WARGAME ACADEMY'S WARGAMER'S GUIDE TO GARY GRIGSBY'S *WAR IN RUSSIA*; MATRIX GAMES' 3.0 EDITION (WWW.MATRIXGAMES.COM)

- Original 19xx Strategic Simulations Rulebook
- *Strategic Simulations Update (bold gray italics)*
- Matrix 3.0 Update Notes
- **Examples: (bold dark blue)**
- Original Designers: Notes (green)
- **Formulas (bold orange)**
- Wargame Academy Modifications from various sources; minor formatting changes not distinquished. Various statements of SSI warranty, disk replacement; have been deleted (magenta). Send all comments, additional information to Bill Thomson; bill@wargameacademy.org; www.wargameacademy.org

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1: INTRODUCTION

On June 22, 1941, Germany launched its blitzkrieg warfare against the Soviet Union. Armored and motorized forces quickly punched through the Soviet front line and countless divisions were cut off and surrounded. Fighting a withdrawal action, the Soviet army retreated eastward and finally made a stand at the gates of Moscow. Plagued with bad weather, long supply lines, Russian partisans, and increased Soviet resistance, the offensive finally ground to a halt.

In December 1941 the Russians launched their counteroffensive. This was merely the first year of strategic warfare waged on the eastern front. You can play WAR IN RUSSIA up until July 1945, fighting for four years over the large map which includes Germany, Poland, the Balkans, Italy, Finland, and Russia.

Numerous campaign games and scenarios are included to allow players many different starting points and game lengths. Units are either Infantry or Armored Corps which are usually composed of several divisions which are further broken down into squads, artillery, tanks, anti-tank guns, and recon vehicles. You can change production of aircraft and tanks, and an editor is included to allow you even more flexibility in changing or designing your own scenario.

Your Game Box Should Contain:

a game disk, this rule book, and a data card.

2: STARTUP

Backup Disks

Your game disk has no physical copy protection, so please make a backup copy and put the original away for safekeeping. Use the information that came with your computer to make the backup copy.

3: README FILE

Your game disk contains a README file that contains rules updates and/or errata. Be sure to read this file carefully before playing the game.

3.1 Installing the Game

Follow the instructions on your data card   to install and play the game.

3.2 Documentation Check

To verify that you have a legitimate copy of the game you will be asked to answer a question using information from this rule book. **Note**: Do **not** count section headings as parts of paragraphs.

4: PLAYER AIDS

Due to the scope of the game, the player aids listed below were designed to help you get started playing the game.

4.1 How to Play

In order to give you an idea of how to play the game, see the "Tutorial" section on page 35.

4.2 Timeline

See the "Historical Timeline" section on page 46 to review the dates for the various battles that took place in the European theater.

4.3 Checklist

In the "Player's Checklist" section on page 11 you can review some of the important tasks you need to perform in any given turn.

4.4 Strategy and Tactics Hints

A section on "Strategy and Tactics" on page 40 has been included to give you some helpful hints on playing the game.

5: GAME CONCEPTS

5.1 Game Scale

Each hex is 20 miles across with each turn representing 1 week. The land units are, at the Corps level, composed of up to 8 divisions.

5.2 Game Map

The game map, based on a hex grid system, covers an area from western Germany in the west to almost the Ural Mountains in the east; from southern Finland in the north to the Caucasus Mountains in the south. The various terrain features used on the map are as follows:
• Bridge
• Mountain
• Clear
• River
• Heavy Forest
• Sea
• Major City
• Swamp
• Minor City

5.3 Combat Forces

There are three types of land combat units in WAR IN RUSSIA as shown below. Each Corps may contain anywhere from 1-8 divisions. The units in the game are rated for experience and readiness and may contain infantry squads, artillery, anti-tank guns, flak guns, recon vehicles, and tanks. Each unit has its Combat Value (CV) calculated and is displayed on the screen when the unit is accessed. HQ units contain the air formations which can perform various air missions. HQs can also contain units which may be used to reinforce an attack/defense in the Combat Execution Phase. For additional details see the "Units" section on page 12. Enemy combat units which are not adjacent to a friendly unit may be hidden (not displayed) on the map.
• Infantry Corps (Korps)
• Tank Corps (Panzer Korps)
• HQ Units

5.4 Game Abbreviations

A list of the game abbreviations is on page 49.

6: TALKING TO THE COMPUTER

6.1 Using the Keyboard

`Note for IBM users: Make sure your [Num Lock] and [Caps Lock] are *off* before playing.

Use the following keys to move the cursor around the map in large increments:

$$I$$
$$J \qquad K$$
$$M$$

Use the following keys on the numeric keypad to move the cursor:

$$7 \qquad\qquad 9$$
$$4 \qquad\qquad 6$$
$$1 \qquad\qquad 1$$

Other options can be accessed with hotkey commands. These commands are listed on the back of this rule book, and can be displayed during the game by pressing the '/' key.

Horizontal and Vertical Menu Selections

Use the "4" and "6" keys or the left and right arrow keys to move horizontally across the menu. Use the "8" and "2" keys or the up and down arrow keys to move vertically in the menu. Press Enter to accept your selections. Some of the menus that require these keystrokes are the Setup Menu and the Delay/Display Menu.

6.2 Using the Mouse

Use the mouse to move the pointer over the menu items and buttons. To move around the map, place the pointer at the edges of the map. To select hexes or move units, click the pointer over a desired hex. Use the left mouse button to activate the Unit Menu over a particular unit. If you click the right mouse button you will be given information about the friendly units in the hex.

All keyboard commands also work if you are using a mouse.

7: SETTING UP THE GAME

When you start a game, the Setup Menu allows you to load saved games or set up new ones. You can return to this menu while playing by selecting Esc or pressing "Q" on the General Orders Menu and SETUP on the Options Menu.

Check your data card for information on scenarios.

SETUP MENU
SCENARIO PLAYER BALANCE
Saved game Axis Computer Max Help Axis
Campaign 41 Soviet Computer Help Axis
Campaign 42 Both Human Even
Typhoon Both Computer Help Soviet
Case Blue Scenario Edit Max Help Soviet
Campaign '43
ACCEPT SETUP

If you are using the keyboard, see the section on "Delay/Display Menu" on page 4 to make your menu selections.

SCENARIO allows you to load a saved game or start one of the scenarios.

Saved Game loads a previously saved game. You will be asked to choose from a list of ten different saved games (A-J). It would be helpful to look at your directory before playing the game or keep a list of your saved games. **Note**: When you load a saved game, remember to reset the Player and Balance options.

Campaign '41 (June 22, 1941 to July 1945) starts the game at the beginning of "Operation Barbarossa." The Axis forces initially receive special Blitzkrieg rules from June-August 1941. This scenario ends in a draw after the first week of July 1945 if neither side has met its victory conditions.

Campaign '42 (June 28, 1942 to July 1945) begins with the 1942 summer Axis offensive code-named "Operation Case Blue". This scenario ends in a draw after the first week of July 1945 if neither side has met its victory conditions.

Typhoon (September 21, 1941 to March 1942) starts with the collapse of the Kiev pocket. The Axis forces are poised to strike toward Moscow. Historically, the Soviets made a successful stand right before Moscow. This scenario is played on a limited area of the total map. This scenario ends in a draw after the first week of February 1942 if neither side has met its victory conditions.

Case Blue (June 28, 1942 to April 1943) also begins with the Axis summer 1942 offensive, but is limited to the area surrounding Stalingrad. This scenario ends in a draw after the first week of April 1943 if neither side has met its victory conditions.

Campaign '43 (July 5, 1943 to July 1945) starts with the final Axis offensive at Kursk. This scenario ends in a draw after the first week of July 1945, if neither side has met its victory conditions.

PLAYER control selections choose whether sides are human- or computer-controlled. There is also an option to Edit Scenarios (see the "Edit Scenarios" section on page 32). These control options may be changed during play by selecting the Setup option in the Options Menu. With these options you may play through games commanding the side with the most interesting strategic situation, or replay saved games to see if you could do better than your opponent in an identical situation.

BALANCE selections allow you to play with both sides on equal footing or to favor one side over the other.

- **Even** means the game will operate with normal rules for both players.
- **Help** gives the player the following advantages:
  - o   Production of war equipment is doubled.
  - o   Player receives double infantry replacements.

- o   Player receives Axis Blitzkrieg supply bonuses on all clear weather turns.
- **Max Help** gives the player the same advantages listed above at the HELP level plus the following:
  - o   Readiness is recovered at double the normal rate.
  - o   The player's units lose 5% readiness per player phase instead of 25% for normal attrition.

OPTIONS MENU

ALLIED PLAYER
ORDERS
END TURN
SAVE
SETUP
ACCEPT

ORDERS takes you to the Orders Phase where you issue all orders regarding the movement of your combat forces.

END TURN ends the orders phase of each player's turn and starts the Execution Phase.

SAVE allows you to store the current game to disk. Select one of ten different letters (a-j) to save your game under. It is helpful to keep track of your saved games.

SETUP returns you to the Setup Menu described on page 3.

ACCEPT puts your choice into action.

DISPLAY/DELAY MENU

The Display/Delay Menu allows you set the Display Level for the amount of information you wish to see in the Combat Phase and the Delay Level for the length of time the information stays on the screen.

DISPLAY/DELAY MENU
DISPLAY DELAY
NONE NONE
LOW LOW
MEDIUM MEDIUM
HIGH HIGH
ACCEPT

DISPLAY regulates the amount of information the player will receive as combat is resolved. A High selection will display all combat but will slow the execution considerably.

DELAY determines how long each message is displayed on the screen. Play with this to find the level that works for you.

ACCEPT sets your selections and exits the menu.

You can change the display/delay levels during the Orders Phase by selecting UTIL then DELAY with the mouse or by pressing the O key. You can change the levels during the Execution Phase by pressing [Space].

8: TURN SEQUENCE

Each game turn consists of the following sequence of phases:
Axis Player Phase:
1. Events
2. Partisan
3. Supply
4. HQ Control
5. Replacements
6. Readiness Recovery
7. Orders
8. Combat
Soviet Player Phase:
1. Supply
2. HQ Control
3. Replacements

4. Readiness Recovery
5. Orders
6. Combat
7. Victory Conditions
8. Summary of Turn
9. Sequence Phases

Events Phase determines how the war is going on the Western and Italian Fronts. See the "Events" section on page 32.
Partisan Phase determines the extent the partisans damage rail and supply lines. See the "Partisans" section on page 27.
Supply Phase calculates the supply level of each hex on the map. See the "Supply" section on page 26.
HQ Control Phase determines which units are within the HQ Control Area which gives them a supply bonus. See the "Headquarters" section on page 21.
Replacements Phase allows replacements to be received by HQ units and then distributed to the various units under their command. See the "Replacements" section on page 27.
Readiness Recovery Phase allows units to gain readiness lost due to movement, combat, or attrition. See the "Readiness" section on page 29.
Orders Phase allows you to move your units and give them orders, adjust production, fly air missions, etc. See the "Orders Phase" section on page 6.
Combat Phase executes the plots made by the player in five separate pulses. See the "Combat" section on page 15.
Victory Conditions Phase determines if a player has won the game or the end of the game has been reached. See the "Victory Conditions" section on page 32.

9: ORDERS PHASE

At the start of the player's Orders Phase, the map will be displayed. Just below the map are 13 mouse function 'buttons'. These functions may be performed by moving the pointer over the desired button and clicking the mouse. Listed below is a brief description of the mouse function buttons and their keyboard equivalents:

GENERAL ORDERS MENU

BUTTON DESCRIPTION KEYBOARD
SHOW Show Plots Shift/P
(March, Rail, Plot)
 . . . . Move Large Increments I, J, K, M
CEN Center Cursor F2
MAP Change Map Scale F1
CNTL View Enemy-controlled Hexes F9
UTIL Utility Menu NONE
NEXT Next Unit N
HQ Get Parent HQ H
CITY Display Factories C
ESC Return to Options Menu Q, Esc
SHOW (Shift/P) shows unit plots.
 . . . (I, J, K, M keys) allows you to move the cursor on the map in large increments in order to move large distances very quickly.
CEN (F2 key) centers the map on the present cursor location.
MAP (F1 key) switches the map scale, displaying either a tactical or a strategic view of the map.
CNTL (F9 key) displays which hexes on the map are enemy-controlled. Units can only plot into enemy-controlled hexes (no normal movement is allowed).
UTIL (None) accesses the Utility Menu (see page 10).
NEXT (N key) accesses the next unit.
HQ (H key) accesses the unit's parent HQ.
CITY (C key) allows you to view the resources and factories in the city. You may transport factories to the Urals (if you are the Russian player) or change aircraft/tank production models.
Esc (Q or Esc key) exits to the Options Menu (see page 4).

Unit Menu Options

The Unit Menu can be accessed by moving the map cursor over a friendly Corps unit and clicking the left mouse button. If the unit is an HQ, then the Unit HQ Menu will be displayed (see page 7).

UNIT MENU

BUTTON	DESCRIPTION	KEYBOARD
MOVE	Move Unit	Alt/V
TRANSFER	Transfer Units	Alt/T
PLOT	Plot Path for Unit	P
RAIL	Rail Move	Alt/V+R
RAIL TRAN	Rail Transfer	Alt/T + R
CHANGE HQ	Change Parent HQ	Alt/H
REMOVE	Delete Unit from Map	R
NEXT	Get Next Unit	N
SUPPLY	Get Special Supply	Shift/S
CHANGE	Change Unit	F3
Esc	Exit Unit Men	None

MOVE (Alt/V) allows you to move units within friendly-controlled hexes. Moving units will cost readiness based upon the number of hexes moved. Non-mechanized Corps can be moved up to five hexes with a readiness cost starting at 19%. Mechanized Corps can be moved up to ten hexes with readiness costs starting from 10%. Increased readiness costs are assessed when crossing a mountain, swamp, or river. Rain and blizzard conditions cause additional readiness loss. The Axis readiness is affected more during a blizzard than the Soviets'.
TRANSFER (Alt/T) transfers divisions between corps/armies. Transferring units will lose readiness based on the number of hexes between units. Rain and blizzard conditions increase the readiness cost of transferring units. Axis units' readiness is affected more so than Soviet units' during blizzard turns. To transfer, a unit must have a readiness of 50 or more. Non-HQ units can contain a maximum of 8 units; HQ units can contain up to 25 units. The maximum range a unit may transfer is based on the lowest Supply Level of either the origin or destination hex. For example, if the origin hex is at SL 4 and the destination at SL 2, then the destination hex can be a maximum of only 2 hexes away in order to transfer.
PLOT (P) allows you to move a unit into enemy-controlled territory. Plotting over or through an enemy unit will initiate an attack during the Combat Resolution Phase. The Infantry units are limited to two hexes and the Mechanized units have a range of five hexes. If the Supply Level of the hex is zero or the weather is Rain or Blizzard, Mechanized units can only plot 2 hexes.
RAIL (Alt/V + R) moves a unit on a rail hex to another point on the rail line. All rail hexes between the beginning and end points must be friendly-controlled. Each rail hex movement will cost 1% readiness. Rail movement costs Rail Points to move.
RAIL TRAN (Alt/T + R) transfers units between units on rail hexes. Readiness cost is 1% per hex. All rail hexes between the units must be friendly-controlled. Non-HQ units can contain a maximum of 8 units. Rail movement costs Rail Points to move.
CHANGE HQ (Alt/H) changes the parent HQ of a corps.
REMOVE (R) disbands corps/army units that have no subordinate units.
NEXT (N) moves the cursor to a different corps unit.
SUPPLY (Shift/S) supplies the unit during the current turn with an extra readiness boost. Readiness gain for a unit supplied is equal to the supply level of the hex or the maximum readiness gain, whichever is less. This gain is reduced during rain, snow, and blizzard conditions. During rain the number is modified by .67; during snow the Axis is modified by .81 and the Soviets by .9; and during blizzard the Axis is modified by .5 and the Soviets by .81.
CHANGE (F3) lets a player select another name and/or unit type from an available list of units.
ESC (Esc key) exits the Unit Menu. Unit HQ Menu The Unit HQ Menu can be accessed by moving the map cursor over a friendly HQ unit and clicking the left mouse button. If the unit is not an HQ, then the Unit Menu will be displayed (see page 6).

UNIT HQ MENU

BUTTON	DESCRIPTION	KEYBOARD
MOVE	Move HQ	Alt/V
TRANSFER	Transfer Units	Alt/T
RAIL TRAN	Rail Transfer	Alt/T+R
AIR TRAN	Air Transfer	Alt/A
RAIL	Rail Move HQ	Alt/V+R
REPLACE	Replacement Level	+ or -
SET OBJECT	Set HQ Objective	Alt/G
HQ CONTRL	Set HQ Control	Alt/K
INTERDICT	Bomb Units	Alt/I
BOMB AF	Bomb Airfield	Alt/F
BOMB CITY	Strategic Bombing	Alt/S
AIRLIFT	Airlift Supplies	Alt/L
SHOW OBJ	Show Objective	O
Esc	Exit HQ Menu	

MOVE (Alt/V) allows you to move units within friendly-controlled hexes. Moving units will cost readiness based upon the number of hexes moved. Increased readiness costs are assessed when crossing a mountain, swamp, or river. Rain and Blizzard conditions cause additional readiness loss. The Axis readiness is affected more during a Blizzard than the Soviets'.

TRANSFER (Alt/T) transfers divisions between units. Transferring units have a readiness cost based on the number of hexes between units. Rain and Blizzard conditions increase the readiness cost of transferring units. Axis units readiness is affected more so than Soviet units during Blizzard turns. HQ units can contain up to 25 units.

RAIL TRAN (Alt/T + R) transfers units between two Corps/Army/HQ units on rail hexes. Readiness cost is only 1% per hex. All rail hexes between the units must be friendly-controlled. HQ units can contain up to 25 units. Rail movement costs Rail Points to move.

AIR TRAN (Alt/A) transfers air groups between HQ units.

RAIL (Alt/V + R) moves HQ by rail from one rail hex to another point on the rail line. All rail hexes between the beginning and end points must be friendly-controlled. Each rail hex movement will cost 1% readiness. Rail movement costs Rail Points to move.

REPLACE (+ or -) sets the HQ replace level. This will determine at what point replacement starts automatically. The default is 50% and can be increased or decreased in increments of 5%.

SET OBJECT (Alt/G) sets the objective for that HQ and its subordinate units. Useful only if HQ control is set to Computer
Operational Control.

HQ CONTROL (Alt/K) allows you to select the level of computer control over your HQ's units. A player may place an HQ and all of its subordinate combat units under three levels of control: Human Full Control, Computer Operational Control, and Computer Full Control. To set the Computer Control HQ feature press Alt/K or click HQ CONTROL on the HQ Menu. The three levels are explained below:

- **Human Full Control**: The human player controls all land and air forces subordinate to an HQ.
- **Computer Operational Control**: The human player selects an HQ's target base and the computer will deploy the HQ's assets to capture or defend the target base. HQs with this status will have a single asterisk (*) after their names on the display.
- **Computer Full Control**: The computer will be in full strategic and operational control of all of the HQ's assets. HQs with this status will have double asterisks (**) after their names on the display.

INTERDICT (Alt/I) allows aircraft with sufficient range and an Interdict Mission to attack enemy ground forces. Each attack from an HQ will use one qualifying air group.

BOMB AF (Alt/F) lets a player bomb an enemy airfield within range of bombers with an Airfield Attack mission.

BOMB CITY (Alt/S) bombs cities within range of bomber groups with missions of Strategic Bombing.

AIRLIFT (Alt/L) resupplies a unit by air. Air Units must be placed on Air Transport Missions.

SHOW OBJ (O) shows the designated objective for that HQ.

ESC exits the HQ Menu.

Unit Information Displays

The Unit Information Displays can be accessed by moving the map cursor over a friendly unit. Some basic information about the unit is displayed in the bottom text window. An example is shown below:

<div align="center">
Date: 6/22/41 Clear
Plot: 47th Panzer Korps cv: 120: 6: 1e
HQ Control: 2nd Panzer Army OP:150
Supply: 9 Terrain: Clear Location: 29 28
</div>

The above unit data is taken from the Campaign 1941 scenario. The date is 6/22/41, the weather is Clear, and the unit has no Plot as of yet. The unit is in Clear Terrain. The unit is the 47th Panzer Korps and has a Combat Value (CV) of 120; it has 6 attached sub units, and an entrenchment value of 1. Its superior HQ is the 2nd Panzer Army which has 150 Operation Points. The unit is in a Supply Level 9 hex at location x coordinate 29 and y coordinate 28.

If the above unit was an HQ, then after the HQ's name would be its Combat Value and the number of Air Groups in the HQ. The number of attached units and the entrenchment level are not displayed. When the cursor is over a friendly unit, clicking the right mouse button will bring up additional Unit Information Displays. A list of all the attached units will be shown. If the unit is an HQ, a "C" after the unit's name will tell you that the unit is a subordinate unit to the HQ and not in Reserve status (it is a separate unit in another hex). Units in Reserve status with an HQ are attached directly to the HQ and move with the HQ.

You can access attached units by clicking on the letter to the left of the unit name or by pressing the keyboard letter. A more detailed description of the unit will be displayed. If the unit is a panzer or tank unit, then at the bottom of the display will be the panzer or tank sub-formations which you can access by clicking on the letter next to the name. You can change equipment by clicking the CHANGE button when you have accessed a specific unit. You can change the leader of the HQ or access friendly Air Groups attached to the HQ by clicking on one of the two buttons at the bottom of the display. If you have accessed the Air Group Display, then you can select a specific Air Group to examine, CHANGE the aircraft type, or change its MISSION. At the far right of the Air Group Display will be a short abbreviation of the current mission that the Air Group is flying.

Plot Menu

To plot movement place the cursor over the unit and select Plot Mode. You can use the cursor, keyboard numbers, or keypad to plot your path. You can also place the mouse pointer over each desired hex you wish to move into and click the left button to plot your path. Infantry units can only plot 2 hexes of movement. Mechanized units can normally plot 5 hexes of movement; only 2 hexes can be plotted in the cases where the Supply Level of the hex is 0, or the weather is Rain or Blizzard. The various plot commands are listed as follows:

PLOT MENU
BUTTON DESCRIPTION KEYBOARD
MODE Set Display Mode NONE
CLR Clear Plot C
END End Plotting E
STOP Static Attack S
WAIT Wait 0
MAP Change Map Scale F1
CEN Center Cursor F2
NEXT Next Unit N
CNTL Show Hex Control F9
BOMB Artillery Bomb. B
SHOW Show Plot Path Shift/P
ESC Exit Menu Esc

MODE allows you to cycle through various unit options.

CLR (C) erases the existing plot.

END (E) ends the potting for the unit.

STOP (S) plots a static attack. You first need to enter a movement direction plot followed by an "S" for a static attack. When a static attack is ordered, the unit will not advance if the enemy hex is empty after the combat occurs. Static attacks are normally used when a few attacking units are attacking the same enemy unit or when a unit is attacking from a city and you do not wish the unit to advance.

WAIT (0) orders a wait plot allowing the unit to pause for that pulse. Wait plots are used in coordinating attacks on a single enemy unit when some of the attacking units must move first to get into position to attack. At other times, wait plots are necessary so units do not get jammed up trying to plot into the same hex.

MAP (F1 key) switches the map scale, displaying either a tactical or strategic view of the map.

CEN (F2 key) centers the map on the present cursor location.

NEXT (N) accesses the next unit.

