing, or at least stack it with an entrenched unit. Watch your ammunition. Nearly every artillery unit uses more ammunition (Attack Bullets) when it fires than it receives from attack supply. Usually, a HQ will issue more ammunition to an artillery unit which meets the criteria for a refit.

● Air Support Missions

(This feature was introduced in our Battlefront game. Only minor changes have been made to it since.)

The Air Support Area is beneath the battlefield, between the Asset Placement Area and the Replacement Area. Up to 2 types of air support missions can be available. In Kharkov, the Soviets have only one type, the Germans have two.

There are 3 air support missions available to the Soviets.

Right-clicking anywhere in the Air Support Area will bring up the Air Support Popup. Here you will find details about each type of air support available. You are told the die roll required to score a hit, the number of missions available, the chance the mission will scatter into an adjacent hex, the maximum range from any friendly unit that the mission can be used and the radius affected by the mission. In this example, the values are die roll (3), number of missions (3), scatter chance (20%), range (12 hexes) and blast radius (1 hex).

Mousing over the Turn boxes at the bottom of the Air Support Area will provide information on the availability of your air support missions in future turns.

Click on any of the circular icons showing a plane. The cursor changes to an aircraft graphic inside a blue, circular icon. It can be placed on any non-shaded hex on the battlefield.

Use your 3 air support missions anywhere you like.

Unlike interdiction, once placed, air support missions cannot be undone.

Air support missions are used like artillery, but their extra range makes them very useful for counter-battery against exposed enemy artillery units. (I know I'm repeating myself, but I can't emphasize too much how important it is to keep your artillery units entrenched.)

● Anti-Aircraft Operations

(Minor changes.)

Select the 2nd Heavy Anti-Aircraft Regiment, hex (20,7).

The information on the regiment's attack bar tells you that enemy air support missions and interdiction made within 1 hex of where the anti-aircraft unit is located will be adversely affected.

Furthermore, objectives can be assigned static AA protection. Right-click on the town of Pervomayskiy, hex (16,9), and move the cursor over the Soviet graphic. In the upper right of the popup, you are told the radius covered by the objective's AA protection, 1 hex in this example, *and the negative effect of the AA on enemy air support missions, a -1 die roll modifier.*

Let's try it. There's no point in moving the 2nd Heavy Anti-Aircraft Regiment to Pervomayskiy so we'll move closer to the enemy, hex (17,7), and provide some protection for the forces on the front line.

● Using the Combat Display

(Major changes. It has been greatly simplified. The only decisions required of the player are which units to use in the close combat.)

The artillery barrage unleashed above may well have subtracted a few German positions that we actually need for this lesson, so please reload Lesson Three before continuing. The Combat Display appears whenever you start a combat. So, how's that done?

Select the 686th Rifle Regiment from 411th Rifle Division, hex (15,9). Position the cursor over the enemy strongpoint adjacent and north, hex (15,8), of the regiment. The cursor becomes a pair of clashing red and blue arrows, informing you the attack is legitimate.

Click on the enemy strongpoint. A combat graphic appears over the target hex while beneath the battlefield the Combat Display Area appears, replacing the Control Panel, Asset Placement Area, Air Support Area and Replacement Area.

The first decision you should make is which units adjacent to the target hex you wish to commit to the close combat. The best way to do this is to click on the 'Maximize Combat Results' button, which is located in the lower centre of the screen.

Do this now and you'll see the Combat Results Table in the lower right of the screen has been updated to show what will happen when the strongpoint is attacked using all adjacent units. A combat result displayed in green text is an overrun.

To add or withdraw units from a close combat, select them from the battlefield. Tap the space bar or click on the unit icon in the Unit Display Area to toggle each unit into or out of the close combat. Try it.

Right-clicking anywhere in the Combat Display Area will bring up the current odds calculation.

The factors involved in calculating the final combat odds are all described here.

Check the game manual for a full explanation of each. Note that there are no special attacks in this game, so that line will always be blank.

Right-clicking anywhere in the Combat Results Area (lower right of screen) will bring up the full Combat Results Table for the combat.