CNTL (F9 key) displays which hexes on the map are enemy-controlled. Units can only plot into enemy-controlled hexes (no normal movement is allowed).

BOMB (B) plots an artillery bombardment. You first need to enter a movement direction plot followed by a "B" for a bombardment. When an artillery bombardment is ordered, the unit will fire its artillery weapons. Bombardment attacks are normally used to continually reduce a defender, especially his readiness, preparing to assault with greater forces later. The defender artillery bombardments help to keep the offensive player in a reduced state.

SHOW (Shift-P) shows the current plot path.

ESC (Esc Key) exits the Plot Menu.

Utility Menu Options

The Utility Functions may be listed by selecting the Utility Menu (UTIL Button) shown described above:

UTILITY MENU

BUTTON	DESCRIPTION	KEYBOARD
MUR/URAL	Murmansk/Urals Factories	Alt/C
VICTORY	Victory Point Display	Alt/O
POOLS	Production Pools	Alt/P
ADD UNIT	Add New Unit	F5
USAAF	Examine USAAF	Alt/U
INDUSTRY	View Industry	NONE
RAIL	View Rail Hexes	F10
ADD HQ	Add New HQ	F6
EXIT	Exit Game - Go to DOS	Alt/Q
DELAY	Set Delay/Display Levels	D
MOVE FAC	Move Factories	U
AX REVIEW	Axis Combat Review	Alt/N
SU REVIEW	Soviet Combat Review	Alt/M
FAC CONTROL	Human/Comp. Factory	Control Shift F
ESC	End Orders	Phase Q

MUR/URAL(Alt/C) displays the Murmansk and Ural factories.

VICTORY(Alt/O) displays the victory cities needed for the current scenario. Captured cities will be highlighted.

POOLS(Alt/P) displays the friendly Replacement Pools of equipment, aircraft, and squads. To examine production factories for a specific item of equipment, select the letter to the left of the equipment name.

ADD UNIT(F5 key) allows you to add a new unit on an empty friendly-controlled hex. You cannot plot a newly created unit. You must wait a full turn.

USAAF(Alt U) starts in 1943. The Soviet player can see air support from US 8th and 12th Army Air Corps. Always under computer control; cannot transfer.

INDUSTRY(NONE) allows you to view a list of cities and production capacities for Heavy Industry, Artillery, Armor Cars, Oil, Resources, Railyard, and Manpower.

RAIL(F9 key) displays all friendly-controlled active rail hexes.

ADD HQ (F6 key) allows you to select a new HQ (if there any available) to add to the map.

EXIT (Alt/Q) allows you to exit to DOS. You will be given an option to exit ("Y") or return to the game ("N").

DELAY (D) allows you to adjust the Display and Delay Levels. For more details see "Display and Delay Menu" on page 4.

MOVE FAC (U) allows you to move factories.

AX REVIEW (Alt/N) allows you to review the Axis combat reports. The squares represent unit locations, triangles represent land combat locations, and circles represent air combat locations. Gray represents the Axis; red the Soviets.

SU REVIEW (Alt/M) allows you to review the Soviet combat reports. The squares represent unit locations, triangles represent land combat locations, and circles represent air combat locations. Gray represents the Axis; red the Soviets.

FAC CONTROL (Shift F) allows you to toggle between full human or full computer control of production.

ESC (Q) allows you to return to the Orders Menu in order to End Turn, Save, Setup. See "Orders Menu" on page 6 for more details.

HOTKEYS

The following is a list of "Hotkey" Functions for which there are no mouse equivalents:

HOTKEY DESCRIPTION
Shift P Show Plots
F8 Remove Units From Map
Orders Phase / Player Checklist
1. Check for reinforcements.
2. Upgrade units with new equipment.
Check pools.
3. Check the supply level of your units (Airlift or Special Supply).
4. Change HQ control of any units that may be necessary.
5. Change HQ Replacement Level if necessary.
6. Place HQs under computer control — set objective if necessary.
7. Perform air missions.
8. Move units.
9. Plot units.
UNITS

    There are three types of land combat units in WAR IN RUSSIA as shown below. Advancing Infantry Corps have the capability to plot only 2 hexes into enemy territory whereas Tank Corps can plot up to 5 hexes. Each Corps may contain anywhere from 1-8 divisions. The units in the game are rated for experience and readiness and may contain infantry squads, artillery, anti-tank guns, flak guns, recon vehicles, and tanks. Each combat unit has its Combat Value (CV), number of attached units, and entrenchment level displayed on the screen when the unit is accessed. HQ units have their Combat Value and # Air Groups displayed on the screen when accessed. HQ units contain the air forces which can perform various air missions such as Ground Attack, Interdiction, Airfield Attack, Strategic Bombing, Training, Air Transport, Escort, and CAP. HQs can also contain reserve and reinforcement units which may be used to reinforce an attack/defense in the Combat Execution Phase. HQs have a leader whose rating influences each battle in which he has subordinate units. HQs also have a Replacement Level which gives replacements to its various subordinate units.

-   Infantry Corps (Korps)
-   Tank Corps (Panzer Korps)
-   HQ Units

Hidden Units

Enemy combat units which are not adjacent to a friendly unit may be hidden (not displayed) on the map. These enemy units may be spotted each turn by friendly air units located in HQ units. The more air units an HQ has, the higher the chance there is of spotting an enemy unit. The air units have a range of 10 hexes to spot hidden enemy units. Units are hidden before each Orders Phase.
MOVEMENT

    There are five different modes of troop movement: March Movement, Transfer, Rail Transfer, Rail, and Plot. Each movement method has its own advantages and disadvantages as explained below. If a unit does not move in a turn, it may increase its entrenchment level.

March Movement

    In order to use March Movement, place the map cursor over the unit and click the left mouse button. The Unit Menu will be displayed. Select MOVE. Using the keyboard press Alt/V. Next, move the cursor to the destination hex and click the left button. You may also use the keypad or number keys to move the unit until you reach the destination hex. Moving by keyboard you will see the cost in readiness displayed as you move the unit (MOVE COST: #%). Troops cannot march into or out of enemy-controlled hexes or hexes with an SL of 0. You must plot into or out of these hexes. Once a unit has used March Movement, the unit cannot plot. HQs cannot launch air operations after marching. March

Movement costs less readiness to move, but more Operation Points are expended. Non-mechanized units may move a maximum of 5 hexes; Mechanized units may move a maximum of 10 hexes.

Transfer

Transfer Movement allows men and equipment to be transferred from one unit to another. To transfer men/equipment into a unit, first place the cursor over the unit and click the left button. Then select TRANSFER on the Unit Menu. Using the keyboard press Alt/T. Next move the cursor to the losing unit and click the left button (press "G"). Select the unit you wish to transfer. An Operation Point will be expended and readiness will be lost. A non-HQ unit can have a maximum of 8 attached units; an HQ unit may have 25 attached units. To be able to transfer a unit must have a readiness of at least 50. The maximum distance units can transfer is based on the lowest SL hex (either the origin or destination hex). For example, if the origin hex is at SL 4 and the destination at SL 2, then the destination hex can be a maximum of only 2 hexes away in order to transfer.

Rail Transfer

Rail Transfer Points to move.

Rail

Rail moves a unit on a rail hex to another point on the rail line. All rail hexes between the beginning and end points must be friendly-controlled. Each rail hex movement will cost 1% readiness. Rail movement costs Rail Points to move.

Plotting

In order to enter an enemy hex or attack an enemy unit, you must first plot your orders. Plotted orders are not carried out until the Execution Phase. Units can make up to five plots which can include movement direction plots, wait plots, static attack plots, and artillery bombardment plots. As you plot your orders the plots will be displayed on the screen.

To plot movement place the cursor over the unit and select Plot Mode. You can use the cursor keyboard numbers or keypad to plot your path. You can also place the mouse pointer in each desired hex you wish to move into and click the left button to plot your path. Infantry units can only plot 2 hexes of movement. Mechanized units can normally plot 5 hexes of movement; only 2 hexes can be plotted in the cases where the Supply Level of the hex is 0, or the weather is Rain or Blizzard.

To plot a static attack, you first need to enter a movement direction plot followed by an "S" for a static attack. When a static attack is ordered, the unit will not advance if the enemy hex is empty after the combat occurs. Static attacks are normally used when a few attacking units are attacking the same enemy unit or when a unit is attacking from a city and you do not wish the unit to advance.

To plot an artillery bombardment, you first need to enter a movement direction plot followed by a "B" for a bombardment. When an artillery bombardment is ordered, the unit will fire its artillery weapons. Bombardment attacks are normally used to continually reduce a defender, especially his readiness, preparing to assault with greater forces later. The defender artillery bombardments help to keep the offensive player in a reduced state. In vital areas which must be held or taken, a large concentration of artillery firepower can make a difference.

Pressing the "0" key or clicking on the WAIT option will order a wait plot allowing the unit to pause for that pulse. Wait plots are used in coordinating attacks on a single enemy unit when some of the attacking units must move first to get into position to attack. Other times wait plots are necessary so units do not get jammed up trying to plot into the same hex.

Other plot commands which displays the unit's plot.

Operation Points

As units perform various functions, such as movement and combat, Operation Points (OP) are consumed. Each side receives Operation Points during every turn based upon the amount of Heavy Industry, Oil, and Resource Points. The Operation Points are then distributed to each HQ, the amount received not to exceed the current Replacement Level of the HQ. The amount of remaining Operation Points in an HQ may affect the results of a battle. The involved units may either receive a bonus (if there are a lot of OPs) or a penalty (if there are too few OPs). The various OP costs are listed as follows:

OPERATION POINT COSTS

DESCRIPTION OP COST

March 1 per Div/Bn
HQ March Half returned to pool
Transfer 1
Plotted Move 1 per hex
Bombardment 1

Special Supply 1 per Div/Bn
Train Air Group 1 per turn
Air Missions 1
Retreat/Shatter HQ All
West/South Front Half per turn
Pz Korps 1 per turn
Tank Army 1 per turn
Shock Army 1 per turn

Readiness Cost for Movement

Units lose readiness as they move or are transferred across the map. Units have four ways to move: March Movement, Transfer, Rail Transfer, and Plot. Plot movement is executed in the Execution Phase. The readiness costs for the various methods of movement are as follows:

READINESS LOSS TABLE

MECHANIZED/NON-MECHANIZED

WEATHER MARCH TRANSFER RAIL TRANS.

Clear/Snow 10/20 60/70 1/1
Rain 35/45 85/95 1/1
Blizzard 20/30 70/80 1/1
Blizzard 35/45 85/95 1/1
(Axis 1941)

Note: There are two numbers in the table above with the first number representing the percentage readiness loss for Mechanized units and the second the percentage readiness loss for Non-Mechanized units. Example: An Axis Panzer Corps (Mechanized) is moving by Transfer. In clear weather it costs 60% readiness per hex moved.

READINESS LOSS TABLE

MECH./NON-MECH.

TERRAIN/DESCRIPTION PLOT MOVEMENT

Clear, Woods, Rail, City 10/20
Mountain 30/50
Swamp* 30/50
Across River* +10
Soviets Before 1944 +10
* Readiness loss only during Clear or Rain turns. During Blizzard turns there is no penalty due to

swamps and rivers being frozen.

Note: There are two numbers in the table above with the first number representing the percentage readiness loss for Mechanized units and the second the percentage readiness loss for Non-Mechanized units. Example: An Axis Panzer Corps (Mechanized) is executing its plots during the Execution Phase. Moving into a mountain hex costs 30% readiness. A Soviet infantry army before 1944 costs 60% readiness to move into a mountain hex.

After both players have completed their Orders Phase, all plotted moves and battles are performed during the Execution Phase. Combat is divided into five segments or pulses. All plots and combat occurring in a pulse are resolved for all units before proceeding to the next pulse. Readiness and unit losses for movement and combat are calculated separately during each pulse. Land combat can occur whenever a unit plots its movement into an enemy-occupied hex. Units are charged movement costs after entering the hex. As aircraft execute their missions, air combat between aircraft and other aircraft or ground units may occur.

Land Combat

The outcome of a battle is based on many factors. You can get an idea of the relative odds in any combat by comparing the Combat Values (CV) of the opposing forces. Both players have the ability to reinforce the combat which is handled automatically by the computer. Units may lose readiness and have a lower CV if they have to plot through intervening hexes, have engaged in combat previously, have been attacked by air units or artillery bombardments, or have already retreated.

Plotting

In order to enter an enemy hex or attack an enemy unit, you must first plot your orders in the Orders Phase. Plotted orders are not carried out until the Execution Phase. Units can make up to five plots which can include movement direction plots, wait plots, static attack plots, and artillery bombardment plots. As you plot your orders the plots will be displayed on the screen.

To plot movement, place the cursor over the unit and select Plot Mode. You can use the cursor keyboard numbers or keypad to plot your path. You can also place the mouse pointer over each desired hex you wish to move into and click

the left button to plot your path. All units can make five plots. Infantry units can only plot 2 hexes of movement. Mechanized units can normally plot 5 hexes of movement; only 2 hexes can be plotted in the cases where the Supply Level of the hex is 0, or the weather is Rain or Blizzard.

To plot a static attack, you first need to enter a movement direction plot followed by an "S" for a static attack. When a static attack is ordered, the unit will not advance if the enemy hex is empty after the combat occurs. Static attacks are normally used when a few attacking units are attacking the same enemy unit or when a unit is attacking from a city and you do not wish the unit to advance.

To plot an artillery bombardment, you first need to enter a movement direction plot followed by a "B" for a bombardment. When an artillery bombardment is ordered, the unit will fire its artillery weapons. Bombardment attacks are normally used to continually reduce a defender, especially his readiness, preparing to assault with greater forces later. The defender artillery bombardments help to keep the offensive player in a reduced state. In vital areas which must be held or taken, a large concentration of artillery firepower can make a difference.

Pressing the "0" key or clicking on the WAIT option will order a wait plot allowing the unit to pause for that pulse. Wait plots are used in coordinating attacks on a single enemy unit when some of the attacking units must move first to get into position to attack. Other times wait plots are necessary so units do not get jammed up trying to plot into the same hex.

Other plot commands available are CLR which erases all existing plots, END which ends the plotting for the unit, and SHOW which displays the unit's plot. There is a special Hotkey command, Shift-P, which allows you to view all of the plots made for the turn.

Combat Sequence

The sequence of events for each battle is as follows:
1. Bombard/Artillery Fire
Attacker Bombardment
Defender Bombardment
2. Anti-Tank Fire
Defender Anti-Tank Fire
Attacker Anti-Tank Fire
3. Assault Fire
Defender Combat Fire
Attacker Combat Fire

Losses are determined and combat strengths are reduced at each stage of the sequence before going to the next one. Unit readiness is updated and odds are calculated to determine the final combat result.

BOMBARD/ARTILLERY FIRE

During damage during this segment:
1. Infantry Squads
2. Artillery
3. Anti-Tank Guns
4. Flak Guns (Axis only)

ANTI-TANK FIRE

During anti-tank fire, are subject to damage during this segment:
• Tanks
• Recon Vehicles (Attacker only)

ASSAULT FIRE

During assault fire both sides attack with their remaining tank and infantry strength. The attacker also adds recon vehicle strength and the defender adds anti-tank strength. Only the following parts of a unit are subject to damage during this segment:
• Infantry
• Anti-Tank Guns (Defender only)

Reinforcing Units

During the Combat Phase, HQs will, at times, order combat units attached directly to the HQ as a Reserve unit to be committed to take part in a battle in which other subordinate units are engaged. The units engaged in the battle must be within the HQ Control area. Units are in Reserve status if they are listed on the HQ's Unit Information Display and do not have a (C) after their name. These Reserve units are in the hex with the HQ. Whichever Leader the computer has assigned to lead the battle will order the use of Reserves. When a Reserve unit has been committed, a message similar to the following message appears:

<div style="text-align:center">

Guderian reinforces
39th Panzer Korps
with 122nd Infantry Div

</div>

Combat Air Support

During combat an HQ may reinforce ground troops with air support. The aircraft's firepower is added into the friendly unit's artillery strength. The unit must be within range of the HQ in order to be supported. Air support is completely at random and under computer control. Aircraft may fly an unlimited number of air support missions in a turn. The number of aircraft flying from an air group is determined by the range from the HQ to the target. Air support missions may be cancelled if heavy losses are suffered from enemy fighters.

Terrain and Entrenchments

Defending units have a fortification value based on the terrain and their entrenchment level. If a unit does not move in a turn, its entrenchment level may increase one level. Units automatically increase one level until they reach level 2. After level 2 has been reached, there is a random chance based upon the Supply Level in the hex to increase a level up to a maximum of level 5. Additional entrenchments can occur only during clear and snowy weather. Units in a city are not affected by any weather restrictions. Woods, swamps, and minor cities add one to the fortification level while mountains and major cities add 3. Total losses incurred by a defending unit are divided by the unit's fort level. Attacking across a river will cut damage inflicted by tanks to one-third and halve infantry damage.

A unit's entrenchment level may decline if attacked at high enough odds.

Leaders

Each HQ is under the command of a different officer who has a leadership rating from one to nine. Leadership ratings affect many aspects of a battle. Every combat unit is attached to an HQ and usually that HQ's leader will be in charge of the battle using his rating to influence the results.

Occasionally another leader further up the chain of command may step in and take charge of the battle. This action is random and entirely under computer control. At the start of every battle the leader in charge may be able to gain additional readiness for the units involved. A leader's rating is checked to see if a retreating unit shatters, and if not, how much readiness is lost. Combat reinforcements are more likely to be committed by better leaders.

Determining Odds

During the Execution Phase you will see the combat odds displayed for the battles which take place. The odds represents the value of the attacker's modified strength (AV) compared to the defender's modified strength (DV) during the assault fire segment of the battle. Basically the odds = AV / DV. Any odds below a value of 1 are shown as 0. The results of the battle are based on the odds and, at times, the leaders' ratings. Odds are calculated differently for the attacker and defender:

Attacker Value (AV) = (4 x Tanks) + (2 x Recon Vehicles) + (number of squads and artillery)

Defender Value (DV) = (2 x Tanks) + (number of squads and AT Guns)

Combat Results

Based upon the combat odds and random factors, the losses to both the attacking and defending forces are determined. Basically there are five overall results to a given combat: the defender holds positions in the hex, the defender holds positions in the hex but the attacking units may continue to attack in the next pulse, the defender may retreat, the defender may shatter, or the defender may surrender.

HOLD POSITIONS

The defender does not retreat but holds its positions. All attacking units cancel their remaining plots.

ATTACK CONTINUATION

Normally an attacking unit may only attack once into a given enemy hex. However, if a defending unit is in city, mountain, or swamp terrain with a Supply Level greater than zero, the defending unit will not retreat unless it has less than 10 squads. If the unit does not retreat, the Supply Level of the hex is then halved and the attacker may continue to attack in the next pulse.

RETREAT

When a defender is forced to retreat, one of the attacking units will advance into the vacated hex (unless the attacking unit chose a static attack). If the advancing unit plots again into the same or another defending unit, combat will occur again in the next pulse. Whether or not a unit retreats is based on the combat odds and the defender's fortification value. The higher the value the tougher it is to force a retreat. Due to the nature of the terrain, any defending unit north of y coordinate 8 is considered to have an entrenchment value of 5 for retreat calculations only.

SHATTER

Whenever a retreating unit is reduced to a Defender Value of 50 or less, there is a chance that the combat unit will shatter and be destroyed as a fighting force. The unit is removed from the map. All artillery units are lost. All remaining readiness is returned to the HQ (OKH or RGVK) to serve as replacements. Non-ready infantry troops and armored cars are permanently lost. The Leader rating of the retreating unit's parent HQ will strongly affect the chance that the unit shatters. When a unit is shattered it is removed from the game and all remaining readiness is returned to the supreme HQ and converted into reinforcements.

NOTE: Units will automatically shatter, regardless of their Defender Value, if they are forced to retreat from a hex with an SL of 1 or greater into an SL 0 hex.

SURRENDER

A unit will surrender if forced to retreat from an SL 0 hex to another SL 0 hex or if they are surrounded and have no retreat path available. Upon surrendering, all men and equipment are permanently lost. The lost units will be reconstructed and begin rebuilding in the HQ to which the original parent HQ was assigned.

DAMAGED TANKS

Some portion of the "destroyed" tanks in a battle are, in fact, only damaged. These vehicles are repaired and placed into the Replacement Pool.

Disorganization

Disorganization may occur if too many Stacking Points (SP) are contained in an Axis Korps or Soviet Army. The leader rating of the unit is compared to the amount of Stacking Points in the unit. The higher the leader rating is and the less Stacking Points that are in the unit, the greater the chance that the unit will not suffer any effects from disorganization. Disorganization is determined at the start of each Execution Phase. The following tables are used to show the amount of Stacking Points for various units and also the percentage of readiness lost due to disorganization:

STACKING POINTS

TYPE	STACKING POINTS
Tank Corps	3
Mech Corps	3
Pz/Tank Div	3
PzG Div	3
Pz Bde	3
Mot. Div	1
Other Divs	1
Indep. sub units	0

READINESS LOSS TABLE STACK POINTS

AXIS INF KORPS	SOV INF ARMY	PZ/TANK/ SHOCK	% READINESS LOST
0-3	0-5	0-9	0
4	6	10	5
5	7	11	10
6	8	12	20
7	9	13	30
8	10	14	50
9+	11+	15+	75

Table example: An Axis Infantry Korps has 1 Pz Division (3 SP), 2 Infantry Divisions (2 SP), and a Pz Brigade (3 SP). Total Stacking Points (SP) are 8. The Infantry Korps will lose 50% readiness due to disorganization.

Readiness Cost for Combat

Defending units automatically lose 10% of their readiness whenever they are attacked by either air or ground units. Whenever units are forced to retreat they also suffer a 10% readiness loss. There is a random chance, based on the leader's rating, that the unit may lose an additional 40% readiness due to routing.

Air Combat

Whenever aircraft fly a mission they are subject to attacks by enemy air groups from the nearest HQ (containing fighters) to the target hex and any flak guns in the target hex. Air operations may be cancelled if the losses are too high. The total number of aircraft that will actually fly a given mission is based on each air group's readiness, the range to target, and the range rating of the aircraft involved. Fighter and fighterbomber aircraft can perform one bombing mission, but an unlimited number of escort missions in a turn. All other aircraft can fly one mission per turn. Escort fighters will only fly missions if they have other types of aircraft to escort. Escorting fighters normally have a shorter range than the bombers. Before selecting your target, be sure to check all of the ranges of the aircraft. Unescorted bombers will be much more vulnerable and take heavier losses. Before a target is bombed, any attacking aircraft may be engaged by enemy fighters in air-to-air combat. If there are escorting fighters, then they will

engage the enemy fighters also. Over the target the attacking air groups will be subject to anti-aircraft or flak fire. Any remaining bombers will then drop their bombs and the damage will be calculated.

If an HQ has moved during the turn, it may not fly any air operations.

During your Orders Phase your HQ Air Groups can fly the following missions as listed in the HQ Menu: Interdiction (ALT/I), Bomb Airfields (ALT/F), Bomb Cities (ALT/S), and Airlift Supplies (ALT/L). Each Air Group can be assigned a specific mission such as Escort, CAP, Ground Attack, Interdiction, Airfield Attack, Training, Strategic Bombing, and Air Transport. These individual Air Group missions can be selected by accessing the HQ, highlighting the Air Group, and then selecting MISSION.