In this example, the CRT used is 'Fortifications' and the odds column when all adjacent units are committed is 7-1. This is as good as it gets, so go ahead and resolve the combat by clicking on the 'Conduct Combat' button.

When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Four

Topics Covered

- Putting in Your First Attack
- The Dice in Combat

● Putting in Your First Attack

(Minor changes.)

Let's look at tactical factors more closely. Tactical combat odds shifts take into account a lot of factors, and there's a detailed list in the game manual. Here's a summary, and a brief statement of their purpose.

Combats are not really isolated events; nearby troops, even if they don't participate, exert an influence in addition to the more easily identified factors of terrain, rivers, minefields, detachments and the number of hexsides across which the attack is mounted. In the Unit Control Area, immediately to the right of the Combat Display Area, are two views of the tactical situation. The first is a direct extract from the battlefield. The second is an iconic view of what's happening across each hexside.

The hexsides across which you are currently capable of attacking the enemy are identified with red, orange or green arrows. Attacks through green arrow hexsides earn a tactical benefit and may allow Direct Fire (Attack), those through red or orange hexsides do not. We are going to put in an attack (close combat) against the Hungarian light infantry regiment in hex (15,6). We are going to commit the 5th Guards Tank Brigade, the 41st and 47th Rifle Divisions and one regiment from the 253rd Rifle Division.

Move them into contact as follows.

5th Guards Tank Brigade
102nd Rifle Regiment/41st Rifle Division
139th Rifle Regiment/41st Rifle Division
244th Rifle Regiment/41st Rifle Division
148th Rifle Regiment/47th Rifle Division
334th Rifle Regiment/47th Rifle Division
353rd Rifle Regiment/47th Rifle Division
981st Rifle Regiment/253rd Rifle Division

from hex (16,7) to hex (14,6)
from hex (17,7) to hex (15,7)
from hex (17,8) to hex (15,7)
from hex (16,7) to hex (15,7)
from hex (21,7) to hex (16,5)
from hex (21,9) to hex (16,6)
from hex (19,6) to hex (16,5)
from hex (18,6) to hex (15,5)

Select the 5th Guards Tank Brigade. To initiate the close combat, click on the Hungarian light infantry brigade. Next, click on the Maximize Combat button to add every adjacent unit to the close combat.

The odds column to be used in the close combat is 12-1. That's pretty good.

Now for an explanation of how this value is reached. Right-click anywhere in the Combat Display Area to bring up the Combat Odds Calculation popup.

(1). Unit Strengths

The Soviets have a total attacking strength of 126 points; the Hungarians have a total defending strength of 16 points. That produces a combat odds ratio of 7-1. You are also told that adding another 2 points of attacking strength would boost the odds ratio to 8-1.

(2). HQ Bonus

The Soviets enjoy a bonus of four combat shifts in their favor, contributed by the 6th Army HQ. You can always find out the current bonus by bringing up the HQ Unit popup on the battlefield. That brings the odds up from 7-1 to 11-1.

(3). Tactical Bonus

The more directions you attack the enemy from, the fewer obstacles you have to fight through and the lack of nearby enemy all contribute to a higher tactical bonus. As described in the last lesson, only those hexsides you are attacking from which have a green arrow count for the tactical bonus. Check out the Unit Control Area for this close combat, and you'll see that 3 hexes are contributing to the tactical bonus while 2 are not.

To find out the range of Tactical Bonuses for the Soviets, go to the Terrain Effects/CRT Table. You will have to temporarily quit out of the Combat Display. Click on the Incidental button.

The pie slice diagrams tell you that your tactical bonus ranges from -3 shifts if there are no eligible hexsides all the way to +6 shifts if all hexsides are active (and contain an attacking unit, of course). Start the close combat again, and use the Maximize Combat button.

The hex containing the 5th Guards Tank Brigade is not an eligible hexside because it contains only 4 combat steps of attackers. The enemy units in hex (14,7) contain 5 steps.

The general rule is that an attacking hex is only eligible for the tactical bonus if it contains more steps of combat units than the total number of enemy steps (of any type) adjacent to it, excepting only the target hex of the close combat.