ESCORT

Fighter aircraft can be assigned an escort mission to fly with other friendly aircraft bomber) toars the target. Escort fighters will engage enemy CPA in air-to-air combat to protect friendly bomber. To be effecit the target must be within fighter range. Fighters on escort will provide only one-half of the fighters to intercept enemy aircraft.

CAP

Fighter aircraft can be assigned a CAP mission, which means that they cannot be used for escort Missions. Fighters on CAP will intercept enemy aircraft.

GROUND ATTACK

Aircraft on a Ground Attack mission in the Execution Phase will attack enemy units which are being assaulted by friendly Corps/Armies.

INTERDICTION

Interdiction missions are attacks on enemy combat units and bridges. These missions help lower the readiness of attacked enemy units and are useful to soften up land units before the ground attacks commence. You can also use this mission to attack enemy bridges to cut the enemy's supply line. Select INTERDICT in the HQ Menu. The following aircraft types can participate in Interdiction missions: fighters, fighterbombers, dive-bombers, tank-killers, and level-bombers.

AIRFIELD ATTACK

Airfield attacks are critical in helping you achieve air superiority over the battlefield. The attack is aimed at destroying aircraft while still on the ground. The following aircraft types can participate in Airfield Attack missions: fighters, fighter-bombers, dive-bombers, and level-bombers. Select BOMB AF in the HQ Menu to bomb an enemy HQ unit.

TRAINING

Air Groups expend one Operation Point per turn while Training. The group's experience may increase each turn due to the training. The higher the experience rating of the Air Group, the less chance that the group will have its experience increased. An Air Group in training cannot perform any other mission.

STRATEGIC BOMBING

The bombing of cities is a strategic bombing mission. Once you have selected this mission for an air group, you can choose BOMB CITY in the HQ Menu. You will be prompted to select the city to bomb. Only level-type bombers can participate in strategic bombing. The bombing of enemy cities puts enemy installations temporarily out of operation for a few turns, and can also do permanent damage. The effects are shown in the table below:

DISPLAYED DAMAGE LEVEL	PERMANENT DAMAGE	OUT OF OPERATION
Light	10%	1 turn
Moderate	20%	2 turns
Heavy	30%	3 turns
Massive	40%	4 turns

AIR TRANSPORT

Airlift operations may be mounted to raise the readiness of units in a hex. It is useful for any units who are in a low Supply Level hex, have been cut off by enemy units, or have outrun their supply lines in the advance. Larger units will receive less readiness increase. Only transport and level-bomber type aircraft can airlift supplies. Units will receive more readiness as the number of participating aircraft increases. Select AIRLIFT in the HQ Menu to airlift supplies.

Readiness Cost for Combat

Defending units automatically lose 10% of their readiness whenever they are attacked by air units.

13: HEADQUARTERS

HQ units provide the leadership and administrative functions in the game. There are two types of HQ units. The first type is a Front Line HQ unit which has control over the combat units under its command. It is referred to a combat unit's parent HQ. This HQ will provide direct support to the unit, giving it replacements, increasing its Supply Level, sending reserve units/air support during the Combat Phase, and providing the leader's rating of the HQ leader in combat.

The second type of HQ unit is the Rear Echelon HQ which provides support to its subordinate HQs by modifying the amount of replacements that are distributed. Each level of HQ controls the percentage of replacements that get distributed down the chain of command. The German HQ command structure is OKW HQ (supreme command), OKH (eastern front command), and the various Army HQs. The Soviet command structure is STAVKA (supreme command) and then the various Front HQs. Headquarters store and use Operation Points (OP). As units perform various functions, such as movement and combat, Operation Points are consumed. Each side receives Operation Points during every turn based upon the amount of Heavy Industry, Oil, and Resource Points. The Operation Points are then distributed to each HQ; the amount received not to exceed the current Replacement Level of the HQ. The amount of remaining Operation Points in an HQ may affect the results of a battle. The involved units may either receive a bonus (if there are a lot of OPs) or a penalty (if there are too few OPs).

Leaders

Each HQ is under the command of a different officer who has a leadership rating from one to nine (see the "Leadership Ratings" table on page 73). Leadership ratings affect many aspects of a battle. Every combat unit is attached to an HQ and usually that HQ's leader will be in charge of the battle, using his rating to influence the results. Occasionally another leader further up the chain of command may step in and take charge of the battle. This action is random and entirely under computer control. At the start of every battle the leader in charge may be able to gain additional readiness for the units involved. A leader's rating is checked to see if a retreating unit shatters, and if not, how much readiness is lost. Combat reinforcements are more likely to be committed by better leaders.

Leader Effects on Shatter

Whenever a retreating unit is reduced to a Defender Value of 50 or less, there is a chance that the combat unit will shatter and be destroyed as a fighting force. The unit is removed from the map and all remaining readiness is returned to the HQ (OKH or RGVK) to serve as replacements. Non-ready troops are permanently lost. The Leader rating of the retreating unit's parent HQ will strongly affect the chance that the unit shatters. **NOTE:** Units will automatically shatter, regardless of their Defensive Value, if they are forced to retreat from a hex with an SL of 1 or greater into an SL 0 hex. Defensive Value (DV) = (2 x tanks) + (number of squads and AT guns).

Reserve and Air Commitment

During the Combat Phase, HQs will, at times, order combat units attached directly to the HQ as a Reserve unit to be committed to take part in a battle in which other subordinate units are engaged. The units engaged in the battle must be within a certain range of the HQ. The range is randomized for each battle, but the higher leader rating is and the closer the units are to the HQ, the better the chance that the HQ will commit additional units to the battle. Units are in Reserve status if they are listed on the HQ's Unit Information Display and do not have a (C) after their name. These Reserve units are in the hex with the HQ. Whichever Leader the computer has assigned to lead the battle will order the use of Reserves. When a Reserve unit has been committed, a message similar to the following message appears:

Guderian reinforces
39th Panzer Korps
with 122nd Infantry Div

In addition to combat units being sent to reinforce a battle, aircraft will also on occasion be sent to subordinate units within the HQ Control Area during the Combat Phase. This is completely at random and under computer control.

Relieved of Command

When issuing orders in the Orders Phase, you may replace a Leader with another Leader who is in the Leader Pool of unassigned officers. To do so place the cursor over an HQ unit, click the left button (press "G") to access the HQ Unit Information Display, select Leader (F1 key), and then choose a new Leader.

The old Leader is placed in the Leader Pool. The Axis player may not relieve Leaders from any Axis ally HQ (such as Finnish or Rumanian). Leaders on both sides may be relieved from command by the computer for reasons such as incompetence and treason. If the Leader is not executed, he will be returned to the Leader Pool after a certain amount of time has elapsed.

HQ Unit Menu

When the cursor is over an HQ unit and you click the left button ("G" key), the HQ Unit Menu will be displayed. The HQ Unit Menu options are divided into the following four sections: HQ Movement, HQ Replacement Level, HQ Control/Objective, and HQ Air Missions.

HQ Movement

The four basic types of movement for HQs or units that are attached directly (Reserves) to HQs are Move, Transfer, Rail Transfer, and Rail. Rail Transfer and Rail movement costs less readiness loss than normal Movement and Transfer. Note: HQs cannot plot movement like combat units. The HQ Unit Menu functions for movement are:

MOVE (Alt/V) allows the HQ to move to the destination selected.

TRANSFER (Alt/T) allows the HQ to transfer into the HQ additional combat units.

RAIL TRAN (Alt/T + R) allows the HQ to transfer into the HQ by rail additional combat units.

RAIL (Alt V + R) allows the HQ to move by rail to the destination selected.

HQ Replacement Level

The Headquarter Replacement Level determines the amount and timing of replacements that each of the combat units may receive. It also determines the maximum amount of Operation Points that can be received each turn. The player's supreme commander, OKW HQ (Axis) or RVGK HQ (Soviet) receives replacements each turn. The replacements are then distributed among the Army HQs (Axis) and the Front HQs (Soviet). These HQs then distribute replacements to the various divisions based on the Replacement Level (RL) of the HQ. The default RL setting is 50%, which means that whenever a combat unit reaches less than 50% of its maximum strength, it will start to receive replacements.

The HQ Unit Menu function for setting the Replacement Level is:

REPLACE (+ or - keys) allows you to access the Replacement Level Menu. Press the "+" button or key to increase by 5% or the "-" button or key to decrease by 5% the current Replacement Level. Press the NEXT button (N key) to access the next HQ. Press the ESC button (Esc key) to exit the menu.

HQ Control/Objective

You have the option of controlling all of the units in the game or delegating some of the responsibility to the computer. There are three levels of human/computer control. You may set an objective for the HQ as well. The HQ Unit Menu options are:

HQ CONTROL (Alt/K) allows you to select the level of computer control over your HQ's units. A player may place an HQ and all of its subordinate combat units under three levels of control: Human Full Control, Computer Operational Control, and Computer Full Control. To set the Computer Control HQ feature press Alt/K or click HQ CONTROL on the HQ Menu. The three levels are explained below: Human Full Control: The human player controls all forces subordinate to an HQ. Computer Operational Control: The human player selects an HQ's target hex and the computer will deploy the HQ's assets accordingly. HQs with this status will have a single asterisk (*) after their names on the display. Computer Full Control: The computer will be in full strategic and operational control of all of the HQ's assets. HQs with this status will have double asterisks (**) after their names on the display.

SET OBJECT (Alt/G) allows you to set an objective for the HQ. If the HQ is under Computer Operational Control, you may set the objective for the HQ. The computer will focus the HQ's land and air assets on obtaining the objective. If the HQ is under Human Full Control or Computer Full Control, setting an objective will not be applicable.

HQ Air Missions

During your Orders Phase your HQ Air Groups can fly the following missions as listed in the HQ Menu: Interdiction (ALT/I), Bomb Airfields (ALT/F), Bomb Cities (ALT/S), Bomb Bridges (ALT/B), and Airlift Supplies (ALT/L). These missions are explained below:

INTERDICTION

Interdiction missions are attacks on enemy combat units. These missions help lower the readiness of attacked enemy units and are useful to soften up land

units before the ground attacks commence. The following aircraft types can participate in Interdiction missions: fighters, fighter-bombers, divebombers, tank-killers, and level-bombers. Individual Air Groups need to be placed on Interdiction Missions before selecting this HQ Menu option.

BOMB AIRFIELDS

Airfield attacks are critical in helping you achieve air superiority over the battlefield. The attack is aimed at destroying aircraft still on the ground. After selecting this mission, choose the enemy HQ you wish to attack. The following aircraft types can participate in Bombing Airfield missions: fighters, fighter-bombers, dive-bombers, and level-bombers. Individual Air Groups need to be placed on Airfield Attack Missions before selecting this HQ Menu option.

BOMB CITIES

The bombing of cities is a strategic bombing mission. Once you have selected this mission for an air group, you will be prompted to select the city to bomb. Only level-type bombers can participate in strategic bombing. The bombing of enemy cities puts enemy installations temporarily out of operation for a few turns and can also do permanent damage. Individual Air Groups need to be placed on Strategic Bombing Missions before selecting this HQ Menu option. The effects are shown in the table below:

DISPLAYED DAMAGE LEVEL	PERMANENT DAMAGE	OUT OF OPERATION
Light	10%	1 turn
Moderate	20%	2 turns
Heavy	30%	3 turns
Massive	40%	4 turns

AIRLIFT SUPPLY

Airlift operations may be mounted to raise the readiness of units in a hex. They are useful for any units who are in a low Supply Level hex, have been cut off by enemy units, or have outrun their supply lines in the advance. Larger units will receive less readiness increase. Only transport and level-bomber type aircraft can airlift supplies. Units will receive more readiness as the number of participating aircraft increases. Individual Air Groups need to be placed on Air Transport Missions before selecting this HQ Menu option.

14: PRODUCTION

Your cities, factories, and natural resources are of critical importance to your war effort. Historically, part of Hitler's motivation for starting the war with Russia was to secure for Germany the rich lands and resources of the Soviet Union. As armies capture cities with factories or other assets, these resources are added to the victor's war machine. Cities also offer fortified defensive positions and protect troops from the ravages of the long Soviet winters. You can examine your production capabilities by accessing the Replacement Pool, Heavy Industry, and Oil/Resource functions. You can have the computer control all of your production or you can have complete control. You can toggle between computer and human control by selecting FACTORY CONTROL in the Utility Menu.

Heavy Industry

Cities with manufacturing facilities will have a Heavy Industry number. This represents the size of the factories located there. The number of items produced each week at a facility will be a factor of the Heavy Industry number and the production cost of the manufactured item. The total Heavy Industry number for all factories is a factor in the growth of individual facilities. Each location has a chance of increasing in size until it reaches a value of 20. Small factories are more likely to grow than large ones.

Oil/Resources

Oil supplies the fuel and lubricants needed to keep an army moving, and may lower the readiness of your combat troops if the Oil Level drops below 100.

Resources are used in your factories to produce war materials. If resources drop below 100, your production will decrease proportionately.

Examining Cities

To examine cities, place the map cursor over a city hex and click the CITY button (or press "C"). This will show what oil and manufacturing facilities are available. Manufacturing facilities are indicated by the type of equipment currently being produced and the number of units produced each week. If the production number contains an asterisk (*), this indicates that the equipment is not yet in production. Either the factory is tooling up to produce it or the factory has been damaged by strategic bombing and is under repairs.

Murmansk/Ural Areas

As the Soviet player you can examine the production in the off map areas of Murmansk and the Urals by accessing the Utility Menu and selecting

MUR/URAL (or press Alt/C). Murmansk is the center for the Lend Lease equipment received from the Allies. Production cannot be altered for Lend Lease equipment.

Changing Production

Under full human Factory Control you can change production of your war materials. To change production, examine a city with factory facilities, then select the letter of the item to be changed. A menu will appear indicating the various equipment which the factory can produce. When you change the new equipment to be produced, there is a down time for that facility as it retools for the new item. You may not change the basic types of factories; you cannot produce tanks in an aircraft factory. The Axis player cannot change the type of equipment produced in Italian cities. You may only produce equipment after the date it was historically available, but you may begin to gear up for production before that time to be able to begin full production when the new equipment becomes available. The only exception to this rule is the allocation of factories to research and development. If you assign factories to build equipment that is not yet available according to the historical timelines, there is a chance that the availability date will be pushed up one week at a time.

The extremely large Axis Elefant tank was produced in limited quantities during the war and may not be selected for production. There are a number of facilities that will produce this tank starting in 1943, and if you retool them no more Elefants will be built.

Upgrading Equipment

If you wish to change the type of equipment for a specific unit, you must use the CHANGE function upon accessing the unit (land or air). A menu will appear with the available types of equipment to choose from. Note that if a unit currently contains medium tanks, only other medium tanks will appear on the list to choose from. A unit containing assault guns can only choose other assault guns. You basically have to keep the same type of equipment in the unit. The computer will automatically convert old tanks in the Replacement Pool to newer type tanks.

Moving Factories (Soviet Only)

The Soviet player has the option of relocating factories off the map to the Ural Mountains. This option is only available if the Soviet player has 3000 or more rail points. To move factories access the city and press the "U" key. The effect of moving a factory is that production is reduced to one and there is a three month delay before the factory resumes production. Moving factories can be very costly in terms of lost production, but it is still less costly than losing the facilities to advancing enemy troops.

HELP & MAX HELP

If a player has the HELP or MAX HELP option in place for his units, then all production amounts are doubled.

15: SUPPLY

Units must be in supply to receive the necessary food, ammunition, and other materials necessary to maintain effective combat readiness in the field. Supply lines are the paths materials must travel to reach your units. Supply is affected by several factors such as weather and distance from friendly rail lines. In your Orders Phase, as you move the cursor around the map, the Supply level (SL) for each hex will be displayed in the bottom text window. Normally the highest Supply Level of a hex is 6. Cities in Naval Supply may have an SL of 7 (see the "Naval Supply" section on page 26). During the initial Axis Blitzkrieg in June/July 1941 the Axis' highest SL can reach 10; during August 1941 it can reach 8 (see the "Blitzkrieg" section on page 27). Supply lines only pass through friendly-controlled hexes. Hexes will convert to friendly control immediately if a friendly unit moves into the hex. A unit may only Plot its movement into an enemy-controlled hex. An enemy-controlled hex may also convert during the Supply Phase into a friendly-controlled hex if the friendly SL is 2 or more while the enemy SL is 0. You should be careful during deep penetrations of the enemy rear area that you do not outrun your supply line since hexes that you have previously overrun may convert back to enemy control. Enemy partisans or bad weather may also cause your forward supply lines to convert back to enemy control.

Rail

The highest SLs are at friendly operational rail hexes, and then the SL drops off at the rate of 1 SL per hex as you move away from the rail hex. The rate drops off 2 SLs per hex upon entering swamp or mountain terrain. Recently captured rail lines are not necessarily available even if the rail hex is under friendly control. The Soviet and Axis forces ran on different gauge rail;

therefore, the existing rail lines must be converted before they can become operational. A rail hex will become operational, beyond the existing railhead, when it is at SL 4 or higher and under friendly control. Under the Blitzkrieg rules, the SL must be at SL 8 or higher (June/July 1941) and SL 6 or higher (August 1941). During poor weather rail becomes operational at a slower rate. The EXAMINE RAIL function will allow you to examine friendly and enemy rail conditions.

Weather

Weather will affect the Supply Level of all non-city hexes. Units in cities are treated as if they are in clear weather conditions unless the weather is Blizzard in which case their SLs are the same as non-city Snow conditions.

Naval Supply

If the Axis player holds Constanta at SL 5 or higher, then Odessa, Rostov, Sevastapol, and Novorossiysk will add 1 to their SLs from Naval Supply if they also held. If the Soviet player holds Novorossiysk at SL 5 or higher, then Odessa, Rostov, Sevastapol, and Constanta will add 1 to their SL from Naval Supply if they are also held. If the Soviet player holds Leningrad at less than SL 2 and controls the hexes located at 41,6 and 44,6 with SLs greater than 1, then Leningrad and hex 41,6 will have an SL of 5. During the warm months these areas were serviced by Naval Supply. During the winter months the Soviets built a connecting rail line and road across the frozen lake Ladoga to the east of Leningrad for supply.

Special Supply

Units may also receive a special readiness boost. In the Unit Menu, select SUPPLY. The unit must pay Operation Points for each division, brigade, or battalion. The amount of Special Supply received depends on the weather and the current Supply Level of the hex.

Airlift Supply

Airlift operations may be mounted to raise the readiness of units in a hex. It is useful for any units who are in a low Supply Level hex, have been cut off by enemy units, or have outrun their supply lines in the advance. Larger units will receive less readiness increase. Only transport and levelbomber type aircraft can airlift supplies. Units will receive more readiness as the number of participating aircraft increases.

Partisans

Throughout the war on the eastern front, the Axis forces were greatly hindered by partisan freedom fighters operating behind the front lines. During the Partisan Phase certain areas on the map will be selected in which partisans will become active. In each area the partisans will be able to cut Axis supply lines by placing a Soviet controlled hex on the map. The effectiveness of partisans is determined by the Axis supply level in the hex and the presence of Axis units. If a partisan group attacks a hex occupied by an Axis unit, the partisan group may be destroyed. Initially partisans operate out of Russia, but as time elapses, the partisans will begin operating further westward. In addition, as the war continues, partisan activity will increase.

Blitzkrieg

At the start of the 1941 Campaign the Axis player receives the benefits from the special Blitzkrieg rules. This represents the initial preparation and stockpiling the Axis did prior to launching Operation Barbarossa. The base Supply Level for Axis rail during June and July 1941 is 10 instead of 6. Rail will also convert to Axis operation at SL 8 or higher instead of 4. The base Supply Level in August 1941 is 8. Rail will convert to Axis operation at SL 6 or higher. If the Axis player is receiving HELP or MAX HELP, then on all clear weather turns from 1941-1945, the Axis player receives the Blitzkrieg Supply Level bonus of 10.

16: REPLACEMENTS

During the Replacement Phase at the beginning of the player's turn, his divisions will receive replacement troops and equipment. The Replacement Level of a division's parent HQ will determine when it will receive replacements. The default setting for an HQ's Replacement Level is 50%, which means that a division must be reduced to 50% of its full strength or below before it can receive replacements. Once a division is below its Replacement Level, it will automatically receive replacements until it reaches its Replacement Level again. A player which has been set to HELP or MAX HELP will have its infantry replacements doubled.

In order to change the Replacement Level of an HQ, you must place the cursor over the HQ unit and click the left button (press "G"). The Unit HQ Menu will now be displayed. Select REPLACE. The current HQ's Replacement Level

will now be displayed. You may adjust the level up or down 5% at a time by clicking the "+" or "-" buttons or pressing the "+" or "-" keys.

Replacements are taken from the Replacement Pool of equipment that can be examined in the Orders Phase. Using a mouse, click on the UTIL button in the General Orders Menu, then select POOLS on the

Utility Menu.

The Replacement Pool contains new troops and equipment in addition to repaired armored vehicles that have been damaged during combat. Although the recruitment and production levels are set automatically by the computer, you can control what type of equipment is produced in your factories. See the "Production" section on page 24 for a more detailed description of production capabilities.

Upgrading Equipment

During the Replacement Phase equipment is upgraded automatically at certain times (if production is under human full control, then you must manually upgrade all units). There are basically two types of upgrading: new equipment replacements and refitting. When a new type of equipment is available in large enough quantities, it will be used to replace older equipment in the mechanized or armored divisions. New equipment will tend to be issued first to divisions that have suffered heavy casualties. You can manually upgrade a mechanized division in the Orders Phase by accessing the unit with the right mouse button. By selecting the division and the model to modify with the (C)HANGE option, you can select the new model. Older equipment will be automatically refitted with upgraded capabilities. Units containing a specific type of equipment can only be changed or upgraded to the same general type of equipment (medium tanks can only be exchanged for other medium tanks). Some examples of being refitted are the Axis PZ II tanks which will be refitted with larger guns and become Marder IIIs and the Axis antitank guns which are refitted each year to increase their firepower.

Lend Lease

The Soviet Replacement Pool will automatically receive Allied Lend Lease equipment. The equipment enters the Soviet Union through the port of Murmansk. You can review the off-map cities by selecting the UTIL option on the General Orders Menu and then choose the MUR/URAL option on the Utility Menu. Using the keyboard press Alt/C.

17: REINFORCEMENTS

New units arrive in the Axis OKH HQ or the Soviet RVGK HQ units. At the back of the manual the month/year arrival times are noted for each unit. The arrival times noted are for the Campaign 1941 game. There may be a few circumstances in other scenarios that may have slightly different arrival times. The new units can be transferred to other HQ's or units as soon as they are available. As the Axis player, you may wish to leave some units in the Western and Italian Fronts in order to slow down any Allied advances, especially if the Eastern Front campaign is under control. See the "Events" section on page 32. It is a good idea to check for reinforcements at the beginning of your turn.

18: READINESS

Readiness is the percentage of forces in a division that are actually prepared for combat. For example, if the unit's readiness level is at 70%, then only 70% of the troops will engage in combat (the unit has lost 30% of its combat effectiveness). Readiness is lost during movement, combat, and normal attrition. Readiness is regained in the Readiness Recovery Phase based on the unit's Supply Level (SL). You can view the readiness of a division in the Orders Phase by placing the map cursor over a Corps. Click the left button or press "G" to access the unit's data. Select the unit you wish to examine. The unit's readiness and other data will be displayed.

18.1 Readiness Attrition

All combat units for a player automatically lose 40% of their current readiness from normal attrition at the beginning of their friendly Supply Phase. Using HELP or MAX HELP all of the player's units will lose only 10%. During the following years, the Soviet player's units lose additional readiness: 1941 (60%), 1942 (40%), 1943 (20%).