The hex containing all 3 regiments of the 41st Rifle Division isn't eligible because of the enemy minefield present.

The net tactical bonus in this example is +3 shifts, increasing the combat odds ratio from 11-1 up to 14-1.

(4). CRT Adjustment

Sometimes a Combat Results Table includes combat shifts favorable to the defender; not so in this example.

(5). Unit Quality

The Soviets have one elite unit participating in the attack; that's the 5th Guards Tank Brigade. The Hungarian unit is not elite. The general rule here is the attacker gains one odds shift if at least one participating unit is elite. The defender gains one odds shift if at least one defending unit is elite. If both sides have an eligible elite unit, the effect is cancelled out. Elite units are identified by a gold background in the Unit Display. In our example, the lone Soviet elite unit increases the odds from 14-1 to 15-1.

(6). Minefield Effect

If the defending units occupy an enemy minefield hex, up to 3 combat odds shifts can be awarded against them. It is not applicable in this example.

(7). Entrenchment/Hedgehog Effect

If the defending units are entrenched or hedged, they can receive up to 5 combat odds shifts in their favor. It is not applicable in this example.

(8). Minimum Combat Odds

This is an information only line. To attack enemy units on this CRT, a minimum odds ratio of 1-2 is required. This has been easily achieved.

(9). *Special Attack Effect*

This feature is reserved for extraordinary combat options such as Japanese banzai attacks. There are no Special Attacks in Kharkov.

(10). Final Combat Odds

The CRT on which this close combat is being fought does not have a 15-1 odds column. The nearest odds columns are 12-1 and 20-1. All combats are always resolved on the odds column less than or equal to the final odds obtained.

So, this close combat is resolved at 12-1.

Go ahead and click the Conduct Combat button. I rolled a 2, killing all 3 steps in the Hungarian unit and losing one of my own.

● The Dice in Combat

(Minor change from Battlefront, major change from Decisive Battles.)

In any single close combat, several dice can be rolled. Here's a list.

All rolls are simultaneous.

(1). CRT Casualty Roll

Steps lost by the attacker and the defender are determined. If the total number of steps defending a hex is more than 4, two dice can be rolled. If 5 steps, there is a 25% chance of 2 dice. If 6 steps, there is a 50% chance of 2 dice. If 7 steps, there is a 75% chance of 2 dice. If 8 or more steps, the chance of 2 dice is 100%.

If the CRT casualty roll results in a 'Sur' (Surrender) result for the defender, it is the only roll taken into account. Surrender results occur only at very high odds. The attacker can never surrender.

(2). Defender Retreat Roll

To the right of the CRT odds column is the retreat column. A separate die is rolled with a 'DR' result forcing the defending units to retreat. Retreat priorities are explained in the next lesson.

Every casualty caused by an artillery fire mission or an air support mission will add +1 to the retreat roll.

(3). Direct Fire (Attack) Roll(s)

One unit with a Direct Fire (Attack) value from every eligible attacking hex can roll, provided there is at least one unentrenched unit in the defending hex. The unit with the best value is always chosen. It is possible to get up to 6 Direct Fire (Attack) dice rolls.

(4). Direct Fire (Defense) Roll(s)

Every unit with a Direct Fire (Defense) value in the target hex always rolls. However, if the CRT casualty roll causes a 'Sur' result, Direct Fire (Defense) casualties to the attacker are not applied. It is possible to get up to 4 Direct Fire (Defense) dice rolls.

When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Five

Topics Covered

- Taking Casualties
- Combat is an Action for the Attacker
- How Units Retreat
- Attacking Un defended Strongpoints
- Using the Combat Advisor
- Using the Artillery Advisor
- Attacking Defended Strongpoints

• Taking Casualties

(No changes.)

Well, we're back where we left off the last lesson.

Let's look at what happens after a combat has been executed.

To refresh your memory, we used eight Soviet combat units to attack the Hungarian light infantry regiment in hex (15,6). The combat result was A1-D3; 1 Soviet dead step and 3 dead Hungarian steps, eliminating that unit.