Low Oil Reserves

Oil supplies can also affect the readiness of units. If the Oil Reserve level drops below 100, there is a chance that units will be affected by the lack of oil

and suffer a readiness loss. After accessing the Replacement Pool option, you can look at the Oil Reserve level.

18.2 Readiness Cost for Movement

Units lose readiness as they move or are transferred across the map. Units have four ways to move: March Movement, Transfer, Rail Transfer, and Plot. Plot movement is executed in the Execution Phase. The readiness costs for the various methods of movement are as follows:

READINESS LOSS TABLE
MECHANIZED/NON-MECHANIZED

WEATHER	MARCH	TRANSFER	RAIL TRANS.
Clear	10/20	60/70	1/1
Rain	35/45	85/95	1/1
Blizzard	20/30	70/80	1/1
Blizzard (Axis 1941)	35/45	85/95	1/1

Note: There are two numbers in the table above with the first number representing the percentage readiness loss for Mechanized units and the second the percentage readiness loss for Non-Mechanized units. Example: An Axis Panzer Corps (Mechanized) is moving by Transfer. In clear weather it costs 60% readiness per hex moved.

READINESS LOSS TABLE
MECH./NON-MECH.

TERRAIN/DESCRIPTION	PLOT MOVEMENT
Clear, Woods, Rail, City	10/20
Mountain	30/50
Swamp*	30/50
Across River*	+10
Soviets Before 1944	+10

* Readiness loss only during Clear or Rain turns. During Blizzard turns there is no penalty due to swamps and rivers being frozen.

Note: There are two numbers in the table above with the first number representing the percentage readiness loss for Mechanized units and the second the percentage readiness loss for Non-Mechanized units. Example: An Axis Panzer Corps (Mechanized) is executing its plots during the Execution Phase. Moving into a mountain hex costs 30% readiness. A Soviet infantry army before 1944 costs 60% readiness to move into a mountain hex.

Readiness Cost for Combat

Defending units automatically lose 10% of their readiness whenever they are attacked by either air or ground units. Whenever units are forced to retreat they also suffer a 10% readiness loss. There is a random chance, based on the leader's rating, that the unit may lose an additional 40% readiness due to routing.

Winter of 1941

During the Blizzard turns in 1941 all Axis forces east of Warsaw lose an additional 25% readiness using March or Transfer Movement. Axis units will also lose 10% of the infantry squads before the Replacements Phase. Whenever Axis units attempt to move, they may lose a random amount of equipment (tanks, vehicles, etc.) due to the extremely cold temperatures.

Soviet Leadership

Soviet units lose an additional 25% readiness before the Soviet Supply Phase from 1941-1943 due to the general lack of leadership and disorganization. In addition all Soviet units lose an extra 10% per hex
using plot movement for 1941-1943.

Disorganization

Disorganization may occur if too many Stacking Points (SP) are contained in an Axis Korps or Soviet Army. The leader rating of the unit is compared to the amount of Stacking Points in the unit. The higher the leader rating is and the fewer Stacking Points that are in the unit, the greater the chance that the unit will not suffer any effects from disorganization. Disorganization is determined at the start of each Execution Phase. The following tables are used to show the amount of Stacking Points for various units and also the percentage of readiness lost due to disorganization:

STACKING POINTS

TYPE	STACKING POINTS
Tank Corps	3
Mech Corps	3
Pz/Tank Div	3
PzG Div	3
Pz Bde	3
Mot. Div	1
Other Divs	1
Indep. sub units	0

READINESS LOSS TABLE
STACK POINTS

AXIS INF KORPS	SOV INF ARMY	PZ/TANK/ SHOCK	% READINESS LOST
0-3	0-5	0-9	0
4	6	10	5
5	7	11	10
6	8	12	20
7	9	13	30
8	10	14	50
9+	11+	15+	75

Table example: An Axis Infantry Korps has 1 Pz Division (3 SP), 2 Infantry Divisions (2 SP), and a Pz Brigade (3 SP). Total Stacking Points (SP) are 8. The Infantry Korps will lose 50% readiness due to disorganization.

Readiness Gain

Each turn units gain readiness due to being in supply. There are two calculations that determine the readiness gain. One is based upon the Supply Level of the hex the unit occupies; the other is the maximum readiness gain allowed for that type of unit. The actual readiness gain is whichever number is smaller. The readiness a unit gains from being supplied is equal to the Supply Level of the hex multiplied by 10. If the player being supplied is receiving MAX HELP then this number is doubled. This number is also modified by weather as shown below:

WEATHER	AXIS	SOVIET
RAIN	x.67	x.67
SNOW	x.81	x.90
BLIZZARD	x.50	x.81

19: EXPERIENCE

Each unit has an experience level which represents the percentage of maximum efficiency or skill the unit fights at. The higher the number the better the unit is in combat situations. Air Groups can be placed on Training Missions to increase their experience levels at a cost of Operation Points. Land combat units will automatically gain experience each turn. Units also increase their experience level as they engage in combat. However, as losses are suffered and new replacements are received, the unit's experience level will decrease depending upon the number of replacements.

20: SPECIAL RULES

There are a few special rules in the game which are mentioned below: Weather, Soviet Command, Blitzkrieg, Soviet Tank Corps, and Events.

Weather

City Supply Levels

Weather will affect the Supply Level of all non-city hexes. Units in cities are treated as if they are in clear weather conditions unless the weather is Blizzard in which case their SLs are the same as non-city Snow conditions.

Winter of 1941

During the Blizzard turns in 1941 all Axis forces east of Warsaw lose an additional 25% readiness using March Movement or Transfer Movement. Axis units will also lose 10% of the infantry squads before the Replacements Phase. Whenever Axis units attempt to move, they may lose a random amount of equipment (tanks, vehicles, etc.) due to the extreme cold temperatures.

Soviet Command 1941

From June to October 1941, Soviet Units may not follow plotted orders due to poor command in this period.

Blitzkrieg

At the start of the 1941 Campaign the Axis player receives the benefits from the special Blitzkrieg rules. This represents the initial preparation and stockpiling the Axis did prior to launching Operation Barbarossa. During the month of June

1941 the Axis gets a large surprise bonus in attacking Soviet airfields. The base Supply Level for Axis during June and July 1941 is 10 instead of 6. Rail will also convert to Axis operation at SL 8 or higher instead of 4. The base Supply Level in August 1941 is 8. Rail will convert to Axis operation at SL 6 or higher. If the Axis player is receiving HELP or MAX HELP, then on all clear weather turns from 1941- 1945, the Axis player receives the Blitzkrieg Supply Level bonus of 10.

Soviet Tank Corps

In July 6th 1941, the Soviets converted these units into infantry armies. The Soviets will not get Tank Armies until June 1942.

Events

While you command the action on the Eastern Front, the rest of the war still rages. In the Events Phase the computer will determine how the war is going for the Axis on the Western and Italian Fronts. The relative strengths of Axis and Allied forces will be checked on each front. Whenever the Axis is weaker than the Allies on a front, an event will occur. Events are historical turning points in the war such as the Allies gaining beachheads in Italy or the capture of the German Afrika Korps. These events will slowly affect the Axis player's industry and overall war capabilities. The strengths on the fronts are calculated with the formulas found in the Formulas Appendix at the back of the manual.

The Axis troops for the Western Front are located in the West Front HQ in Germany. The Italian Front troops are located in the Italian Front HQ. No actual combat will occur with units in these areas. Except for the surrender of the Afrika Korps, the effect of an event occurring is that the main HQ for that front is shattered with all units being reduced in strength (all units will stay in the HQ). After shattering the units will be built back up again (there will be a delay factor before the next event can occur). If you wish to reinforce these fronts or to remove units you may do so as with any other units. If these fronts are left alone, the war in these areas will approximately follow the historical timeline. If you remove troops or reinforce the fronts, you will alter the timeline accordingly.

21: VICTORY CONDITIONS

Players receive points for capturing certain enemy cities. Victory conditions are checked at the end of each turn. The game will end automatically whenever either player has captured enough cities to guarantee victory. The campaign games end in July 1945 if neither player has captured enough cities; the shorter scenarios have various ending dates. For the specific victory conditions access the Utility Menu and then select VICTORY.

22: EDIT SCENARIOS

In the Setup Menu you may choose a scenario and also select SCENARIO EDIT. This allows you to edit the scenario, changing the locations of units, the composition of units, adding new units, removing units, and many other parameters. Once you have finished editing, select ESC, which allows you to save the game (A-J). The format of the filename is "SCENA", "SCENB", . . . "SCENJ". Normally save games are saved as "SAVEA", "SAVEB" . . . "SAVEJ". When you choose a specific letter (A-J), the computer will save the file under two filenames ("SCEN" and "SAVE") to give you a backup file. If you are making up your own scenarios, it would be a good idea to keep track of your filenames on a piece of paper so you do not overwrite a file. After saving the game, press "ALT/Q" and then "Y" to exit to DOS. To start your scenario you need only select the option SAVED GAME in the Setup Menu and choose the appropriate letter (A-J).

Utility Menu

The Utility Menu has the options listed below:
MUR/URAL allows you to change population, oil, resource, and control (Axis or Soviet) of first Murmansk and then the Urals.
SET MAP calculates the supply level of every hex on the map after you have made the necessary changes for the scenario.
POOLS performs the same function as in normal game play.
ADD UNIT adds a unit to the map. A menu will bring up your selections.
USAAF performs the same function as normal game play.

INDUSTRY performs the same function as normal game play.
SET HEX allows you to change control of the hex to either Axis or Soviet control.
ADD HQ adds an HQ to the map.
SET DATE allows you to set the day, month, and year for your scenario.
AIR DELAY allows you to change the number of turns delay an air unit must wait before it arrives as a reinforcement.
DIV DELAY allows you to change the number of turns delay a divisional/brigade unit must wait before it arrives as a reinforcement. BN DELAY allows you to change the number of turns delay a battalion-sized unit must wait before it arrives as a reinforcement. ESC exits the Utility Menu.

Unit HQ Menu

If you access an HQ unit and click the left mouse button, you will get the Unit HQ Menu. The options are listed below:
MOVE allows you to move the accessed unit to another hex on the map.
TRANSFER allows you to transfer units into the accessed unit. You must select the losing unit and then choose which specific divisions or other units you wish to transfer. A maximum of 25 units can be in an HQ unit.
ADD AIR GROUP allows you to select a specific air group from a list of the available air groups to add more air strength to the accessed HQ.
AIR TRAN allows you to transfer air groups into the accessed unit. You must select the losing unit and then choose which specific air groups you wish to transfer. A maximum of 10 Air Groups can be in an HQ unit.
ADD DIV allows you to select a specific unit from a list of available divisions.
ADD BN allows you to select a specific unit from a list of available battalions.
SET OBJECT allows you to choose the HQ's objective to focus on when the HQ is operating under computer control.
HQ CONTRL allows you to choose from three
levels of human/computer control: Human Full Control, Computer Operational Control, and Computer Full Control.
REPLACE allows you to set the replacement level for the HQ.
DELETE UNITS allows you to delete divisions/battalions or air groups from the HQ.
REMOVE HQ deletes the HQ from the map.
Esc exits the Unit HQ Menu.

Unit Menu

If you access a combat unit and click the left button, you will get the Unit Menu. The various options are listed below:
MOVE allows you to move the accessed unit to another hex on the map.
TRANSFER allows you to transfer units into the accessed unit. You must select the losing unit and then choose which specific divisions or other units you wish to transfer. A maximum of 8 units can be in a combat unit.
ADD DIV allows you to select a specific unit from a list of available divisions.
ADD BN allows you to select a specific unit from a list of available battalions.
DELETE UNITS allows you to delete attached sub units.
CHANGE HQ allows you to change the HQ the unit is subordinate to.
REMOVE deletes the unit from the map.
CHANGE allows you to select a new unit from a list of available units. You are therefore able to change the name and possible unit type of the current unit. Esc exits from the Unit Menu.

Unit Information Menu

Upon accessing a unit and clicking the right mouse button, you will access the Unit Information Menu. You can then select a specific unit listed to edit by clicking on the letter to the left of the unit's name. Selecting the option (X)EDIT will allow you to edit the number of squads, artillery guns, A-T guns, AA guns, vehicles, readiness, and experience. If you have selected an armor unit to edit, you can also choose to edit the armor sub units. (C)HANGE allows you to select a new unit name/type. (E)DIT allows you to change the unit's readiness, experience, and number of tanks.

Edit City

Place the map cursor over a city on the map and click the CITY button. Selecting the option (X)EDIT allows you to edit the population, oil, resource, and which side controls the city (Axis = 0, Soviet = 1).

23: TUTORIAL

This short tutorial will cover basic familiarization and actions available to you. This will not cover every option in detail or recommend specific tactics. Those can be found in other parts of this manual. The tutorial assumes you have already installed the game and are now in the Setup Menu. It also assumes you are using a mouse in most cases.

When the game begins, select the MOSCOW scenario, SOVIET COMPUTER player and leave the balance on the default of EVEN. After you have made the selections press Enter/Return or click ACCEPT SETUP with your mouse. The DISPLAY/DELAY menu will appear next. Select LOW display and HIGH delay. The low display will cause high level (general) information to be displayed, while the high delay will slow down the rate at which the information appears.

The Map

As the game begins, you will notice the screen largely covered by a map. The lower portion of the screen is used to display game progression and various other information. Don't worry about the initial messages that are displayed, as you play the game you will become familiar with these messages and their meanings. Many of the actions within the game are available with "hot keys." A list of these can be accessed by pressing "/" or "?". In many instances in the game the right mouse button will perform the same function as pressing the Esc or the [Space] button. Many keystrokes are interchangeable. Once these initial messages have finished, the AXIS PLAYER menu will appear. Select ORDERS and click the mouse on ACCEPT. The map displayed is called the Tactical map. Click the MAP button to switch to the Strategic map. This map allows you to see the entire Moscow scenario. It is based on an X/Y grid system and is a small portion of the larger map used in the campaigns. The Moscow map goes from [33,10] (top left) to [70,33] (lower right). Your current position is displayed in the lower right-hand box. Click the MAP button to return to the tactical map.

The bottom portion of the screen is used to display various information. On the left the weather, the date, and the terrain are displayed. On the right are displayed supply level and location. Depending on the location of the cursor on the map, additional information may be displayed. The "buttons" just below the map are used to perform various functions. The cursor on the map is a black circle and may be moved using the number keypad or the mouse. Find the cursor and place it on location [46,32].

HQ Units

You are now located on the 2nd Panzer Army. The square with the "H" at the cursor position signifies a Headquarters unit. The pictures show the equipment located within that unit. Click the right button to access the HQ. This screen identifies the unit, its higher headquarters, the number of aircraft assigned, its leader, its operation/replacement level, and the subordinate units. The subordinate units are listed with a letter beside each unit. Units with a (C) next to them belong to a corps and are represented on the map by one of the Axis squares. The units with a number to the right are reserve units assigned to the 2nd Panzer Army HQ.

The number denotes the number of squads and/or pieces of equipment belonging to that unit. Click on the letter "A" which is to the left of the 53rd Korps. The tactical map is now displayed with the cursor on the 53rd Korps. Click on the HQ button. The cursor moves to the HQ with all the subordinate corps highlighted. Click the right button. The HQ information screen is displayed again. Click on the button labeled F1 Leader. A list of available leaders is shown along with their ratings. Choose one of the leaders by clicking with the mouse. Notice you have just changed leadership within that HQ. The leadership rating will affect various aspects of play throughout the game.

Infantry Corps

Click on the "A" next to the 53rd Korps. The square with the "X" identifies the 53rd Korps as an Infantry Corps. Click the right button to access the corps information. This screen will identify the unit, higher headquarters, entrenchment level, and subordinate units.

Click on the " right mouse button.

Mechanized Or Armor Corps

Click on the "B" next to the 24th Panzer Korps. A Mechanized or Armor Corps is denoted by the square with the oblong shape within. Click right button to access corps information. Click on the "B" to access the 3rd Panzer

Division. Notice the subordinate Panzer Battalions at the bottom. Click on the "A" to access the 1/6th Panzer Battalion. The pop-up screen shows experience, readiness, and unit data. Press "C" to change unit equipment. The available equipment in the reserves appears in a popup screen. You can select equipment to swap out on a one-for-one basis. When equipment is switched, both readiness and experience drop. Exit the pop-ups by clicking the right button. Click the HQ button and then click the right mouse button.

Air Groups

Click on the "F2" button at the bottom of the screen to pop-up the Air Groups information screen. This will show Air Groups assigned, plane types, number of aircraft, and current assignments. Click on the "A" to bring up data on the JG-53(E) group. This screen shows experience and plane specifications. Click on the CHANGE button to change the aircraft type. Select a plane type by clicking on it with the mouse. The air group "A" now consists of zero operational aircraft of that type. The experience has also dropped. Click on "C" to bring up the StG-1(G) group. Click on MISSION to see the various missions available. Shown are the four assignments available to most aircraft. Fighters also have Escort and Cap missions, while bombers have Strategic Bombing and Air Transport options. Select INTERDICT by clicking on it with the mouse. The air group may now participate in Player directed interdiction strikes.

Set Objectives/Control

Go to the map and click the left button while the cursor is over the 2nd Panzer Army. This will bring up the HQ Menu for that unit. Click on SET OBJECT and the information screen will ask you to move the cursor to the objective. On the numbers keypad, type in "66669", which will place the cursor on the city of Kursk. Press Enter or click the left mouse button after moving the mouse pointer over Kursk to set this as your objective. Bring up the HQ Menu and select HQ CONTRL. Select HUMAN FULL CONTROL from the pop-up screen and you will return to the map. Now click on the NEXT button at the bottom of the map to advance to the another HQ. Bring up the HQ Menu and set the HQ CONTRL to COMPUTER FULL CONTROL. Repeat this for all HQs until you return to the 2nd Panzer Army. Now you will be controlling the 2nd Panzer Army and the computer will be controlling all other forces.

MAP

Attacking With Infantry

Move the cursor to hex 46,30. Click the mouse button twice on the subordinate unit 53rd Korps. On the Unit Menu that appears, select PLOT and notice that the information panel at the bottom changes color and asks you to move the cursor to plot the path. Using the numbers keypad, type in "696" and press the Esc key. In the information panel only "69" appears because an infantry unit is limited to plotting two hexes. Plotting over the enemy unit initiates an attack during the Combat resolution phase.

Attacking With Armor

Select the subordinate unit 24th Panzer Korps in hex 47,32. Click the left button to bring up the Unit Menu and PLOT the unit "66666". Press the Esc key. Notice that the armor units have a range of five hexes.

Attacking With Aircraft

Go to the 2nd Panzer Army and click the left button to bring up the HQ Menu. Select INTERDICT. The information panel has changed and tells you to move the cursor to target. Click twice on Kursk (city located "66669" from your present location). After clicking twice, the bombing will occur and the results will be displayed.

Go back to the HQ and access the Air Groups information screen. You will notice the small "u" out to the right of the StG-1(I) group and all Escort groups. The bomber unit has been marked as "used" and will not be available for further player-directed attacks at this time. Such groups may take part in the Combat Phase, but will not be player-directed.

Movement

Click the right button until you are back to the HQ information screen for 2nd Panzer Army. Select the 48th Panzer Korps. Click the left button to bring up the Unit Menu and select MOVE. The information panel changes color and tells

you to move the cursor to the destination. Using the number keypad, move the cursor to different places. The information panel displays the cost in unit readiness to move to that location. When the cost is not displayed, the unit is unable to move to that position. Note that you may plot but not move into enemy-controlled hexes. Using the mouse to select the destination will automatically move the unit if possible. Rail movements are possible by selecting RAIL from the Unit Menu. Units must begin and end such moves on rail lines. Enemy-controlled hexes can be displayed by clicking on the CNTL button just below the map.

Transfers

Go to the 2nd Panzer Army HQ information screen and select the 24th Panzer Korps. Click the left button to bring up the Unit Menu and select TRANSFER. The information panel changes color and tells you to move the cursor to the losing unit. Place the cursor on the 2nd Panzer Army. Click on "I" to transfer the 101st Flak. Press the right mouse button to complete the transfer. Click on the ESC button below the map to end transfers. Rail transfers are done between units on rail hexes. Use RAIL TRAN from the Unit Menu. Air Group transfers use AIR TRAN on the HQ Menu. If all units have been transferred from a corps, the corps can be disbanded with the REMOVE option on the Unit Menu.

Combat Resolution Phase

Once all the player-directed actions are entered, the next step is the Combat resolution phase. Click on the ESC button at the bottom of the map. The AXIS PLAYER Menu appears. Using the mouse click on COMBAT and then ACCEPT. This will start the Combat Phase and all player- and computer-directed attacks will occur with the results being displayed on screen. Upon completion of this phase, control goes over to the Soviet computer for completion of the second half of the turn.

24: STRATEGY & TACTICS

This section contains some general observations about the strategy and tactics involved in playing WAR IN RUSSIA for both the Axis and Soviet players.

Axis Strategy

To defeat the Soviet Union, the Axis Player must inflict fatal or near fatal damage to the Soviet war economy in 1941. Such damage can only be wrought by advancing to the line Leningrad-Moscow-Rostov before the blizzards begin in late November or early December. Securing this line in 1941 will result in a weak Soviet Winter offensive (if any) and the final defeat of the Soviet Union in the Summer of 1942. In the order of priority, capturing Moscow in 1941 is the Axis Player's most important objective. Leningrad is the next most important objective, while the drive on Rostov is primarily intended as a diversion to draw Soviet strength from the Moscow and Leningrad sectors. The distribution of reserves and air assets should be matched to these priorities.

If the 1941 offensive is successful, the Axis Player can win the game in 1942 by advancing to the line Gorki-Saratov- Stalingrad, conducting what will essentially be a "mopping up" operation. The Caucasus region can and should be avoided. However, if the 1941 offensive failed to capture Moscow and Leningrad, the Soviet player will be too strong for the Axis Player to launch a general offensive in the style of 1941. In this situation the Axis Player must concentrate his forces if he is to achieve anything decisive. While Moscow and Leningrad remain tempting targets, these cities will most likely be heavily defended. Furthermore, the loss of either of these cities, particularly Leningrad, will be of less consequence in 1942 than in 1941. The reduced value of Moscow and Leningrad in 1942 results from the recovery of factories evacuated to the Urals in 1941. Moscow is still of value for Victory point purposes, but its fall in 1942 will not be nearly as crippling as it would have been in 1941. As was historically the case, Soviet efforts to defend Moscow and Leningrad in 1942 should leave the southern half of the Soviet line comparatively weak. Likely Soviet weakness in the south makes an Axis repetition of Operation Blau a viable alternative to striking at Moscow and/or Leningrad. Axis objectives in the south would be Stalingrad and the oil centers of the Caucasus. The danger in such a strategy is that it involves stretching the Axis line unacceptably thin. If the offensive fails to secure its objectives, the taut Axis line will be vulnerable to breaking almost anywhere. A southern strategy in 1942 is primarily an economic

strategy as opposed to a political strategy (i.e., trying to force a surrender). It aims at weakening the Soviet war economy sufficiently to secure a draw in the game. In short, when the Axis Player gives up taking Moscow, he gives up winning.