When more than one unit of the same side participates in a combat, which is usually the case for the attacker, and often the case for the defender, a decision to allocate the casualty has to be made.

Here's how that works. The unit with the greatest number of vital steps takes the casualty. If more than one unit meets this criteria, then the unit with the lowest attack value (for attacker's casualties) or lowest defense value (for defender's casualties) is chosen.

If more than one casualty has been inflicted, the process is repeated.

Select the 5th Guards Tank Brigade, hex (14,6). This unit was chosen to receive the casualty, being the only one with 4 steps.

Neither player has any say in how casualties are distributed.

● Combat is an Action for the Attacker

(Minor changes.)

This is just a quick reminder that combat usually uses up a unit's one Action allowed in a turn. The defending units are not affected because it's not their turn.

On the battlefield, those units who participated in the combat have a yellow dot in the upper right corner of their unit icon. They have used their action capability for this turn.

Close combats which result in an overrun result do not use up the one Action usually allowed, although they do consume 1 attack Bullet. Note that overruns achieved against an enemy hex containing nothing but a strongpoint never consume Attack Bullets.

● How Units Retreat

(No changes.)

Only the defending force's units can be required to retreat.

Defending units will try to retreat whenever an 'R' appears in the combat result.

Here are the rules regarding retreats.

Units can retreat a maximum of one hex. They cannot retreat into hexes which already contain a full count of units (4, in the tutorial scenario). They cannot retreat into hexes they are not allowed to move into, nor across hexsides they are not allowed to traverse. Of course, they cannot retreat into enemy occupied hexes.

If a stack of more than 1 unit is required to retreat, units will retreat one at a time. A unit with more steps will retreat before a unit with fewer steps. Where units have equal numbers of

steps, leg units will retreat before horse units which will retreat before wheeled units (and motorised leg units) which will retreat before tracked units.

If steps are equal within a movement category, the unit with the greatest defense value will retreat first. The retreat destination is chosen according to the following priorities.

- (1). Not occupied by a friendly unit, not adjacent to enemy unit(s), not across an unbridged river.
- (2). Not occupied by a friendly unit, not adjacent to enemy unit(s), across an unbridged river.
- (3). Occupied by a friendly unit, not adjacent to enemy unit(s), not across an unbridged river.
- (4). Occupied by a friendly unit, not adjacent to enemy unit(s), across an unbridged river.
- (5). Occupied by a friendly unit, adjacent to enemy unit(s), not across an unbridged river.
- (6). Occupied by a friendly unit, adjacent to enemy unit(s), across an unbridged river.
- (7). Not occupied by a friendly unit, adjacent to enemy unit(s), not across an unbridged river.
- (8) Not occupied by a friendly unit, adjacent to enemy unit(s), across an unbridged river.

If there are 2 or more legitimate retreat hexes with the same priority, the computer will choose the one closest to friendly lines.

If a unit cannot retreat for whatever reason, or it retreats into an unoccupied hex adjacent to an enemy unit(s), it may take an additional casualty. The likelihood of an additional casualty, or step loss, is linked to the unit's quality and supply state. For elite units, the chance is 30%. For regular units, the chance is 50%. For substandard units, the chance is 100%. For isolated units (regardless of quality), the chance is always 100%.

Isolated units are easily identified. In the Unit Display Area, isolated units have a blood-red background. In the Battlefield popup, isolated units have a blood-red background behind the unit icon.

● Attacking undefended strongpoints

(No changes.)

This is a straightforward procedure which we've done once already in a previous lesson. Let's hit a few more strongpoints.

Select the 2nd Sapper Regiment, hex (17,6). Move it to hex (15,9). Attack the enemy strongpoint directly north, hex (17,5). Use the Maximize Combat button to commit every adjacent unit to the attack.

The combat odds are 7-1, and with the Sapper Shock die-roll modifier of +3 for the sapper unit, every result is an overrun which will kill the strongpoint and consume no Attack Bullets. There is a chance that the strongpoint will inflict a casualty, not from the CRT

itself but from its Direct Fire (Defense) value of 5; i.e. a die-roll of 5 or 6 by the defending strongpoint will cause a 1 step loss to the attacker.

Click on the Conduct Combat button. Exit the Combat Display. The strongpoint is destroyed, revealing an enemy minefield symbol. That minefield has been there since the start of the game and can only be cleared when the minefield hex comes under control of your troops, as delineated by the front-line arrows.

Let's knock off another strongpoint. Select the 2nd Sapper Regiment again, hex (15,9). Launch a close combat against the strongpoint to the northwest, hex (14,8).

Commit all adjacent units (use the Maximize Combat Result button) which will produce an odds ratio of 2-1 or 3-1, which gives a chance of missing out on an overrun result. That is not a chance you should take, if at all avoidable. We need to call up some more combat power. Select the 678th Rifle Regiment from the 411th Rifle Division, hex (16,8) and move it to hex (15,8). Attack the same strongpoint again, maximize the result and you'll see this time we have an improved odds ratio. Execute the close combat.

Finally, attack the strongpoint in hex (14,9) and maximize the result. The odds are 4-1 again, (unless you've been unlucky) and a guaranteed overrun. Click on the Conduct Combat button.

● Using the Combat Advisor

(Minor changes.)

Our next task is to attack hex (14,7) which contains both enemy units and a strongpoint. Before moving anyone, we can ask the Combat Advisor for help. The Combat Advisor takes the role of an army intelligence officer, providing a pretty good idea of the maximum combat result which can be achieved against enemy hexes, given the current battlefield situation. This is the same function used by the AI when playing against the computer.

Click on the Combat Advisor button, it's the centre-right button in the Unit Control Area. All enemy hexes against which you can mount an attack are overprinted with a translucent combat graphic and the best odds value that can be achieved. The small green die tells you what the minimum roll needed for an overrun is.

Odds shown in green predict an excellent result. Odds shown in other colors identify targets on a sliding scale. Yellow indicates a good opportunity, orange represents a possible opportunity while red indicates a poor opportunity. All targets which are not clearly identified because the hidden units option is in effect, are so indicated with a grey '?', regardless of the odds which can be achieved.

You need to remember that combat advice is a momentary snapshot of the possibilities. Taking an action with just one unit may alter the situation. If you think this may have

happened, click the Combat Advisor button once to remove the advice, then a second time to generate a new snapshot.

● Using the Artillery Advisor

(This feature was introduced in our Battlefront game. Only minor changes have been made to it since.)

The Artillery Advisor provides a complimentary function to the Combat Advisor.

The enemy force defending hex (14,7) is very tough, so a heavy shelling is required to weaken them before we put in a close combat. Remember, once a hex has been close assaulted, it cannot be shelled in the same turn.

Click on the Artillery Advisor button, it's the centre-left button in the Unit Control Area. All enemy hexes which you can shell with an artillery unit overprinted with the die roll(s) required to cause a casualty. Note that any beneficial die roll modifiers awarded to the target hex appear only when you mouse-over that target hex.

Again, artillery advice is a momentary snapshot of the possibilities. Taking an action with just one artillery unit may alter the situation. If you think this may have happened, click the Artillery Advisor button once to remove the advice, then a second time to generate a new snapshot.

● Attacking Defended Strongpoints

(No changes.)

The most important point to remember about attacking defended strongpoints is this. The strongpoint must be attacked and destroyed before the units sheltering under it can be attacked.

The second important point to remember is the defense value of a defended strongpoint is either the defense value of the strongpoint itself, or the defense value of the troops under it, whichever is greater. Furthermore, strongpoints always benefit from the anti-tank value of the terrain they occupy and the units they shelter.

Let's get back to the attack on hex (14,7).

The Combat Advisor informs us the best we can do is an attack on the 3-1 column.

That's not good enough so it's time to commit an air support mission and the 4 artillery units we are allowed to use against a single hex per turn.

Use the Artillery Advisor. The most powerful Soviet artillery units can score an automatic hit, at least for the moment. Click on the target hex (14,7). Those artillery units which can achieve the advised result are shaded green to distinguish them from other units.