Soviet Strategy

In 1941 the Soviet Player's first mission must be to save as much of the frontier army as possible, particularly the tank divisions, from annihilation in the opening weeks of the war. During the "Blitzkrieg" period it is tantamount to suicide to attempt a standup fight with Axis forces in a supply level of 5 or greater. The Soviet Player must conduct a skillful fighting withdrawal until he reaches the "edge" of the Axis supply range. He should then consolidate his defense so as to make the Axis Player fight for gains thereafter. At the same time, the Soviet Player should be building another line of defense further back to retreat to when the Axis forces inevitably break through the first line.

The Soviet Player should not simply run from the Axis forces because doing so will not allow adequate time to evacuate vital industry to the Urals. A fighting withdrawal, which slows the Axis down without sacrificing too many units, will provide the time to get the industry out and most of the army as well.

By the time the Soviet Player reaches his first line of defense (basically an irregular North-South line running through Kiev), he should have reorganized as much of his units as possible into "combined arms" armies of at least one tank division and three or more rifle divisions. These combined arms armies are vital to slowing down the Panzer Korps and can occasionally even throw back a weak Axis Infantry Korps. Even while his first line of defense is still consolidating, the Soviet Player should garrison Moscow and Leningrad with fullstrength divisions including at least one 1000+ strength point tank division in each city. Although such reserves will be hard to come by, early creation of strong garrisons in these cities will pay enormous dividends later. Weaker garrisons should be created in all cities west of Rostov, with the cities along the approaches to Moscow getting a bit more than the rest. The second line of defense should be created between Rzhev and Vyazma of single division armies to get an early start on digging in. This second line can be fleshed out later with units retreating back to it or coming from RVGK. Beyond the suggestion above and barring

some foolhardy moves by the Axis Player, there is little the Soviet Player can do until the bad weather comes in October. Once the Axis forces cross the Dvina-Dnieper line, the Soviet Player must defend as strongly as possible without risking huge encirclements. If he can keep the Axis from penetrating his Rzhev-Vyazma line or isolating Leningrad before October, the Soviet Player should be in a decent position to turn back Barbarossa. If the Soviet Player can hold the Axis Player to no better than the Axis historical performance, the Soviet Player should be in a good position to launch a counteroffensive when the blizzards come. The objective of this counteroffensive should be twofold: first, drive Axis forces as far away from Moscow and Leningrad as possible; and second, inflict maximum damage on Axis forces without burning out your own troops. In the Moscow sector, the primary objective would be to recapture the Rzhev-Vyazma line. Any advance east of this line is helpful provided it does not involve heavy casualties. In the Leningrad sector, the Soviet Player should be content if he can clear the Leningrad-Kalinin railroad (no small feat). Due to the narrow front in this area, expect heavy fighting to achieve only limited gains. In the south, take advantage of Axis weakness to inflict damage, particularly on Axis Allied units, but do not make a major effort here. Like you in the summer before, the Axis Player can afford to give up ground. By the spring of 1942, the Soviet Player should have battle-hardened armies dug in around Leningrad and the approaches to Moscow and backed by tank-heavy reserves. Be willing to accept an Axis breakthrough in the south to make the Moscow/Leningrad sectors attack proof. If the Axis Player resumes the attack on Moscow and/or Leningrad, bleed him while assaulting your prepared positions. If he strikes south, fall back, use some of your reserves to stretch his line, conduct limited counterattacks in the north, and wait for winter. Weaken Moscow and Leningrad if you have to, but under no circumstances let the Axis Player take the oil centers. Remember that your ultimate victory hinges on holding those oil centers. If you can ride out the Axis summer offensive of 1942 without losing Moscow, Leningrad, or the oil centers, you will be on the road to Berlin in 1943.

Tactics And Other Hints On Play

I. GENERAL

A. Maximize your forces when attacking. Unlike SECOND FRONT, it is no longer possible for single corps or armies to attack properly constituted and dug-in defenders (at least after the Axis Blitzkrieg supply ends).

B. Properly constituted Axis Korps consist of several divisions and support units. Even German Infantry Korps should contain several divisions, an artillery unit, and an AT unit (usually PzJg or STuG). A Panzer Korps should have at least two Panzer or SS Divisions, a Motorized Division, and an artillery unit. Infantry Divisions should not be employed in Panzer Korps plotted to move more than 2 or 3 hexes; this practice burns them out too quickly. Large armored formations may attract air attacks and should be protected by extra Flak units when possible. Deficiencies in tanks should be made up with independent Tank Battalions. Axis Minor Allies should be "corset laced" with German Infantry Divisions (even the Finns).

C. Properly constituted Soviet armies should each contain an Armored Division or Tank Corps in addition to several Infantry Divisions. The less capable NKVD, Cavalry, Airborne, Mountain, and rebuilt Rifle Divisions should be distributed uniformly among the more capable divisions or retained for second line use. As they become available, independent Tank Brigades and Regiments, SU and towed AT, and artillery units should be distributed as well. Build these support units so they contain at least 25 to 30 of their main equipment and have experience levels similar to the units already in the line before using them. The Soviet Mechanized Corps should be conserved to defend major objectives or used in the few available Tank armies (which should also contain Tank Corps and support units). Mech Corps are very expensive to replace if they are lost.

D. The maintenance of a continuous front is very important, and a proper line also contains backup units at intervals since these are essential for defeating breakthroughs efficiently. Important hexes must also be garrisoned by backup units ahead of time so the defenders can entrench. Important hexes include major and minor cities (especially Moscow and Leningrad) and selected adjacent hexes, key hexes on railroads or behind rivers, key swamp and forest blocking positions, flanks of important sections of the line and the extreme north and south edges of the Eastern Front, the Kerch Peninsula, the Narva River (east of Talinin), and others as circumstances warrant. It is not unusual to have dozens of such occupied hexes behind the line. The Axis must do this as well.

II. WEATHER

A. Mud halts virtually all ground operations. This time should be used to reorganize and rest. Don't move units other than by rail unless absolutely necessary. They will not recover from the readiness hit until after 1 or 2 turns of clear weather, or until they rest in an HQ or city. Especially avoid attacking on the second sequential Mud turn.

B. The Axis will face a terrible winter in 1941. Until the Soviet Player outruns his supply, he is virtually unstoppable during Blizzard turns. Only well defended cities can resist the Soviets for long. Other winters may also be bad, depending on how many Blizzard turns, and how often they occur in sequence. Three or four Blizzard turns in a row should enable even a weak Soviet Player to completely retreat or shatter the entire Axis line.

C. The German recovers readiness first. This means that each time the weather changes for the better, the Soviet Player may face for a turn or two something of what the Axis Player must endure during blizzards. The Axis Player cannot afford to ignore these opportunities to attack a weakened Soviet any more than the Soviet can afford to ignore Blizzard opportunities. Historically, as each side's attacks petered out they were riposted by the other's counteroffensives. You will not do as well as the historical participants if you do not teach the other side caution in this way.

III. AIRPOWER

A. The most important weapon in the game is the airplane. It causes the most casualties, even in 1941. Player-selected air attacks cannot be made after the HQ containing the attacking units performs most moves or functions, so air attacks should be done first.

B. All front line Axis HQs must be supported by at least one fighter wing and at least one bomber wing. All front line Soviet HQs require a fighter division and a ground attack division. Do not concentrate air units in a single HQ. They are too vulnerable to bombing and overrunning. If air must be concentrated, concentrate the HQs themselves. There should never be more than 5 or 6 Axis or 4 or 5 Soviet air units in a single HQ within even unescorted bombing range of enemy air units. Note that RVGK cannot be bombed.

C. Every HQ containing Air units must contain at least 1 fighter unit. Most manual air attacks should be made within this fighter's range, so the bomber can be escorted. HQ objectives and ground attack plots should usually be selected within escort range as well. Although long range attacks can be very successful, your bombers may be slaughtered unless you guess right and limit unescorted attacks to undefended targets.

D. In addition to the obvious requirement for a few Air units training in Italy and France to increase these HQs' strength from the start, the Axis Player will need to begin moving fighters to the West as soon as the Allied strategic bombing offensive begins. Eventually most of the German fighter strength will be in the West. It is essential therefore that the Axis Minor Allies air forces be used (gently at first) in the line from the start so they can gain experience, as they will constitute most of the Axis East Front air support if the game goes into 1944. Even the Italians should be rotated to the East to gain experience.

E. It is recommended that the Axis Player also place an unused HQ on Ploesti and possibly Bucharest, and that these be accorded at least 1 decent fighter unit each. If it is necessary to keep an air reserve (and it is), then this is the place to keep it. One heavy or massive attack against the Ploesti oil fields can significantly reduce Axis oil production. Several such attacks and the Axis will lose the war. The Soviet is well advised to protect the Baku as well.

F. The Axis Player has Ju-52 bombing missions are over.

G. The Soviet Player should make few air attacks until he has a chance of wresting air superiority from the Axis in 1944. The planes will fly support missions automatically during the combat phases and they will slowly gain in experience this way. A few missions may sneak in unopposed during bad weather. The Axis should attack Soviet air bases as a priority target throughout the war. Otherwise he should concentrate on troop targets as this will at least draw out the Soviet fighters to be slaughtered. Units in Major Cities must be air targeted during ground assaults in order to decrease readiness and draw down defending air, but otherwise these ground units should not be attacked as the high entrenchment levels minimize ground casualties. The stronger the unit's combat value (CV), the more casualties it will suffer from an air attack. Unused air attacks should be directed against enemy strategic targets (usually those within escort range).

IV. REINFORCEMENTS, REPLACEMENTS, & PRODUCTION

A. Pay attention to HQ reinforcement levels. Squads and equipment are best kept in units, where they can fight and train. But some replacements in the pools are essential if a player is to have any staying power in the face of unanticipated events. You can't get them back out of the line if you need them. Armies or Fronts with large numbers of new squads and equipment reduce experience levels and may weaken units in extreme cases. HQs with good leaders should be set higher as they can train units more efficiently, and will draw more than their fair share of replacements anyway. Understrength units can be fed into these areas for rebuilding and excess units can be transferred to weaker HQs.

B. Equipment upgrades are best left to the computer. Only obvious mistakes (such as front line equipment going into France) should be adjusted manually. The production/replacement system is brittle and small changes can have unanticipated results. The computer takes these into account as you can't.

C. Similarly, don't toy with the production systems unless you have a real need. You may find to your detriment that those KV-II factories you converted to T-60 were intended by the program for SU-152. Most especially don't try to optimize your production. You can't.

D. Be sure to evacuate Soviet industry quickly. Better too soon than losing it altogether. Although eventually the Urals will fill up with new factories, the one chance the Soviet has to smooth out production is here. Several artillery factories must be evacuated to maintain sufficient production of this vital commodity. No heavy industry should be overrun. You can evacuate 9 factories, save two for the heavy industry in Moscow and Leningrad but don't evacuate these unless you must. Since these evacuations take Rail Factors, they should be performed prior to other movement.

V. TACTICS

A. Keep your best leaders in the line. RVGK should be occupied by at least a 6 or 7. The Axis Army Groups should also have at least 6's. All unused HQs should be created, positioned out of harm's way, and commanded by level 3 or 4 leaders. This helps prevent getting incompetents into OKW, for instance.

B. Units containing railroads for strategic movement whenever possible to avoid readiness penalties.

C. Use artillery bombardment plots judiciously. These attacks cost artillery casualties with little return. Artillery replacements are frequently in short supply.

D. Try to keep units under the control of an HQ close enough that they are within its radius of influence. There are several benefits from this, not the least of which are the possibility of leader directed automatic reinforcements (which are especially useful on the defensive).

E. Major cities are tough objectives since they entrench to level 9. They can rarely be taken by coup de main. They should be isolated before they are attacked. This usually means the Axis must advance past Leningrad and Moscow before they will fall. Use panzer or tank units to break through the enemy line disrupt and cut off his supply line; then use follow-up infantry units to mop up the encircled enemy forces.

F. You should have good leaders in areas which will be hotly contested. Set the Replacement Level high for the HQs in these areas. On the defensive, you should try to keep units in place in key areas so they will entrench sufficiently to reduce losses/retreats.

G. Use Special Supply and Airlift Supply to help boost the readiness of advancing mobile units who are getting low in readiness. If the units are too low, consider halting temporarily to get resupplied. Low readiness units are very vulnerable to enemy counterattacks.

H. If the computer reinforces a Panzer Korps or Tank Army with an infantry unit, transfer the unit out as soon as possible if the Korps/Army is on the move. Infantry units lose too much readiness in movement.

I. Once you are within range of Oil and Resource centers, consider Strategic Bombing them to reduce the levels.

VI. Special Axis Problems

A. The Axis Player is at a disadvantage in the game. Blitzkrieg supply is the only time that he can advance far from his railheads. He must make the most of it.

B. Partisans require the Axis Player to keep a dozen or more 1 or 2 division Korps in rear area Cities and on important railroads. Since the second line Minor Axis Rumanian and Hungarian Divisions, along with the German Security Divisions, are very difficult to train up to front line quality, they should be used along with a few better divisions to garrison the supply system. Because of the partisan threat, no rear area or Army Group HQ should be left entirely empty. The advantages of repulsing a Partisan attack with heavy Partisan losses are too great to miss the opportunity of maintaining at least a small HQ garrison.

C. The event checks require strong garrisons on the Western and Italian Fronts, at least after 1941. The Reinforcement levels in these HQs should be set high to preserve the strength of regular units and to facilitate rebuilding shattered and under-strength new units that may be present. These garrisons require SS or Panzer Divisions to avoid their HQ strength being halved. The Western requires 1 Elite SS in 1941, 2 in 1942, 3 in 1943, 4 in 1944, and 5 in 1945. Italian Front requires the same number of Panzer divisions (Elite SS count for two Panzer Divisions when used in Italy). Don't go overboard. These HQs will eventually shatter no matter how strong you make them. If they are very strong, shattering will be expensive. The minimum Panzer/SS Division requirements should be met through 1943.

25: HISTORICAL TIMELINE

DATE	SITE	X/Y Coordinate	BATTLE INFO
Jun 41	Daugavpils	34,20	Germans capture
Jun 41	Gorodishche	32,27	Germans seal off
Jun 41	Minsk	35,25	Germans seal off
Jul 41	Minsk	35,25	Germans capture
Jul 41	Dvina	32,17	Germans cross
Jul 41	Dniepr	43,23	Germans cross
Jul 41	Smolensk	45,23	Germans reach

DATE	SITE	X/Y	BATTLE INFO
Jul 41	near Uman	40,41	Germans seal off forces
Aug 41	Smolensk	45,23	Germans capture
Aug 41	near Uman	40,41	Germans capture forces
Aug 41	Dnepropetrovsk	48,39	Germans reach
Aug 41	Kremenchug	46,38	Germans form bridgehead
Aug 41	North of Gomel	44,27	Russian attack repulsed
Aug 41	Novgorod	42,11	Germans capture
Aug 41	Vuosalmi	40,6	Finns capture
Aug 41	Viipuri	40,6	Finns capture
Sep 41	near Lokhvista	44,33	Germans capture
Sep 41	Schlusselburg	43,7	Germans capture
Sep 41	Dniepr	43,23	Germans cross
Sep 41	Kiev	42,34	Germans capture
Oct 41	Vyazma	48,21	Germans seal off
Oct 41	Bryansk	48,26	Germans seal off
Oct 41	Vyazma	48,21	Germans capture
Oct 41	Bryansk	48,26	Germans capture
Oct 41	Moscow	53,18	Germans begin assault
Oct 41	Kharkov	50,35	Germans capture
Oct 41	Orel	50,27	Germans capture
Oct 41	Kalinin	51,14	Germans capture
Oct 41	Sevastopol	46,50	Germans begin assault
Nov 41	Rostov	56,41	Germans capture
Nov 41	Rostov	56,41	Russians recapture
Nov 41	Tikhvin	45,7	Germans capture
Nov 41	Kursk	50,31	Germans capture
Dec 41	Tikhvin	45,7	Russians recapture
Dec 41	Moscow	53,18	Counteroffensive begins
May 42	Kerch Peninsula	50,48	Germans capture
May 42	Kharkov	50,35	Russian offensive begins
Jul 42	Sevastopol	46,50	Germans capture
Jul 42	Rostov	56,41	Germans recapture
Aug 42	N. of Stalingrad 6	6,35	Germans reach Volga
Sep 42	S. of Stalingrad	7,38	Germans reach Volga
Sep 42	Stalingrad	65,37	Germans begin assault
Sep 42	S. Stalingrad	65,37	Germans capture
Oct 42	N. Stalingrad	65,37	German offensive fails
Nov 42	S. Stalingrad	65,37	Counteroffensive begins
Nov 42	S. Stalingrad	65,37	German forces surrounded
Jan 43	Caucasus		Germans begin withdrawal
Jan 43	Voronezh	55,30	Russians liberate
Jan 43	Stalingrad	65,37	Paulus surrenders
Feb 43	Stalingrad	65,37	Germans surrender
Feb 43	Kursk	50,31	Russians recapture
Feb 43	Rostov	56,41	Russians recapture
Feb 43	Kharkov	50,35	Russians recapture
Mar 43	Kharkov	50,35	Germans recapture
Aug 43	Orel	50,27	Russians recapture
Aug 43	Kharkov	50,35	Russians recapture
Sep 43	Mariupol	51,42	Russians recapture
Sep 43	Novorissisk	53,50	Russians recapture
Sep 43	Smolensk	45,23	Russians recapture
Oct 43	Taman Peninsula	51,48	Russians clear
Nov 43	Kiev	42,34	Russians recapture
Nov 43	Zhitomir	39,34	Russians capture
Nov 43	Zhitomir	39,34	Germans recapture
Feb 44	Korsun salient		Germans routed

Mar 44	Uman	40,40	Russians recapture
Apr 44	Crimea	47,48	Liberation begins
Apr 44	Tarnopol	34,36	Russians liberate
May 44	Sevastopol	46,50	Russians recapture
May 44	Crimea	7,48	Russians clear
Jun 44	Finland		Russians begin assault
Jul 44	Minsk	35,25	Russians recapture
Aug 44	Bucharest	33,50	Russians enter
Aug 44	Ploesti	33,48	Russians enter
Sep 44	Bulgaria		Russians declare war
Sep 44	Bulgaria		Russians invade
Sep 44	Prague		Russians capture
Sep 44	Yugoslavia		Russians enter
Dec 44	Budapest	21,42	Russians surround
Jan 45	Poland		Russian offensive begins
Jan 45	Warsaw	24,28	Russians capture
Feb 45	Budapest	21,42	Russians capture
Mar 45	Austrian Frontier		Russians cross
Apr 45	Vienna	18,40	Russians capture
Apr 45	Berlin	12,28	Russians reach
May 45	Berlin	12,28	Germans surrender

26: WESTERN/ITALIAN FRONT TIMELINE

The timeline below is a summary of some of the important historical battles or events that occurred on the Italian Front (I) or the Western Front (W).

1942:
- June 21, 1942 (I): Tobruk is captured by Rommel's Afrika Korps.
- October 23, 1942 (I): Battle of El Alamein opens in Africa.
- November 4, 1942 (I): Rommel forced to retreat from El Alamein.
- November 8, 1942 (I): Operation Torch is executed. Allies land in Northwest Africa at
- Oran, Algiers, and Casablanca.

1943:
- January 27, 1943 (W): First American air attack on Germany in daylight hits Wilhelmshaven.
- February 19, 1943 (I): Germans inflict humiliating defeat on Americans at Kasserine pass in North Africa.
- May 12, 1943 (I): General Von Arnim surrenders the Afrika Korps, and its Italian allies, to British and American troops at Tunis. The Battle for North Africa is over. 291,000 Axis soldiers are captured.
- July 10, 1943 (I): Operation Husky, the Allied invasion of Sicily, is launched.
- July 25, 1943 (I): Mussolini resigns and is arrested. Marshall Badoglio forms new government.
- September 9, 1943 (I): Allies invade Italy at Salerno.
- September 29, 1943 (I): Italians sign Armistice with Allies.
- October 1, 1943 (I): Allies take Naples.
- October 13, 1943 (I): Italy declares war on Germany.

1944:
- January 15, 1944 (I): Germans in Italy withdraw to the Gustav Line, which is anchored on Monte Cassino.
- January 22, 1944 (I): Allies land at Anzio, Italy.
- May 16, 1944 (I): Allies break the Gustav line. The road to Rome is finally opened.
- June 4, 1944 (I): Rome falls to U.S. 5th Army.
- June 6, 1944 (W): Allies land at Normandy beaches in western France.
- July 27, 1944 (W): British and American forces break out of Normandy beachhead.
- August 4, 1944 (I): 8th Army reaches Florence.
- August 25, 1944 (W): French armored units liberate Paris.

- September 17, 1944 (W): Operation Market Garden, Montgomery's plan to force a bridgehead into the Ruhr Valley with use of paratroops, is launched.
- September 21, 1944 (W): Market Garden ends in an Allied defeat.
- December 16, 1944 (W): Hitler stages a last-ditch offensive on the Western Front designed to split the British and American armies by recapturing Antwerp. Known as the Battle of the Bulge, it sorely pressed the American units who received the attack. Due to a lack of reserves, fuel and air support, the attack eventually bogged down, and by December 22, the Germans reverted to the defensive.

1945:
- March 7, 1945 (W): The bridge at Remagen is stormed successfully by American troops, giving the Allies a foothold across the Rhine river.
- April 25, 1945 (W): Soviets and Americans meet at Elbe River.
- April 25, 1945 (I): U.S. 5th Army launches offensive in the Po Valley.
- April 28, 1945 (I): Mussolini killed by Italian communist partisans.
- May 7-8 (W): Germany surrenders unconditionally to Allies. The war in Europe draws to a close.

26: GAME ABBREVIATIONS

ABBREVIATION	DEFINITION
AT	Anti-tank
AV	Attack Value
BN	Battalion
CV	Combat Value
DIV	Division
DV	Defensive Value
HQ	Headquarter
OP	Operation Point
RL	Replacement Level
SL	Supply Level
SP	Stacking Point
USAAF	United States Army Air Force

City Table

The cities in the game are listed in alphabetical order below. The city data is: name of city
(CITY NAME), city population (POP), Oil rating (OIL), Resource rating (RES), factories
(FACT), city x coordinate (X), and city y coordinate (Y).

CITY	NAME	POP	OIL	RES	FACT	X	Y
Baku	8	40	0	No	70	61	
Batumi	1	5	0	No	58	58	
Belgrade	2	0	5	No	23	50	
Berlin	43	0	25	Yes	12	28	
Bremen	3	0	0	Yes	2	25	
Bremerhaven	1	0	0	Yes	2	23	
Breslau	6	0	0	No	18	33	
Brest-Litovsk	1	0	0	No	30	29	
Bryansk	2	0	0	No	48	26	
Bucharest	6	15	5	No	33	50	
Budapest	10	0	0	Yes	21	42	
Cologne	8	0	10	Yes	1	32	
Constanta	1	0	0	No	37	49	
Danzig	4	0	0	Yes	20	22	
Daugavpils	1	0	0	No	34	20	
Demyansk	2	0	0	Yes	45	14	
Dnepropetrovsk	2	0	5	Yes	48	39	
Dresden	6	0	0	Yes	13	31	
Essen	7	20	15	Yes	2	31	
Florence	3	0	0	Yes	8	53	
Frankfurt	6	0	5	Yes	4	35	
Genoa	6	0	0	Yes	5	51	

Gomel	1	0	0	No	44	29
Gorki	6	0	5	Yes	61	18
Grodno	1	0	0	No	30	26
Groznyy	2	15	0	No	65	54
Hamburg	17	20	0	Yes	4	25
Hannover	5	5	0	Yes	4	29
Helsinki	3	0	5	Yes	33	4
Kalinin	2	0	0	No	51	14
Karlsruhe	2	0	5	Yes	2	39
Kassel	5	0	0	Yes	5	33
Kaunas	1	0	0	No	30	20
Kazan	1	0	0	Yes	69	18
Kharkov	8	0	5	Yes	50	35
Kiev	8	0	5	Yes	42	34
Konigsberg	3	0	0	Yes	23	21
Krakow	2	5	0	No	23	33
Kursk	2	0	0	No	50	31
Leipzig	7	0	0	Yes	10	31
Leningrad	32	5	10	Yes	40	7
Lodz	6	0	0	No	21	29
Lubeck	1	0	0	No	7	22
Lvov	3	0	0	No	30	36
Magdeburg	3	0	0	Yes	7	30
Maikop	1	15	0	No	57	50
Mannheim	3	0	5	Yes	5	37
Milan	11	0	0	Yes	7	49
Minsk	2	0	0	Yes	35	25
Mogilev	1	0	0	No	41	25
Moscow	42	5	20	Yes	53	18
Munich	8	0	5	Yes	9	42
Murmansk	1	5	0	Yes	222	222
Naples	9	0	0	No	13	60
Novgorod	1	0	0	No	42	11
Novorossiysk	1	0	0	No	53	50
Nurnberg	4	0	0	No	9	37
Odessa	6	0	5	Yes	40	44
Orel	5	0	0	Yes	50	27
Ploesti	1	40	0	No	33	48
Poltava	3	0	2	No	48	36
Prague	8	0	5	Yes	13	34
Pskov	1	0	0	No	37	13
Riga	4	0	5	Yes	29	15
Rome	12	0	5	Yes	11	58
Rostov	5	0	10	Yes	56	41
Rzhev	1	0	0	No	48	17
Saratov	4	5	5	Yes	65	30
Sevastapol	1	0	0	Yes	46	50
Smolensk	2	0	0	Yes	45	23
Sofia	3	0	0	No	28	56
Stalingrad	4	0	5	Yes	65	37
Stalino	3	0	5	Yes	53	40
Stettin	3	0	0	No	13	22
Stuttgart	5	0	5	Yes	4	39
Tallinn	1	0	0	No	30	9
Taranto	1	0	0	Yes	16	62
Tarnopol	1	0	0	No	34	36
Tbilisi	5	15	0	No	61	58
Tikhvin	1	0	0	No	45	7
Tilsit	1	0	0	No	25	19
Trieste	3	0	0	Yes	15	48
Tula	3	0	0	Yes	52	24
Turin	6	0	0	Yes	3	49
Uman	1	0	0	No	40	40
Urals	250	20	50	Yes	222	222

Velikiye	Luki	1	0	0	No	43	18
Venice	3	0	0	No	12	49	
Vienna	19	5	5	Yes	18	40	
Vilna	2	0	0	No	32	22	
Vitebsk	2	0	0	No	42	22	
Vologda	1	0	0	Yes	55	9	
Voronezh	2	0	0	No	55	30	
Vyazma	1	0	0	No	48	21	
Warsaw	12	0	0	No	24	28	
Wuppertal	4	0	5	Yes	3	32	
Zaporozhe	2	0	0	No	49	41	
Zhitomir	1	0	0	No	39	34	

ORDER OF BATTLE TABLES

The Axis and Soviet 1941 Campaign Game Order of Battle for attached land combat units is below. The Order of Battle data is: name of the unit (UNIT NAME), unit type (TYPE), nationality of unit (NAT), and availability date (AVAIL).

Axis Order Of Battle

UNIT NAME	TYPE	NAT	AVAIL
Das Reich	Motorized Div	SS	6/41
L.A.H.	Motorized Div	SS	6/41
Totenkopf	Motorized Div	SS	6/41
Viking	Motorized Div	SS	6/41
Frundsbrg	PzG Div	SS	12/42
Hohenstfn	PzG Div	SS	12/42
Nordland	PzG Div	SS	6/43
H.Jugend	Panzer	SS	7/42
G.V.Ber.	PzG Div	SS	10/43
Rchsfhr.	PzG Div	SS	10/43
H.Wessel	PzG Div	SS	1/44
1st	Panzer Div	Ger	6/41
2nd	Panzer Div	Ger	6/41
3rd	Panzer Div	Ger	6/41
4th	Panzer Div	Ger	6/41
5th	Panzer Div	Ger	6/41
6th	Panzer Div	Ger	6/41
7th	Panzer Div	Ger	6/41
8th	Panzer Div	Ger	6/41
9th	Panzer Div	Ger	6/41
10th	Panzer Div	Ger	6/41
11th	Panzer Div	Ger	6/41
12th	Panzer Div	Ger	6/41
13th	Panzer Div	Ger	6/41
14th	Panzer Div	Ger	6/41
15th	Panzer Div	Ger	6/41
16th	Panzer Div	Ger	6/41
17th	Panzer Div	Ger	6/41
18th	Panzer Div	Ger	6/41
19th	Panzer Div	Ger	6/41
20th	Panzer Div	Ger	6/41
21st	Panzer Div	Ger	6/41
22nd	Panzer Div	Ger	6/41
23rd	Panzer Div	Ger	6/41
24th	Panzer Div	Ger	2/42
H.Goering	Panzer Div	Ger	5/43
25th	Panzer Div	Ger	8/43
26th	Panzer Div	Ger	8/43
Lehr	Panzer Div	Ger	1/44
116th	Panzer Div	Ger	3/44
Ariete	Panzer Div	It	6/41
Littorio	Panzer Div	It	6/41

1st	Panzer Div	Rum	1/42		45th	Infantry Div	Ger	6/41
1st	Panzer Div	Hun	1/42		46th	Infantry Div	Ger	6/41
100th	Panzer Brigade	Ger	6/41		50th	Infantry Div	Ger	6/41
101st	Panzer Brigade	Ger	6/41		52nd	Infantry Div	Ger	6/41
102nd	Panzer Brigade	Ger	1/42		56th	Infantry Div	Ger	6/41
103rd	Panzer Brigade	Ger	6/42		57th	Infantry Div	Ger	6/41
104th	Panzer Brigade	Ger	1/43		58th	Infantry Div	Ger	6/41
105th	Panzer Brigade	Ger	6/43		61st	Infantry Div	Ger	6/41
106th	Panzer Brigade	Ger	1/44		62nd	Infantry Div	Ger	6/41
107th	Panzer Brigade	Ger	4/44		68th	Infantry Div	Ger	6/41
F.B.	Panzer Brigade	Ger	6/44		71st	Infantry Div	Ger	6/41
F.G.	Panzer Brigade	Ger	6/44		72nd	Infantry Div	Ger	6/41
3rd	Motorized Div	Ger	6/41		73rd	Infantry Div	Ger	6/41
10th	Motorized Div	Ger	6/41		75th	Infantry Div	Ger	6/41
14th	Motorized Div	Ger	6/41		76th	Infantry Div	Ger	6/41
16th	Motorized Div	Ger	6/41		78 Sturm	Infantry Div	Ger	6/41
18th	Motorized Div	Ger	6/41		79th	Infantry Div	Ger	6/41
20th	Motorized Div	Ger	6/41		81st	Infantry Div	Ger	6/41
25th	Motorized Div	Ger	6/41		83rd	Infantry Div	Ger	6/41
29th	Motorized Div	Ger	6/41		86th	Infantry Div	Ger	6/41
36th	Motorized Div	Ger	6/41		87th	Infantry Div	Ger	6/41
60th	Motorized Div	Ger	6/41		88th	Infantry Div	Ger	6/41
Brndnbrg	Motorized Div	Ger	6/41		93rd	Infantry Div	Ger	6/41
Gr.Deuch.	Motorized Div	Ger	6/41		94th	Infantry Div	Ger	6/41
90th	Motorized Div	Ger	11/41		95th	Infantry Div	Ger	6/41
15th	PzG Div	Ger	8/43		96th	Infantry Div	Ger	6/41
2nd Slov	Motorized Div	Ger	1/42		98th	Infantry Div	Ger	6/41
Trieste	Motorized Div	It	6/41		102nd	Infantry Div	Ger	6/41
Pasubio	Motorized Div	It	6/41		106th	Infantry Div	Ger	6/41
Torino	Motorized Div	It	6/41		110th	Infantry Div	Ger	6/41
2nd	Motorized Div	Rum	6/41		111th	Infantry Div	Ger	6/41
2nd	Motorized Div	Hun	6/41		112th	Infantry Div	Ger	6/41
Polizei	Infantry	SS	6/41		113th	Infantry Div	Ger	6/41
F.Geyer	Cavalry Div	SS	8/41		121st	Infantry Div	Ger	6/41
P.Eugen	Mountain Div	SS	4/42		122nd	Infantry Div	Ger	6/41
Hndschar	Mountain Div	SS	5/42		123rd	Infantry Div	Ger	6/41
Theresia	Cavalry Div	SS	1/44		125th	Infantry Div	Ger	6/41
1st	Cavalry Div	Ger	6/41		126th	Infantry Div	Ger	6/41
1st	Mountain Div	Ger	6/41		129th	Infantry Div	Ger	6/41
4th	Mountain Div	Ger	6/41		131st	Infantry Div	Ger	6/41
97th JG	Infantry Div	Ger	6/41		132nd	Infantry Div	Ger	6/41
100th JG	Infantry Div	Ger	6/41		134th	Infantry Div	Ger	6/41
101st JG	Infantry Div	Ger	6/41		137th	Infantry Div	Ger	6/41
1st	Infantry Div	Ger	6/41		161st	Infantry Div	Ger	6/41
5th	Infantry Div	Ger	6/41		162nd	Infantry Div	Ger	6/41
6th	Infantry Div	Ger	6/41		167th	Infantry Div	Ger	6/41
7th	Infantry Div	Ger	6/41		168th	Infantry Div	Ger	6/41
8th	Infantry Div	Ger	6/41		170th	Infantry Div	Ger	6/41
9th	Infantry Div	Ger	6/41		183rd	Infantry Div	Ger	6/41
11th	Infantry Div	Ger	6/41		197th	Infantry Div	Ger	6/41
12th	Infantry Div	Ger	6/41		198th	Infantry Div	Ger	6/41
15th	Infantry Div	Ger	6/41		205th	Infantry Div	Ger	6/41
17th	Infantry Div	Ger	6/41		206th	Infantry Div	Ger	6/41
21st	Infantry Div	Ger	6/41		208th	Infantry Div	Ger	6/41
22nd	Infantry Div	Ger	6/41		211th	Infantry Div	Ger	6/41
23rd	Infantry Div	Ger	6/41		212th	Infantry Div	Ger	6/41
24th	Infantry Div	Ger	6/41		215th	Infantry Div	Ger	6/41
26th	Infantry Div	Ger	6/41		216th	Infantry Div	Ger	6/41
28th	Infantry Div	Ger	6/41		217th	Infantry Div	Ger	6/41
30th	Infantry Div	Ger	6/41		223rd	Infantry Div	Ger	6/41
31st	Infantry Div	Ger	6/41		225th	Infantry Div	Ger	6/41
32nd	Infantry Div	Ger	6/41		227th	Infantry Div	Ger	6/41
34th	Infantry Div	Ger	6/41		239th	Infantry Div	Ger	6/41
35th	Infantry Div	Ger	6/41		246th	Infantry Div	Ger	6/41

251st	Infantry Div	Ger	6/41		385th	Infantry Div	Ger	11/41
252nd	Infantry Div	Ger	6/41		389th	Infantry Div	Ger	12/41
253rd	Infantry Div	Ger	6/41		38th	Infantry Div	Ger	1/42
254th	Infantry Div	Ger	6/41		82nd	Infantry Div	Ger	1/42
255th	Infantry Div	Ger	6/41		387th	Infantry Div	Ger	2/42
256th	Infantry Div	Ger	6/41		370th	Infantry Div	Ger	5/42
257th	Infantry Div	Ger	6/41		371st	Infantry Div	Ger	5/42
258th	Infantry Div	Ger	6/41		376th	Infantry Div	Ger	5/42
260th	Infantry Div	Ger	6/41		377th	Infantry Div	Ger	5/42
262nd	Infantry Div	Ger	6/41		39th	Infantry Div	Ger	6/42
263rd	Infantry Div	Ger	6/41		1st	Luftwaffe Div	Ger	6/42
267th	Infantry Div	Ger	6/41		2nd	Luftwaffe Div	Ger	6/42
268th	Infantry Div	Ger	6/41		3rd	Luftwaffe Div	Ger	6/42
269th	Infantry Div	Ger	6/41		4th	Luftwaffe Div	Ger	6/42
290th	Infantry Div	Ger	6/41		5th	Luftwaffe Div	Ger	6/42
291st	Infantry Div	Ger	6/41		3rd	Mountain Div	Ger	8/42
292nd	Infantry Div	Ger	6/41		326th	Infantry div	Ger	11/42
293rd	Infantry Div	Ger	6/41		6th	Luftwaffe Div	Ger	11/42
294th	Infantry Div	Ger	6/41		7th	Luftwaffe Div	Ger	11/42
295th	Infantry Div	Ger	6/41		8th	Luftwaffe Div	Ger	11/42
296th	Infantry Div	Ger	6/41		9th	Luftwaffe Div	Ger	11/42
297th	Infantry Div	Ger	6/41		10th	Luftwaffe Div	Ger	11/42
298th	Infantry Div	Ger	6/41		69th	Infantry Div	Ger	1/43
299th	Infantry Div	Ger	6/41		282nd	Infantry Div	Ger	1/43
302nd	Infantry Div	Ger	6/41		355th	Infantry Div	Ger	2/43
304th	Infantry Div	Ger	6/41		356th	Infantry Div	Ger	2/43
306th	Infantry Div	Ger	6/41		704th	Infantry Div	Ger	4/43
319th	Infantry Div	Ger	6/41		264th	Infantry Div	Ger	6/43
320th	Infantry Div	Ger	6/41		265th	Infantry Div	Ger	6/43
321st	Infantry Div	Ger	6/41		242nd	Infantry Div	Ger	7/43
323rd	Infantry Div	Ger	6/41		266th	Infantry Div	Ger	7/43
327th	Infantry Div	Ger	6/41		5th	Mountain Div	Ger	8/43
328th	Infantry Div	Ger	6/41		65th	Infantry Div	Ger	8/43
332nd	Infantry Div	Ger	6/41		181st	Infantry Div	Ger	8/43
333rd	Infantry Div	Ger	6/41		243rd	Infantry Div	Ger	8/43
335th	Infantry Div	Ger	6/41		245th	Infantry Div	Ger	8/43
336th	Infantry Div	Ger	6/41		305th	Infantry Div	Ger	8/43
337th	Infantry Div	Ger	6/41		1st	FJ Div	Ger	8/43
339th	Infantry Div	Ger	6/41		2nd	FJ Div	Ger	8/43
340th	Infantry Div	Ger	6/41		357th	Infantry Div	Ger	10/43
342nd	Infantry Div	Ger	6/41		359th	Infantry Div	Ger	10/43
707th	Infantry Div	Ger	6/41		367th	Infantry Div	Ger	10/43
708th	Infantry Div	Ger	6/41		362nd	Infantry Div	Ger	11/43
709th	Infantry Div	Ger	6/41		278th	Infantry Div	Ger	12/43
712th	Infantry Div	Ger	6/41		406th	Infantry Div	Ger	12/43
715th	Infantry Div	Ger	6/41		416th	Infantry Div	Ger	12/43
716th	Infantry Div	Ger	6/41		462nd	Infantry Div	Ger	12/43
207th Sec	Infantry Div	Ger	6/41		77th	Infantry Div	Ger	1/44
213th Sec	Infantry Div	Ger	6/41		275th	Infantry Div	Ger	1/44
221st Sec	Infantry Div	Ger	6/41		361st	Infantry Div	Ger	1/44
281st Sec	Infantry Div	Ger	6/41		714th	Infantry Div	Ger	1/44
285th Sec	Infantry Div	Ger	6/41		64th	Infantry Div	Ger	2/44
286th Sec	Infantry Div	Ger	6/41		84th	Infantry Div	Ger	2/44
444th Sec	Infantry Div	Ger	6/41		85th	Infantry Div	Ger	2/44
454th Sec	Infantry Div	Ger	6/41		214th	Infantry Div	Ger	2/44
Dtchmstr	Infantry Div	Ger	6/41		402nd	Infantry Div	Ger	3/44
Blue	Infantry Div	Ger	8/41		349th	Infantry Div	Ger	4/44
329th	Infantry Div	Ger	9/41		176th	Infantry Div	Ger	5/44
330th	Infantry Div	Ger	9/41		180th	Infantry Div	Ger	5/44
331st	Infantry Div	Ger	10/41		190th	Infantry Div	Ger	5/44
719th	Infantry Div	Ger	10/41		542nd	VG Div	Ger	6/44
218th	Infantry Div	Ger	11/41		544th	VG Div	Ger	6/44
383rd	Infantry Div	Ger	11/41		545th	VG Div	Ger	6/44
384th	Infantry Div	Ger	11/41		547th	VG Div	Ger	6/44

548th	VG Div	Ger	6/44		15th	Infantry Div	Rum	6/41
549th	VG Div	Ger	6/44		18th	Infantry Div	Rum	6/41
551st	VG Div	Ger	6/44		19th	Infantry Div	Rum	6/41
552nd	VG Div	Ger	6/44		20th	Infantry Div	Rum	6/41
553rd	VG Div	Ger	6/44		21st	Infantry Div	Rum	6/41
558th	VG Div	Ger	6/44		35th	Infantry Div	Rum	6/41
559th	VG Div	Ger	6/44		Nembo	Airborne Div	It	1/42
560th	VG Div	Ger	6/44		100th	Panzer Bn	Ger	6/41
561st	VG Div	Ger	6/44		101st	Panzer Bn	Ger	6/41
562nd	VG Div	Ger	6/44		102nd	Panzer Bn	Ger	6/41
59th	Infantry Div	Ger	6/44		211th	Panzer Bn	Ger	6/41
196th	Infantry Div	Ger	6/44		156th	JPz Bn	Ger	6/41
717th	Infantry Div	Ger	6/44		468th	JPz Bn	Ger	6/41
718th	Infantry Div	Ger	6/44		470th	JPz Bn	Ger	6/41
1st JG	Infantry Div	Fin	6/41		472nd	JPz Bn	Ger	6/41
1st	Infantry Div	Fin	6/41		476th	JPz Bn	Ger	6/41
2nd	Infantry Div	Fin	6/41		479th	JPz Bn	Ger	6/41
4th	Infantry Div	Fin	6/41		485th	JPz Bn	Ger	6/41
5th	Infantry Div	Fin	6/41		521st	JPz Bn	Ger	6/41
7th	Infantry Div	Fin	6/41		153rd	Stug Bn	Ger	6/41
8th	Infantry Div	Fin	6/41		184th	Stug Bn	Ger	6/41
10th	Infantry Div	Fin	6/41		185th	Stug Bn	Ger	6/41
11th	Infantry Div	Fin	6/41		190th	Stug Bn	Ger	6/41
12th	Infantry Div	Fin	6/41		191st	Stug Bn	Ger	6/41
14th	Infantry Div	Fin	6/41		192nd	Stug Bn	Ger	6/41
15th	Infantry Div	Fin	6/41		197th	Stug Bn	Ger	6/41
17th	Infantry Div	Fin	6/41		201st	Stug Bn	Ger	6/41
18th	Infantry Div	Fin	6/41		203rd	Stug Bn	Ger	6/41
19th	Infantry Div	Fin	6/41		210th	Stug Bn	Ger	6/41
1st Slov	Infantry Div	Ger	6/41		226th	Stug Bn	Ger	6/41
2nd Slov	Infantry Div	Ger	6/41		243rd	Stug Bn	Ger	6/41
1st	Cavalry Div	Hun	6/41		659th	Stug Bn	Ger	6/41
1st	Mountain Div	Hun	6/41		660th	Stug Bn	Ger	6/41
6th	Lt Infantry Div	Hun	6/41		665th	Stug Bn	Ger	6/41
7th	Lt Infantry Div	Hun	6/41		666th	Stug Bn	Ger	6/41
9th	Lt Infantry Div	Hun	6/41		667th	Stug Bn	Ger	6/41
10th	Lt Infantry Div	Hun	6/41		1st	Panzer Bn	Fin	6/41
12th	Lt Infantry Div	Hun	6/41		1st Slov	Panzer Bn	Ger	6/41
13th	Lt Infantry Div	Hun	6/41		1st Rec	Panzer Bn	Ger	1/42
20th	Lt Infantry Div	Hun	6/41		66th	Panzer Bn	Ger	1/42
Princepe	Cavalry Div	It	6/41		103rd	Panzer Bn	Ger	1/42
Sforzesca	Infantry Div	It	6/41		203rd	Panzer Bn	Ger	1/42
Ravenna	Infantry Div	It	6/41		300th	Panzer Bn	Ger	1/42
Cosseria	Infantry Div	It	6/41		471st	JPz Bn	Ger	1/42
Pavia	Infantry Div	It	6/41		474th	JPz Bn	Ger	1/42
Brescia	Infantry Div	It	6/41		486th	JPz Bn	Ger	1/42
Trento	Infantry Div	It	6/41		605th	Stug Bn	Ger	1/42
Sarbatha	Infantry Div	It	6/41		11th	JPz Bn	Hun	1/42
Folgore	Airborne Div	It	6/41		12th	Panzer Bn	Ger	6/42
5th	Cavalry Div	Rum	6/41		16th	Panzer Bn	Ger	6/42
1st	Mountain Div	Rum	6/41		177th	Stug Bn	Ger	6/42
1st Fort	Infantry Div	Rum	6/41		202nd	Stug Bn	Ger	6/42
Guard	Infantry Div	Rum	6/41		244th	Stug Bn	Ger	6/42
1st	Infantry Div	Rum	6/41		245th	Stug Bn	Ger	6/42
2nd	Infantry Div	Rum	6/41		600th	Stug Bn	Ger	6/42
4th	Infantry Div	Rum	6/41		501st	Panzer Bn	Ger	11/42
5th	Infantry Div	Rum	6/41		502nd	Panzer Bn	Ger	12/42
6th	Infantry Div	Rum	6/41		503rd	Panzer Bn	Ger	1/43
7th	Infantry Div	Rum	6/41		40th	Panzer Bn	Ger	1/43
8th	Infantry Div	Rum	6/41		681st	JPz Bn	Ger	1/43
9th	Infantry Div	Rum	6/41		682nd	JPz Bn	Ger	1/43
10th	Infantry Div	Rum	6/41		228th	Stug Bn	Ger	1/43
13th	Infantry Div	Rum	6/41		239th	Stug Bn	Ger	1/43
14th	Infantry Div	Rum	6/41		249th	Stug Bn	Ger	1/43