One such unit is the 671st Howitzer Regiment in hex (18,9). Click on it then mouse over the target hex. A roll of 1 on both dice will destroy the strongpoint. Shell the hex.

The strongpoint is destroyed.

Now the strongpoint is destroyed, we can shell the troops. Use the Artillery Advisor again. This time, the best achievable result is a 'double 2'. Only the 29th and 236th Howitzer Regiments, both in hex (17,12) can do this. The difference between the '1' on the artillery unit's attack bar and the 'double 2' over the target units tells us there is at least one entrenched unit in the target hex and that they are receiving an artillery die roll modifier in their favor of 1.

You have to move both artillery units to get them in range of the target. Move them to hex (17,10). Use both of them to shell the target hex.

Only 1 more artillery unit can be used. Use the combat advisor and use an artillery unit of your choice to shell the target hex. You will need a 'double 3' to succeed. Good luck. Commit the air support mission to the target hex. You will need a '3' to kill a step. I got lucky with the air support mission but missed with the last artillery unit. So, there were just 2 steps of Germans left in the target hex, but they are still formidable. If you have more or less, the numbers below will change a bit, but the principal is still the same.

Use the Combat Advisor again. It looks like I can put in an attack at 5-1 now. Click on the target hex. The units which will participate to get these odds are shown with their regular icons; those not needed are 'greyed' out.

Select any of the participating units. Its movement route to join the attack is shown by a dotted line. You can manually move all the participating units into the attack if you like, but there is a very convenient short-cut. With the Combat Advisor on, click on the target hex. Click 'control (o)'. Every unit recommended by the computer will march into position.

That's not the end of the story. It will occasionally happen that the Combat Advisor will see new possibilities once the first advice has been acted upon. Use the Combat Advisor again. This time, the addition of just one more tank brigade will improve the odds to 8-1.

Move the 38th Tank Brigade into position, either manually or by using 'control (o)'. Maximize then execute the close assault. I rolled a '2' which killed both defending units. Although I took no casualties from the CRT, the defending anti-tank unit rolled a '4' for its Direct Fire (Defense) effect. The 38th Tank Brigade took the casualty; it had 4 steps and the lowest attack strength among the participating units.

Finally, the CRT die roll of '2' did not result in an overrun so that's it for those units this turn. They may be able to move a few hexes, but that's all they can do for the rest of the turn.

When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Six

Topic Covered

- Using the Replay Function (Minor changes.)

• Using the Replay Function

In email games, and games against a computer opponent, you have access to a replay function which will allow you to review what occurred in the previous turn.

The Replay button is in the Control Panel. (Centre row, far left.) Click on it. There are five function buttons and a message display area in the Replay Panel. From left to right the function buttons do the following.

(1). The Run Replay button plays your opponent's previous turn as one continuous movie. Let's do that first. Click on the Run Replay button and sit back and watch the Soviet 6th Army demolish the enemy forces in front of them. Below the function buttons there is a summary of the turn's achievements. In this example, the Soviets have eliminated 14 enemy steps, 4 units and destroyed 9 strongpoints.

(2). The Rewind Replay button takes you back to the start. Click on it.

(3). The Replay Next Action button takes you through your opponent's turn one action at a time. This gives you a chance to read the text and get an exact idea of what is happening. The text appears in the panel above the function buttons. Try this for yourself.

(4). *The Run to Next Fire Action button is similar to the Run Replay button except that it pauses at each artillery or air support mission, and each combat, to allow an unhurried view of the carnage. You will need to click the button again to move onto the next fire action or combat.*

(5). The Run to Next Combat button is similar to the Run to Next Fire Action button except that it pauses only at each. It does not pause at artillery or air support missions. You will need to click the button again to move onto the next combat.

Finally, in the top right corner of the Replay Panel is a small 'go-away' button. Use it to dismiss the replay function.

In email games, against vicious and cunning human opponents, you really need to review the replay!