281st	Stug Bn	Ger	1/43		128th	Artillery	Ger	6/41
504th	Panzer Bn	Ger	2/43		129th	Artillery	Ger	6/41
505th	Panzer Bn	Ger	3/43		130th	Artillery	Ger	6/41
506th	Panzer Bn	Ger	4/43		131st	Artillery	Ger	6/41
101st	Panzer Bn	SS	5/43		132nd	Artillery	Ger	6/41
507th	Panzer Bn	Ger	5/43		133rd	Artillery	Ger	6/41
508th	Panzer Bn	Ger	5/43		134th	Artillery	Ger	6/41
88th	JPz Bn	Ger	5/43		135th	Artillery	Ger	6/41
102nd	Panzer Bn	SS	6/43		136th	Artillery	Ger	6/41
509th	Panzer Bn	Ger	6/43		137th	Artillery	Ger	6/41
510th	Panzer Bn	Ger	6/43		139th	Artillery	Ger	6/41
93rd	JPz Bn	Ger	6/43		140th	Artillery	Ger	6/41
657th	JPz Bn	Ger	6/43		143rd	Artillery	Ger	6/41
683rd	JPz Bn	Ger	6/43		145th	Artillery	Ger	6/41
511th	Panzer Bn	Ger	7/43		146th	Artillery	Ger	6/41
525th	JPz Bn	Ger	7/43		148th	Artillery	Ger	6/41
51st	Panzer Bn	Ger	8/43		149th	Artillery	Ger	6/41
52nd	Panzer Bn	Ger	8/43		301st	Artillery	Ger	6/41
654th	JPz Bn	Ger	8/43		302nd	Artillery	Ger	6/41
103rd	Panzer Bn	SS	3/44		625th	Artillery	Ger	6/41
512th	JPz Bn	Ger	6/44		679th	Artillery	Ger	6/41
519th	JPz Bn	Ger	6/44		702nd	Artillery	Ger	6/41
583rd	JPz Bn	Ger	6/44		767th	Artillery	Ger	6/41
586th	JPz Bn	Ger	6/44		914th	Artillery	Ger	6/41
653rd	JPz Bn	Ger	6/44		30th	Artillery	It	6/41
655th	JPz Bn	Ger	6/44		1st	Artillery	Rum	6/41
1st	Artillery	Fin	6/41		2nd	Artillery	Rum	6/41
2nd	Artillery	Fin	6/41		3rd	Artillery	Rum	6/41
3rd	Artillery	Fin	6/41		4th	Artillery	Rum	6/41
4th	Artillery	Fin	6/41		5th	Artillery	Rum	6/41
5th	Artillery	Fin	6/41		6th	Artillery	Rum	6/41
6th	Artillery	Fin	6/41		144th	Artillery	Ger	7/41
7th	Artillery	Ger	6/41		147th	Artillery	Ger	7/41
11th Slov	Artillery	Ger	6/41		11th Slov	Anti-Tank	Ger	6/41
12th Slov	Artillery	Ger	6/41		525th	Anti-Tank	Ger	6/41
15th	Artillery	Ger	6/41		563rd	Anti-Tank	Ger	6/41
17th	Artillery	Ger	6/41		652nd	Anti-Tank	Ger	6/41
18th	Artillery	Ger	6/41		654th	Anti-Tank	Ger	6/41
19th	Artillery	Ger	6/41		6th	Flak	Ger	6/41
20th	Artillery	Ger	6/41		15th Slov	Flak	Ger	6/41
22nd	Artillery	Ger	6/41		18th	Flak	Ger	6/41
24th	Artillery	Ger	6/41		31st	Flak	Ger	6/41
30th	Artillery	Ger	6/41		42nd	Flak	Ger	6/41
31st	Artillery	Ger	6/41		43rd	Flak	Ger	6/41
35th	Artillery	Ger	6/41		52nd	Flak	Ger	6/41
44th	Artillery	Ger	6/41		55th	Flak	Ger	6/41
84th	Artillery	Ger	6/41		64th	Flak	Ger	6/41
101st	Artillery	Ger	6/41		71st	Flak	Ger	6/41
102nd	Artillery	Ger	6/41		75th	Flak	Ger	6/41
103rd	Artillery	Ger	6/41		76th	Flak	Ger	6/41
104th	Artillery	Ger	6/41		83rd	Flak	Ger	6/41
105th	Artillery	Ger	6/41		85th	Flak	Ger	6/41
107th	Artillery	Ger	6/41		91st	Flak	Ger	6/41
108th	Artillery	Ger	6/41		92nd	Flak	Ger	6/41
110th	Artillery	Ger	6/41		94th	Flak	Ger	6/41
111th	Artillery	Ger	6/41		101st	Flak	Ger	6/41
112th	Artillery	Ger	6/41		104th	Flak	Ger	6/41
113th	Artillery	Ger	6/41		125th	Flak	Ger	6/41
121st	Artillery	Ger	6/41		133rd	Flak	Ger	6/41
122nd	Artillery	Ger	6/41		149th	Flak	Ger	6/41
123rd	Artillery	Ger	6/41		153rd	Flak	Ger	6/41
124th	Artillery	Ger	6/41		260th	Flak	Ger	6/41
125th	Artillery	Ger	6/41		271st	Flak	Ger	6/41
126th	Artillery	Ger	6/41		272nd	Flak	Ger	6/41

273rd	Flak	Ger	6/41
274th	Flak	Ger	6/41
275th	Flak	Ger	6/41
276th	Flak	Ger	6/41
277th	Flak	Ger	6/41
278th	Flak	Ger	6/41
279th	Flak	Ger	6/41
601st	Flak	Ger	6/41
602nd	Flak	Ger	6/41
603rd	Flak	Ger	6/41
604th	Flak	Ger	6/41
605th	Flak	Ger	6/41
607th	Flak	Ger	6/41
611th	Flak	Ger	6/41
614th	Flak	Ger	6/41
Goering	Flak	Ger	6/41
610th	Flak	Ger	7/41
74th	Flak	Ger	7/41
84th	Flak	Ger	7/41

SOVIET ORDER OF BATTLE

UNIT NAME	TYPE	NAT	AVAIL
1st	Tank Div	Sov	6/41
2nd	Tank Div	Sov	6/41
3rd	Tank Div	Sov	6/41
4th	Tank Div	Sov	6/41
5th	Tank Div	Sov	6/41
6th	Tank Div	Sov	6/41
7th	Tank Div	Sov	6/41
8th	Tank Div	Sov	6/41
10th	Tank Div	Sov	6/41
11th	Tank Div	Sov	6/41
12th	Tank Div	Sov	6/41
13th	Tank Div	Sov	6/41
14th	Tank Div	Sov	6/41
15th	Tank Div	Sov	6/41
16th	Tank Div	Sov	6/41
17th	Tank Div	Sov	6/41
18th	Tank Div	Sov	6/41
19th	Tank Div	Sov	6/41
20th	Tank Div	Sov	6/41
21st	Tank Div	Sov	6/41
22nd	Tank Div	Sov	6/41
23rd	Tank Div	Sov	6/41
24th	Tank Div	Sov	6/41
25th	Tank Div	Sov	6/41
26th	Tank Div	Sov	6/41
27th	Tank Div	Sov	6/41
28th	Tank Div	Sov	6/41
29th	Tank Div	Sov	6/41
30th	Tank Div	Sov	6/41
31st	Tank Div	Sov	6/41
32nd	Tank Div	Sov	6/41
33rd	Tank Div	Sov	6/41
34th	Tank Div	Sov	6/41
35th	Tank Div	Sov	6/41
36th	Tank Div	Sov	6/41
37th	Tank Div	Sov	6/41
38th	Tank Div	Sov	6/41
39th	Tank Div	Sov	6/41
40th	Tank Div	Sov	6/41
41st	Tank Div	Sov	6/41

42nd	Tank Div	Sov	6/41
43rd	Tank Div	Sov	6/41
44th	Tank Div	Sov	6/41
45th	Tank Div	Sov	6/41
46th	Tank Div	Sov	6/41
47th	Tank Div	Sov	6/41
48th	Tank Div	Sov	6/41
49th	Tank Div	Sov	6/41
50th	Tank Div	Sov	6/41
51st	Tank Div	Sov	6/41
54th	Tank Div	Sov	6/41
55th	Tank Div	Sov	6/41
58th	Tank Div	Sov	11/41
60th	Tank Div	Sov	11/41
9th	Tank Corps	Sov	1/44
52nd	Mech Corps	Sov	2/44
53rd	Mech Corps	Sov	3/44
56th	Mech Corps	Sov	4/44
57th	Mech Corps	Sov	5/44
59th	Mech Corps	Sov	6/44
1st Mos.	Motorized Div	Sov	6/41
7th	Motorized Div	Sov	6/41
15th	Motorized Div	Sov	6/41
29th	Motorized Div	Sov	6/41
81st	Motorized Div	Sov	6/41
84th	Motorized Div	Sov	6/41
109th	Motorized Div	Sov	6/41
131st	Motorized Div	Sov	6/41
163rd	Motorized Div	Sov	6/41
185th	Motorized Div	Sov	6/41
198th	Motorized Div	Sov	6/41
202nd	Motorized Div	Sov	6/41
204th	Motorized Div	Sov	6/41
205th	Motorized Div	Sov	6/41
208th	Motorized Div	Sov	6/41
209th	Motorized Div	Sov	6/41
210th	Motorized Div	Sov	6/41
212th	Motorized Div	Sov	6/41
213th	Motorized Div	Sov	6/41
215th	Motorized Div	Sov	6/41

Unit	Type	Side	Date
216th	Motorized Div	Sov	6/41
218th	Motorized Div	Sov	6/41
219th	Motorized Div	Sov	6/41
220th	Motorized Div	Sov	6/41
236th	Motorized Div	Sov	6/41
240th	Motorized Div	Sov	6/41
239th	Motorized Div	Sov	11/41
1st	Cavalry Div	Sov	6/41
2nd	Cavalry Div	Sov	6/41
3rd	Cavalry Div	Sov	6/41
5th	Cavalry Div	Sov	6/41
6th	Cavalry Div	Sov	6/41
9th	Cavalry Div	Sov	6/41
14th	Cavalry Div	Sov	6/41
17th	Cavalry Div	Sov	6/41
32nd	Cavalry Div	Sov	6/41
36th	Cavalry Div	Sov	6/41
12th	Cavalry Div	Sov	7/41
13th	Cavalry Div	Sov	7/41
15th	Cavalry Div	Sov	8/41
16th	Cavalry Div	Sov	8/41
23rd	Cavalry Div	Sov	8/41
25th	Cavalry Div	Sov	9/41
30th	Cavalry Div	Sov	10/41
34th	Cavalry Div	Sov	11/41
39th	Cavalry Div	Sov	12/41
46th	Cavalry Div	Sov	12/41
48th	Cavalry Div	Sov	12/41
54th	Cavalry Div	Sov	1/42
60th	Cavalry Div	Sov	1/42
63rd	Cavalry Div	Sov	2/42
110th	Cavalry Div	Sov	2/42
111th	Cavalry Div	Sov	2/42
112th	Cavalry	Sov	2/42
	Div		
18th	Cavalry Div	Sov	3/42
20th	Cavalry Div	Sov	3/42
76th	Cavalry Div	Sov	3/42
113th	Cavalry Div	Sov	3/42
114th	Cavalry Div	Sov	3/42
115th	Cavalry Div	Sov	3/42
116th	Cavalry Div	Sov	3/42
117th	Cavalry Div	Sov	3/42
79th	Cavalry Div	Sov	4/42
118th	Cavalry Div	Sov	4/42
119th	Cavalry Div	Sov	4/42
80th	Cavalry Div	Sov	5/42
82nd	Cavalry Div	Sov	6/42
1st	Airborne Div	Sov	6/41
2nd	Airborne Div	Sov	6/41
5th	Airborne Div	Sov	6/41
7th	Airborne Div	Sov	6/41
9th	Airborne Div	Sov	6/41
9th	Mountain Div	Sov	6/41
21st	Mountain Div	Sov	6/41
28th	Mountain Div	Sov	6/41
44th	Mountain Div	Sov	6/41
47th	Mountain Div	Sov	6/41
58th	Mountain Div	Sov	6/41
60th	Mountain Div	Sov	6/41
63rd	Mountain Div	Sov	6/41
76th	Mountain Div	Sov	6/41
77th	Mountain Div	Sov	6/41
96th	Mountain Div	Sov	6/41
192nd	Mountain Div	Sov	6/41
20th	Mountain Div	Sov	8/41
83rd	Mountain Div	Sov	3/42
2nd	Rifle Div	Sov	6/41
5th	Rifle Div	Sov	6/41

Unit	Type	Nat	Date	Unit	Type	Nat	Date
6th	Rifle Div	Sov	6/41	123rd	Rifle Div	Sov	6/41
8th	Rifle Div	Sov	6/41	124th	Rifle Div	Sov	6/41
10th	Rifle Div	Sov	6/41	125th	Rifle Div	Sov	6/41
11th	Rifle Div	Sov	6/41	126th	Rifle Div	Sov	6/41
13th	Rifle Div	Sov	6/41	127th	Rifle Div	Sov	6/41
16th	Rifle Div	Sov	6/41	128th	Rifle Div	Sov	6/41
17th	Rifle Div	Sov	6/41	129th	Rifle Div	Sov	6/41
18th	Rifle Div	Sov	6/41	130th	Rifle Div	Sov	6/41
19th	Rifle Div	Sov	6/41	132nd	Rifle Div	Sov	6/41
23rd	Rifle Div	Sov	6/41	134th	Rifle Div	Sov	6/41
24th	Rifle Div	Sov	6/41	135th	Rifle Div	Sov	6/41
25th	Rifle Div	Sov	6/41	136th	Rifle Div	Sov	6/41
27th	Rifle Div	Sov	6/41	137th	Rifle Div	Sov	6/41
30th	Rifle Div	Sov	6/41	138th	Rifle Div	Sov	6/41
31st	Rifle Div	Sov	6/41	139th	Rifle Div	Sov	6/41
33rd	Rifle Div	Sov	6/41	140th	Rifle Div	Sov	6/41
37th	Rifle Div	Sov	6/41	141st	Rifle Div	Sov	6/41
38th	Rifle Div	Sov	6/41	142nd	Rifle Div	Sov	6/41
41st	Rifle Div	Sov	6/41	143rd	Rifle Div	Sov	6/41
42nd	Rifle Div	Sov	6/41	144th	Rifle Div	Sov	6/41
43rd	Rifle Div	Sov	6/41	145th	Rifle Div	Sov	6/41
45th	Rifle Div	Sov	6/41	146th	Rifle Div	Sov	6/41
46th	Rifle Div	Sov	6/41	147th	Rifle Div	Sov	6/41
48th	Rifle Div	Sov	6/41	148th	Rifle Div	Sov	6/41
49th	Rifle Div	Sov	6/41	149th	Rifle Div	Sov	6/41
50th	Rifle Div	Sov	6/41	150th	Rifle Div	Sov	6/41
51st	Rifle Div	Sov	6/41	151st	Rifle Div	Sov	6/41
53rd	Rifle Div	Sov	6/41	152nd	Rifle Div	Sov	6/41
55th	Rifle Div	Sov	6/41	153rd	Rifle Div	Sov	6/41
56th	Rifle Div	Sov	6/41	154th	Rifle Div	Sov	6/41
61st	Rifle Div	Sov	6/41	155th	Rifle Div	Sov	6/41
62nd	Rifle Div	Sov	6/41	156th	Rifle Div	Sov	6/41
64th	Rifle Div	Sov	6/41	157th	Rifle Div	Sov	6/41
67th	Rifle Div	Sov	6/41	158th	Rifle Div	Sov	6/41
68th	Rifle Div	Sov	6/41	159th	Rifle Div	Sov	6/41
70th	Rifle Div	Sov	6/41	160th	Rifle Div	Sov	6/41
72nd	Rifle Div	Sov	6/41	161st	Rifle Div	Sov	6/41
74th	Rifle Div	Sov	6/41	162nd	Rifle Div	Sov	6/41
75th	Rifle Div	Sov	6/41	164th	Rifle Div	Sov	6/41
80th	Rifle Div	Sov	6/41	165th	Rifle Div	Sov	6/41
85th	Rifle Div	Sov	6/41	167th	Rifle Div	Sov	6/41
86th	Rifle Div	Sov	6/41	169th	Rifle Div	Sov	6/41
87th	Rifle Div	Sov	6/41	170th	Rifle Div	Sov	6/41
89th	Rifle Div	Sov	6/41	171st	Rifle Div	Sov	6/41
90th	Rifle Div	Sov	6/41	172nd	Rifle Div	Sov	6/41
91st	Rifle Div	Sov	6/41	173rd	Rifle Div	Sov	6/41
95th	Rifle Div	Sov	6/41	174th	Rifle Div	Sov	6/41
97th	Rifle Div	Sov	6/41	175th	Rifle Div	Sov	6/41
98th	Rifle Div	Sov	6/41	176th	Rifle Div	Sov	6/41
99th	Rifle Div	Sov	6/41	177th	Rifle Div	Sov	6/41
100th	Rifle Div	Sov	6/41	178th	Rifle Div	Sov	6/41
102nd	Rifle Div	Sov	6/41	179th	Rifle Div	Sov	6/41
106th	Rifle Div	Sov	6/41	180th	Rifle Div	Sov	6/41
107th	Rifle Div	Sov	6/41	181st	Rifle Div	Sov	6/41
108th	Rifle Div	Sov	6/41	182nd	Rifle Div	Sov	6/41
110th	Rifle Div	Sov	6/41	183rd	Rifle Div	Sov	6/41
111th	Rifle Div	Sov	6/41	184th	Rifle Div	Sov	6/41
112th	Rifle Div	Sov	6/41	186th	Rifle Div	Sov	6/41
113th	Rifle Div	Sov	6/41	187th	Rifle Div	Sov	6/41
115th	Rifle Div	Sov	6/41	188th	Rifle Div	Sov	6/41
116th	Rifle Div	Sov	6/41	190th	Rifle Div	Sov	6/41
117th	Rifle Div	Sov	6/41	191st	Rifle Div	Sov	6/41
118th	Rifle Div	Sov	6/41	193rd	Rifle Div	Sov	6/41
121st	Rifle Div	Sov	6/41	195th	Rifle Div	Sov	6/41

UNIT	TYPE	NAT	AVAIL
196th	Rifle Div	Sov	6/41
197th	Rifle Div	Sov	6/41
199th	Rifle Div	Sov	6/41
200th	Rifle Div	Sov	6/41
203rd	Rifle Div	Sov	6/41
206th	Rifle Div	Sov	6/41
211th	Rifle Div	Sov	6/41
214th	Rifle Div	Sov	6/41
217th	Rifle Div	Sov	6/41
222nd	Rifle Div	Sov	6/41
225th	Rifle Div	Sov	6/41
226th	Rifle Div	Sov	6/41
227th	Rifle Div	Sov	6/41
228th	Rifle Div	Sov	6/41
229th	Rifle Div	Sov	6/41
232nd	Rifle Div	Sov	6/41
233rd	Rifle Div	Sov	6/41
235th	Rifle Div	Sov	6/41
1st NKVD	Rifle Div Rifle Div	Sov	6/41
2nd NKVD	Rifle Div Rifle Div	Sov	6/41
4th NKVD	Rifle Div Rifle Div	Sov	6/41
5th NKVD	Rifle Div Rifle Div	Sov	6/41
UNIT	**Rifle Div** **TYPE**	**NAT**	**AVAIL**
6th NKVD	Rifle Div Rifle Div	Sov	6/41
7th NKVD	Rifle Div Rifle Div	Sov	6/41
8th NKVD	Rifle Div Rifle Div	Sov	6/41
9th NKVD	Rifle Div Rifle Div	Sov	6/41
10th NKVD	Rifle Div Rifle Div	Sov	6/41
11th NKVD	Rifle Div Rifle Div	Sov	6/41
12th NKVD	Rifle Div Rifle Div	Sov	6/41
13th NKVD	Rifle Div Rifle Div	Sov	6/41
19th NKVD	Rifle Div Rifle Div	Sov	6/41
20th NKVD	Rifle Div Rifle Div	Sov	6/41
21st NKVD	Rifle Div Rifle Div	Sov	6/41
14th	Rifle Div Div	Sov	7/41
52nd	Rifle Div Div	Sov	7/41
54th	Rifle Div Div	Sov	7/41
59th	Rifle Div Div	Sov	7/41
63rd	Rifle Div Div	Sov	7/41
76th	Rifle Div Div	Sov	7/41
119th	Rifle Div Div	Sov	7/41
3rd NKVD	Rifle Div Rifle Div	Sov	7/41
14th NKVD	Rifle Div Rifle Div	Sov	7/41
15th NKVD	Rifle Div Rifle Div	Sov	7/41
16th NKVD	Rifle Div Rifle Div	Sov	7/41
17th NKVD	Rifle Div Rifle Div	Sov	7/41
18th NKVD	Rifle Div Rifle Div	Sov	7/41
103rd	Rifle Div	Sov	8/41
104th	Rifle Div	Sov	8/41
120th	Rifle Div	Sov	8/41
122nd	Rifle Div	Sov	8/41
168th	Rifle Div	Sov	8/41
192nd	Rifle Div	Sov	8/41
194th	Rifle Div	Sov	8/41
216th	Rifle Div	Sov	8/41
223rd	Rifle Div	Sov	8/41
230th	Rifle Div	Sov	8/41
236th	Rifle Div	Sov	8/41
244th	Rifle Div	Sov	8/41
252nd	Rifle Div	Sov	8/41
255th	Rifle Div	Sov	8/41
257th	Rifle Div	Sov	8/41
32nd	Rifle Div	Sov	9/41
133rd	Rifle Div	Sov	9/41
268th	Rifle Div	Sov	9/41
275th	Rifle Div	Sov	9/41
277th	Rifle Div	Sov	9/41
278th	Rifle Div	Sov	9/41
281st	Rifle Div	Sov	9/41
293rd	Rifle Div	Sov	9/41
295th	Rifle Div	Sov	9/41
300th	Rifle Div	Sov	9/41
21st	Rifle Div	Sov	10/41
26th	Rifle Div	Sov	10/41
65th	Rifle Div	Sov	10/41
93rd	Rifle Div	Sov	10/41
101st	Rifle Div	Sov	10/41
114th	Rifle Div	Sov	10/41
302nd	Rifle Div	Sov	10/41
304th	Rifle Div	Sov	10/41
305th	Rifle Div	Sov	10/41
318th	Rifle Div	Sov	10/41
322nd	Rifle Div	Sov	10/41
323rd	Rifle Div	Sov	10/41
421st	Rifle Div	Sov	10/41
92nd	Rifle Div	Sov	11/41
324th	Rifle Div	Sov	11/41
327th	Rifle Div	Sov	11/41
328th	Rifle Div	Sov	11/41
329th	Rifle Div	Sov	11/41
333rd	Rifle Div	Sov	11/41
335th	Rifle Div	Sov	12/41
337th	Rifle Div	Sov	12/41
343rd	Rifle Div	Sov	12/41
349th	Rifle Div	Sov	12/41
389th	Rifle Div	Sov	12/41
207th	Rifle Div	Sov	1/42
238th	Rifle Div	Sov	1/42
392nd	Rifle Div	Sov	1/42
394th	Rifle Div	Sov	1/42
395th	Rifle Div	Sov	1/42
402nd	Rifle Div	Sov	1/42
406th	Rifle Div	Sov	2/42
407th	Rifle Div	Sov	2/42
408th	Rifle Div	Sov	2/42
409th	Rifle Div	Sov	2/42
423rd	Rifle Div	Sov	2/42
429th	Rifle Div	Sov	2/42
430th	Rifle Div	Sov	2/42