Lesson Seven

Topics Covered

- Viewing Eliminated Units
- Clearing Minefields
- Clearing Detachments
- Taking Replacements

● Viewing Eliminated Units

(No changes.)

There are two ways to view eliminated units. We have touched on the first already.

That's the Order of Battle screen. Click on it now. (Top row, centre, in the Control Panel.)

So far, the only dead units are German. Page through the German OB until you reach VIII Korps. There is a skull over one unit from the 62nd Infantry Division, that's the 162nd Panzer Jager Battalion. Click on this unit and the message area will tell you when and where it was eliminated.

Click on the Resume button.

The second way is visually descriptive. Go to the Control Panel and click on the KIA button (top row, left). It's the button with the skull on it. All units on the battlefield are removed, replaced by the units eliminated so far, in the location where they fell. There are three, in a neat cluster. You can right-click on them and bring up the Battlefield popup we have already used.

Click again to restore the battlefield. The hot key for this button is k.

The German infantry regiment and the Hungarian light infantry regiment appear as dead units on the battlefield but not in the Order of Battle screen. If you check the Unit Popups for these units you'll see they have 'one life' which means they reappear in a rear area with just 1 step, representing the small cadre of men who survived the debacle and are ready to be reorganized.

● Clearing Minefields

(No changes.)

You cannot clear minefields until you control the hex they occupy. Let's take a look at an enemy minefield. Right-click in hex (14,9).

The hex is controlled by the Germans, and the minefield therein is light blue in color.

On the right side of the Battlefield popup is the graphic which gives you a clear picture of the chosen hex's relationship to adjacent hexes. Overprinting the minefield in this graphic is the numeral '1'.

The minefield will be cleared as soon as the hex is controlled by your units, and the numeral decrements to '0'.

The minefield clearing process occurs at the very beginning of your opponent's turn. Enemy minefields in hexes you control decrement by 1 if there is an enemy unit or strongpoint adjacent to the hex in question, at the start of your opponent's turn. Otherwise they decrement by 2 unless a unit with bridge repairing capability is in the hex, in which case the minefield decrements by 3.

Enemy minefields have three effects on your operations. Neither effect is reduced in any way by the current state of the minefield. They exert their full effect until completely cleared.

Minefields increase the OP cost to enter an affected hex by 7 OPs in Kharkov. They prevent the award of favorable tactical shifts in combat when units in them attempt to attack the enemy. When your units defend in hexes containing an enemy minefield, you will suffer an adverse combat odds shift.

Move the 981st Rifle Regiment from 253rd Rifle Division from hex (15,8) to hex (14,9). The front line moves, making this hex eligible for mine clearing in the next turn.

● Clearing Detachments

(No changes.)

This is easy. You don't have any control over clearing detachments. They persist for 1 turn, then disappear.

They have the same effect on your operations as do minefields, except there is no adverse effect for defending on them.

● Taking Replacements

(Minor changes.)

You can't make an omelette without breaking eggs, as they say. So, no matter how well the battle goes, your units will take casualties and therefore need to absorb replacements. Replacements are managed in the Replacement and Transport Area. That's underneath the battlefield, immediately to the left of the Unit Control Area.

Right-click anywhere in the Replacement and Transport Area to bring up the popup. The first column (In) tells you how many armor and infantry replacements you received for the highlighted turn. For example, on Turn 4 (this turn), Turn 5 and Turn 6, you get 1 armor and 2 infantry replacements.

The second column (Pool) tells you how many of each type have accumulated; in this case 4 armor and 8 infantry replacements.

The third column (Black Skull graphic) tells you how many steps have been lost in your army which cannot be replaced by the internal resources of the affected unit(s); in this case none.

Finally, the fourth column (Red Skull graphic) tells you how many steps have been lost in your army which can be replaced by the internal resources of the affected unit(s); in this case 1 armor and 2 infantry steps.

Release the popup and examine the Replacement and Transport Area.

To the right of the Armor and Infantry Replacement icons is the number of replacements of that type currently available. Below them are 2 more buttons.

The button on the left identifies units of the chosen type which can take a replacement. Click on the armor replacement icon, and then on the Identify Eligible Units button. The only unit identified is the 38th Tank Brigade.

The button on the right lets you cycle through eligible units, not that there are any to cycle through here. Click on the Cycle through Eligible Units button. Look at the Activity Panel immediately above the 38th Tank Brigade's Unit Display. Click on the Armor Replacement button there to rebuild the tank brigade to full strength.

The Soviets have 2 rifle regiments with a step loss. The first of these, the 902nd Rifle Regiment, hex (14,13), can take a replacement. Rebuild that unit now. The second, the 699th Rifle Regiment, hex (14,11), cannot take a replacement this turn. It was part of a combat which did not achieve an overrun result.

The Undo button will reverse a replacement action.

You have 2 options when considering replacements for units with timed losses (red skulls). You can assign a replacement, just as you do for fixed losses. The red skull is replaced with a vital step and the timed replacement capability is restored. You don't waste the timed replacement capability if you use a fixed replacement.

The second option is to wait for the prescribed number of turns to elapse, whereafter the step will be recovered. When steps are recovered through the timed replacement structure, action capability is not consumed.

Managing your replacements carefully is important. Always try to keep a few in reserve for emergencies. Don't assign them just because a unit can accept them.

When you have finished with the lesson, and if you want to look at a new lesson, click on the Load and Save Game button found in the Control Panel in the bottom left of the screen.

Lesson Eight

Topics Covered

- Clearing Minefields Revisited
 - Capturing Objectives
 - How Alert Points Work
 - Viewing the Victory Screen
- (No changes.)

• Clearing Minefields Revisited

(No changes.)

Examine the Battlefield popup for hex (14,9). The 981st Rifle Regiment's occupation reduced the minefield strength from '1' to '0', thereby destroying it.

• Capturing Objectives

(No changes.)

All objectives on the map are named.

For the moment, ignore the nationality flags to the left of the objective names. They identify which side earns Alert Points (APs) when an objective is captured. APs are dealt with in the next section.

This turn the Soviets have captured Krasnograd.

Right-click on the city of Krasnograd, hex (2,8). Move the cursor over the Soviet nationality graphic in the bottom row. Here is what it tells you.

For each of turns 1 through 8, the Soviets will receive 50 Victory Points (VPs) each turn they control the objective. There is also a one-time bonus of 200 VPs for capturing the objective. Twenty Replacement Alert Points have been awarded to Germany.

Objectives are considered captured from the turn they are occupied, but VP awards are not made until the following turn. This means you have 1 turn to recapture an objective without conceding its VP value.

• How Alert Points Work

(Minor changes.)

So what are Alert Points (APs)?

APs are the mechanism we have chosen to address the difficulties of dealing with finite map boundaries, to reward progress in the right direction and to reflect the responses of higher military commands to unexpected successes and/or disasters.

Many objectives, when captured, may award APs to one of the belligerents. An AP award is made only once, the first time an objective is captured. There are 2 types of APs.

The first earns credits towards new units, and the second earns credits towards additional replacements, both infantry and armor. In the Krasnograd example, Germany received 20 AP credits towards replacements, and 1 AP credit for new units. These new units are not present in the tutorial, but exist off-map in the game and will appear in Dnepropetrovsk 2 turns after Krasnograd is captured.

● Viewing the Victory Screen

(Minor changes.)

The Victory screen is accessed from the Control Panel (middle row, right centre). Click on it.

The top panel tells you the current VP position, as well as a prediction of the final result, assuming no further casualties or changes in control of objectives.

The centre section of the screen reminds you of the game parameters you have chosen.

The four panels at the bottom of the screen tell you the margins required for each level of victory.

For a more detailed description of the progress of the battle, click on the Victory Details button. You'll find it in the upper-right corner of the screen, to the left of the mini-map and immediately below the Variant Details button.

Here you can see the casualties caused each turn, a summary of dice rolls and the change in the front line from turn to turn.

This concludes the tutorial. Be sure to check out the SSG website www.ssg.com.au and the Matrix website www.matrixgames.com for more game info and visit the forums where any further questions can be answered.

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