UNIT	NAME	TYPE	NAT	AVAIL	
431st	Rifle Div	Sov	2/42		
414th	Rifle Div	Sov	3/42		
416th	Rifle Div	Sov	3/42		
417th	Rifle Div	Sov	3/42		
422nd	Rifle Div	Sov	4/42		
424th	Rifle Div	Sov	4/42		
425th	Rifle Div	Sov	4/42		
426th	Rifle Div	Sov	4/42		
432nd	Rifle Div	Sov	4/42		
433rd	Rifle Div	Sov	4/42		
441st	Rifle Div	Sov	4/42		
445th	Rifle Div	Sov	4/42		
427th	Rifle Div	Sov	2/42	5/42	
428th	Rifle Div	Sov	2/42	5/42	
438th	Rifle Div	Sov	2/42	5/42	
446th	Rifle Div	Sov	2/42	5/42	
131st	Rifle Div	Sov	2/42	6/42	
434th	Rifle Div	Sov	3/42	6/42	
435th	Rifle Div	Sov	3/42	6/42	
436th	Rifle Div	Sov	3/42	6/42	
442nd	Rifle Div	Sov	4/42	6/42	
447th	Rifle Div	Sov	4/42	6/42	
448th	Rifle Div	Sov	4/42	6/42	
449th	Rifle Div	Sov	4/42	6/42	
437th	Rifle Div	Sov	4/42	7/42	
439th	Rifle Div	Sov	4/42	7/42	
444th	Rifle Div	Sov	4/42	7/42	
450th	Rifle Div	Sov	4/42	7/42	
451st	Rifle Div	Div	Sov	7/42	
231st	Rifle Div	Div	Sov	8/42	
440th	Rifle Div	Div	Sov	8/42	
443rd	Rifle Div	Div	Sov	8/42	
452nd	Rifle Div	Div	Sov	8/42	
453rd	Rifle Div	Div	Sov	8/42	
454th	Rifle Div	Div	Sov	9/42	
455th	Rifle Div	Div	Sov	10/42	
456th	Rifle Div	Div	Sov	10/42	
457th	Rifle Div	Div	Sov	11/42	
458th	Rifle Div	Div	Sov	11/42	
459th	Rifle Div	Div	Sov	11/42	
460th	Rifle Div	Div	Sov	11/42	
461st	Rifle Div	Div	Sov	11/42	
462nd	Rifle Div	Div	Sov	11/42	
463rd	Rifle Div	Div	Sov	12/42	
464th	Rifle Div	Div	Sov	12/42	
418th	Rifle Div	Div	Sov	6/44	
501st	Tank Bde	Bde	Sov	7/41	
1st	Hvy Tank Rgt	Sov	7/41		
502nd	Tank	Bde	Sov	8/41	
503rd	Tank	Bde	Sov	9/41	
2nd	Hvy	Tank	Rgt	Sov	9/41
504th	Tank	Bde	Sov	10/41	
505th	Tank	Bde	Sov	11/41	
3rd	Hvy	Tank	Rgt	Sov	11/41
506th	Tank	Bde	Sov	12/41	
507th	Tank	Bde	Sov	1/42	
4th	Hvy	Tank	Rgt	Sov	1/42
508th	Tank	Bde	Sov	2/42	
509th	Tank	Bde	Sov	3/42	
5th	Hvy	Tank	Rgt	Sov	3/42
510th	Tank	Bde	Sov	4/42	
511th	Tank	Bde	Sov	5/42	
512th	Tank	Bde	Sov	6/42	

UNIT	NAME	TYPE	NAT	AVAIL	
6th	Hvy	Tank	Rgt	Sov	6/42
513th	Tank	Bde	Sov	7/42	
514th	Tank	Bde	Sov	8/42	
515th	Tank	Bde	Sov	9/42	
516th	Tank	Bde	Sov	10/42	
517th	Tank	Bde	Sov	11/42	
7th	Hvy	Tank	Rgt	Sov	11/42
518th	Tank	Bde	Sov	12/42	
519th	Tank	Bde	Sov	1/43	
520th	Tank	Bde	Sov	1/43	
8th	Hvy	Tank	Rgt	Sov	1/43
9th	Hvy	Tank	Rgt	Sov	4/43
10th	Hvy	Tank	Rgt	Sov	7/43
11th	Hvy	Tank	Rgt	Sov	10/43
12th	Hvy	Tank	Rgt	Sov	3/44
13th	Hvy	Tank	Rgt	Sov	6/44
1st	Artillery	Sov	6/41		
2nd	Artillery	Sov	6/41		
3rd	Artillery	Sov	6/41		
4th	Artillery	Sov	6/41		
5th	Artillery	Sov	6/41		
6th	Artillery	Sov	6/41		
7th	Artillery	Sov	6/41		
8th	Artillery	Sov	6/41		
9th	Artillery	Sov	6/41		
10th	Artillery	Sov	6/41		
UNIT	**NAME**	**TYPE**	**NAT**	**AVAIL**	
11th	Artillery	Sov	6/41		
12th	Artillery	Sov	7/41		
13th	Artillery	Sov	8/41		
14th	Artillery	Sov	9/41		
15th	Artillery	Sov	10/41		
16th	Artillery	Sov	11/41		
31st	Artillery	Sov	11/41		
32nd	Artillery	Sov	11/41		
33rd	Artillery	Sov	11/41		
17th	Artillery	Sov	12/41		
34th	Artillery	Sov	12/41		
35th	Artillery	Sov	12/41		
36th	Artillery	Sov	12/41		
37th	Artillery	Sov	12/41		
38th	Artillery	Sov	12/41		
1st	Kat	Artillery	Sov	12/41	
18th	Artillery	Sov	1/42		
39th	Artillery	Sov	1/42		
40th	Artillery	Sov	1/42		
43rd	Artillery	Sov	1/42		
2nd	Kat	Artillery	Sov	1/42	
19th	Artillery	Sov	2/42		
47th	Artillery	Sov	2/42		
51st	Artillery	Sov	2/42		
20th	Artillery	Sov	3/42		
57th	Artillery	Sov	3/42		
60th	Artillery	Sov	3/42		
21st	Artillery	Sov	4/42		
62nd	Artillery	Sov	4/42		
65th	Artillery	Sov	4/42		
22nd	Artillery	Sov	5/42		
69th	Artillery	Sov	5/42		
71st	Artillery	Sov	5/42		
23rd	Artillery	Sov	6/42		
76th	Artillery	Sov	6/42		
82nd	Artillery	Sov	6/42		
3rd	Kat	Artillery	Sov	6/42	

UNIT	NAME	TYPE	NAT	AVAIL
24th	Artillery	Sov	7/42	
85th	Artillery	Sov	7/42	
88th	Artillery	Sov	7/42	
93rd	Artillery	Sov	7/42	
25th	Artillery	Sov	8/42	
99th	Artillery	Sov	8/42	
101st	Artillery	Sov	8/42	
UNIT	NAME	TYPE	NAT	AVAIL
26th	Artillery	Sov	9/42	
112th	Artillery	Sov	9/42	
113th	Artillery	Sov	9/42	
27th	Artillery	Sov	10/42	
127th	Artillery	Sov	10/42	
128th	Artillery	Sov	10/42	
28th	Artillery	Sov	11/42	
129th	Artillery	Sov	11/42	
130th	Artillery	Sov	11/42	
4th	Kat	Artillery	Sov	11/42
29th	Artillery	Sov	12/42	
145th	Artillery	Sov	12/42	
146th	Artillery	Sov	12/42	
154th	Artillery	Sov	12/42	
5th	Kat	Artillery	Sov	12/42
30th	Artillery	Sov	1/43	
163rd	Artillery	Sov	1/43	
166th	Artillery	Sov	1/43	
6th	Kat	Artillery	Sov	1/43
177th	Artillery	Sov	2/43	
180th	Artillery	Sov	2/43	
181st	Artillery	Sov	3/43	
189th	Artillery	Sov	3/43	
193rd	Artillery	Sov	4/43	
195th	Artillery	Sov	4/43	
197th	Artillery	Sov	5/43	
199th	Artillery	Sov	5/43	
200th	Artillery	Sov	6/43	
250th	Artillery	Sov	6/43	
7th	Kat	Artillery	Sov	6/43
275th	Artillery	Sov	7/43	
289th	Artillery	Sov	7/43	
300th	Artillery	Sov	7/43	
305th	Artillery	Sov	8/43	
307th	Artillery	Sov	8/43	
308th	Artillery	Sov	9/43	
311th	Artillery	Sov	9/43	
333rd	Artillery	Sov	10/43	
335th	Artillery	Sov	10/43	
UNIT	NAME	TYPE	NAT	AVAIL
347th	Artillery	Sov	11/43	
354th	Artillery	Sov	11/43	
377th	Artillery	Sov	12/43	
381st	Artillery	Sov	12/43	
8th	Kat	Artillery	Sov	12/43
9th	Kat	Artillery	Sov	1/44
666th	Artillery	Sov	6/44	
9th	Anti-Tank	Sov	6/41	
10th	Anti-Tank	Sov	6/41	
1st	Anti-Tank	Sov	6/41	
2nd	Anti-Tank	Sov	6/41	
3rd	Anti-Tank	Sov	6/41	
4th	Anti-Tank	Sov	6/41	
5th	Anti-Tank	Sov	6/41	
6th	Anti-Tank	Sov	6/41	
7th	Anti-Tank	Sov	6/41	

UNIT	NAME	TYPE	NAT	AVAIL
8th	Anti-Tank	Sov	6/41	
11th	Anti-Tank	Sov	7/41	
12th	Anti-Tank	Sov	8/41	
13th	Anti-Tank	Sov	9/41	
14th	Anti-Tank	Sov	10/41	
15th	Anti-Tank	Sov	11/41	
16th	Anti-Tank	Sov	12/41	
17th	Anti-Tank	Sov	1/42	
18th	Anti-Tank	Sov	4/42	
19th	Anti-Tank	Sov	10/42	
20th	Anti-Tank	Sov	1/43	
1st	Flak	Sov	7/41	
2nd	Flak	Sov	9/41	
3rd	Flak	Sov	12/41	
4th	Flak	Sov	1/42	
5th	Flak	Sov	5/42	
6th	Flak	Sov	9/42	
7th	Flak	Sov	1/43	
8th	Flak	Sov	5/43	
9th	Flak	Sov	9/43	
10th	Flak	Sov	1/44	

AXIS EQUIPMENT

NAME	TYPE	ATK	DEF	COST	AVAIL
Czech 38t	Medium Tank	6	4	3	6/41
M-13/40	Medium Tank	5	5	9	6/41
Pz-II	Medium Tank	5	4	2	6/41
Pz-IIIf	Medium Tank	6	5	99	6/41
Pz-IIIg	Medium Tank	9	5	3	6/41
Pz-IIIh	Medium Tank	9	7	3	6/41
Pz-IVd	Medium Tank	7	4	99	6/41
Pz-IVe	Medium Tank	7	6	4	6/41
R-35	Medium Tank	5	7	99	6/41
Czech 38t(E)	Medium Tank	6	5	3	1/42
Pz-IIIj	Medium Tank	11	7	4	1/42
Pz-IVg	Medium Tank	14	7	5	5/42
Pz-IVh	Medium Tank	15	7	5	9/42
Pz-IIIm	Medium Tank	11	8	3	1/43
M-15/42	Medium Tank	8	6	9	1/43
Panther	Medium Tank	21	14	8	5/43
Pz-IVj	Medium	15	8	6	2/44
Tiger	Heavy Tank	18	16	7	12/43
King Tiger		24	21	9	6/44
Jpz-I	Light TD	8	2	2	6/41
Marder II	Light TD	14	3	4	1/42
Marder III	Light TD	13	4	4	5/42
Nashorn	Light TD	22	4	8	7/43
Jpz-IV	Medium TD	19	11	6	3/44
Jagdpanther	Medium TD	22	16	8	6/44
Hetzer	Medium TD	14	10	6	9/44
Elefant	Heavy TD	22	22	9	1/43
Jagdtiger	Heavy TD	26	24	9	12/44
Stug-IIIb	Assault Gun	6	7	3	6/41
Stug-IIIg	Assault GUn	14	9	5	6/42

SOVIET EQUIPMENT

NAME	TYPE	ATK	DEF	COST	AVAIL
BT-5	Medium Tank	6	3	99	6/41
BT-7	Medium Tank	6	5	3	6/41
T-26	Medium Tank	6	4	3	6/41
T-28	Medium Tank	7	9	99	6/41
T-34/76A	Medium Tank	9	10	5	6/41
T-37	Medium Tank	1	2	99	6/41
T-60	Medium Tank	4	5	2	6/41
Valentine	Medium Tank	9	8	4	6/41
T-70	Medium Tank	6	6	3	6/42
T-34/76C	Medium Tank	12	11	6	9/42

Grant	Medium Tank	10	6	5	1/43
T-34/85	Medium Tank	16	12	6	11/43
Sherman	Medium Tank	11	8	6	1/44
KV-1	Heavy Tank	9	15	5	6/41
KV-II	Heavy Tank	10	10	8	6/41
T-35	Heavy Tank	8	7	99	6/41
KV-1E	Heavy Tank	12	15	5	7/41
KV-1S	Heavy Tank	12	18	6	11/42
KV-85	Heavy Tank	16	15	8	10/43
JS-I	Heavy Tank	16	17	8	3/44
JS-II	Heavy Tank	21	18	8	6/44
JS-III	Heavy Tank	21	24	8	1/45
SU-76	Light TD	10	3	4	2/43
JSU-122	Medium TD	19	16	7	3/44
SU-85	Medium TD	14	13	6	9/43
SU-100	Medium TD	20	14	7	11/44
SU-122	Assault Gun	11	14	6	2/43
SU-152	Assault Gun	13	15	7	7/43
JSU-152	Assault Gun	13	17	7	3/44
Artillery	Generic	1	1	1	6/41
AT-Gun	Generic	1	1	1	6/41
Flak	Generic	1	1	1	6/41
Recon	Generic	1	1	2	6/41

AIRCRAFT TABLES

The Axis and Soviet types of aircraft are listed by availability date. The data for the aircraft is: aircraft name (NAME), type of aircraft (TYPE), aircraft maneuverability (MVR), cannon rating (CAN), bomb load (LOAD), endurance or range (END), durability (DURAB), cost (COST), and availability date (AVAIL.).

Axis Aircraft Types

NAME	TYPE	MVR	CAN	LOAD	END	DUR	COST	AVAIL
He-111H	Bomber	1	3	44	30	34	6	6/41
Do-17Z	Bomber	1	3	22	18	30	5	6/41
Ju-88A	Bomber	2	2	44	28	40	6	6/41
S.M.79	Bomber	1	4	26	30	33	9	6/41
B.R.20	Bomber	1	3	35	45	28	9	6/41
Ju-87 Stuka	Dive-Bomber	3	2	22	24	20	4	6/41
Bf-109E	Fighter	20	7	5	10	20	3	6/41
Bf-109F	Fighter	22	5	2	11	20	3	6/41
Fw-190A	Fighter	22	14	11	12	26	4	6/41
G-50	Fighter	19	2	2	10	20	5	6/41
Bf-110C	Fighter-Bomber	10	8	11	18	28	4	6/41
Bf-110E	Fighter-Bomber	8	12	22	20	32	5	6/41
Fokker	Fighter-Bomber	18	2	8	15	20	6	6/41
Ju-52	Transport	1	0	50	21	24	4	6/41
Macchi C.202Fo	Fighter	21	4	2	12	24	6	8/41
S.M.84	Bomber	1	1	40	27	30	9	12/41
He-177	Bomber	1	10	66	19	48	8	4/42
Bf-109G	Fighter	21	6	2	13	24	3	6/43
Ju-87 Pzjag	Tank-Destroyer	3	12	11	24	20	5	6/43
Hs-129	Tank-Destroyer	3	12	5	11	44	6	7/43
Fw-190F	Fighter-Bomber	16	18	11	13	36	5	10/43
Fw-190D	Fighter	25	6	2	13	30	4	11/43
Me-410A	Fighter-Bomber	10	8	22	20	30	6	11/43
Me-262A	Fighter-Bomber	30	20	22	15	20	9	7/44

Soviet Aircraft Types

NAME	TYPE	MVR	CAN	LOAD	END	DURAB	COST	AVAIL
SB-2	Bomber	2	2	13	18	24	5	6/41
IL-4	Bomber	1	3	44	60	33	7	6/41
TB-3	Bomber	1	4	60	32	30	7	6/41
SU-2	Dive-Bomber	3	4	13	18	20	4	6/41
Sturmovik	Dive-Bomber	4	10	13	9	45	5	6/41
Pe-2	Dive-Bomber	2	3	22	23	30	6	6/41
I-16	Fighter	12	8	5	12	10	2	6/41
MiG-1	Fighter	16	4	4	9	20	3	6/41
MiG-3	Fighter	17	4	4	12	24	3	6/41
LaGG-3	Fighter	19	5	4	10	25	3	6/41
Yak-1	Fighter	21	4	3	11	24	3	6/41
I-15	Fighter	8	4	2	11	10	2	6/41
Hurricane	Fighter-Bomber	20	12	4	13	24	4	7/41
B-25	Dive-Bomber	2	8	30	32	38	6	1/42
P-40	Fighter-Bomber	19	6	4	20	25	4	1/42
P-39	Fighter-Bomber	18	8	5	20	22	4	4/42
La-5	Fighter	20	6	2	10	26	3	6/42
Tu-2	Dive-Bomber	1	6	50	37	40	8	8/42
P-38	Fighter	19	7	20	40	34	4	8/42
P-47	Fighter	22	8	20	20	33	4	8/42
B-24	Bomber	1	14	65	99	50	7	8/42
B-17	Bomber	1	16	70	99	60	7	8/42
Spitfire	Fighter	23	8	2	12	22	4	12/42
Yak-9	Fighter-Bomber	21	5	8	20	27	4	12/42
A-20	Dive-Bomber	3	12	26	28	34	6	6/43
Yak-3	Fighter	22	5	3	14	26	3	6/43
La-7	Fighter	23	9	2	10	27	3	6/43
P-47	Fighter-Bomber	22	8	20	11	33	4	6/43
P-51	Fighter	24	6	10	35	26	4	11/43
P-63	Fighter-Bomber	20	8	15	11	22	4	12/43

EQUIPMENT

The Axis and Soviet equipment is listed as below. The data for the equipment is: equipment name (NAME), equipment type (TYPE), attack rating (ATK), defense rating (DEF), cost (COST), and availability date (AVAIL.).

AIR GROUP TYPE NAT AVAIL
1st A.R. Fighter-Bomber Fin 6/41
2nd A.R. Fighter Fin 6/41
3rd A.R. Fighter-Bomber Fin 6/41
4th A.R Bomber Fin 6/41
KG-1 Bomber Ger 6/41
KG-76 Bomber Ger 6/41
KG-77 Bomber Ger 6/41
JG-54 Fighter Ger 6/41
EJG-54 Fighter Ger 6/41
JG-53 Fighter Ger 6/41
KG-106 Transport Ger 6/41
K.Fl.806 Bomber Ger 6/41
KG-53 Bomber Ger 6/41
KG-3 Bomber Ger 6/41
KG-102 Transport Ger 6/41
StG-77 Dive-Bomber Ger 6/41
SKG-210 Fighter-Bomber Ger 6/41
JG-51 Fighter Ger 6/41
KG-2 Bomber Ger 6/41
StG-1 Dive-Bomber Ger 6/41
StG-2 Dive-Bomber Ger 6/41

ZG-26 Fighter-Bomber Ger 6/41
JG-27 Fighter Ger 6/41
KG-50 Transport Ger 6/41
KG-104 Transport Ger 6/41
JG-52 Fighter Ger 6/41
JG-3 Fighter Ger 6/41
LG-2 Fighter Ger 6/41
JG-77 Fighter Ger 6/41
KG-27 Bomber Ger 6/41
KG-51 Bomber Ger 6/41
KG-55 Bomber Ger 6/41
KG-54 Bomber Ger 6/41
FARR 8th Fighter Rum 6/41
AIR GROUP TYPE NAT AVAIL
FARR 9th Fighter Rum 6/41
FARR 2nd Bomber Rum 6/41
MKL 1st E Fighter Hun 6/41
MKL 3rd E Dive-Bomber Hun 6/41
KGR-100 Bomber Ger 6/41
KG-4 Bomber Ger 6/41
KG-30 Bomber Ger 6/41
StG-5 Dive-Bomber Ger 6/41
JG-1 Fighter Ger 6/41
KG-40 Bomber Ger 6/41
KGR-606 Bomber Ger 6/41
JG-2 Fighter Ger 6/41
JG-26 Fighter Ger 6/41
KG-26 Bomber Ger 6/41
StG-3 Dive-Bomber Ger 6/41
ZG-1 Fighter-Bomber Ger 6/41
1o Stormo Fighter It 6/41
14o Storm Bomber It 6/41
LG-3 Fighter Ger 6/41
JG-4 Fighter-Bomber Ger 12/43
JG-5 Fighter Ger 6/41
JG-6 Fighter Ger 1/44
JG-11 Fighter Ger 6/41
JG-50 Fighter Ger 10/43
JG-76 Fighter Ger 3/44
JV-44 Fighter-Bomber Ger 6/44
ZG-2 Fighter-Bomber Ger 6/41
ZG-26 Fighter-Bomber Ger 11/43
SG-1 Dive-Bomber Ger 1/42
SG-2 Dive-Bomber Ger 9/42
SG-3 Fighter-Bomber Ger 11/43
SG-4 Fighter-Bomber Ger 11/43
SG-9 Tank-Destroyer Ger 10/43

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• W A R I N R U S S I A •
AIR GROUP TYPE NAT AVAIL
SG-10 Fighter-Bomber Ger 11/43
SG-77 Tank-Destroyer Ger 10/43
KG-6 Bomber Ger 1/43
KG-28 Bomber Ger 7/41
KG-60 Bomber Ger 6/42
KG-66 Bomber Ger 5/43
KG-100 Bomber Ger 7/42
SKG-10 Fighter-Bomber Ger 12/43
JG-101 Fighter Ger 4/44
JG-102 Fighter Ger 4/44
JG-103 Fighter Ger 5/44
JG-104 Fighter Ger 5/44
JG-105 Fighter Ger 5/44
JG-106 Fighter Ger 5/44
JG-107 Fighter Ger 5/44
JG-108 Fighter Ger 6/44
JG-110 Fighter Ger 6/44
JG-300 Fighter Ger 9/43
JG-301 Fighter Ger 9/43

JG-302 Fighter Ger 12/43
KGzbV1 Transport Ger 7/42
KGrzbV.9 Transport Ger 3/43
TrG1 Transport Ger 5/43
51o Storm Fighter It 6/41
52o Storm Fighter It 6/41
53o Storm Fighter It 6/41
54o Storm Fighter It 6/41
15o Storm Bomber It 6/41
38o Storm Bomber It 6/41
39o Storm Bomber It 7/41
MKL 2nd E Fighter Hun 6/41
MKL 4th E Bomber Hun 6/41
FARR 6th Dive-Bomber Rum 6/41
Soviet Air Groups
AIR GROUP TYPE NAT AVAIL
1st Air Fighter Sov 6/41
2nd Air Fighter Sov 6/41
3rd Bmbr Bomber Sov 6/41
4th Air Fighter Sov 6/41
5th Air Fighter Sov 6/41
6th Air Fighter Sov 6/41
7th Air Fighter Sov 6/41
8th Air Fighter Sov 6/41
9th Air Fighter Sov 6/41
10th Air Fighter Sov 6/41
11th Air Fighter Sov 6/41
12th Bmbr Bomber Sov 6/41
13th Bmbr Bomber Sov 6/41
14th Air Fighter Sov 6/41
15th Air Fighter Sov 6/41
16th Air Fighter Sov 6/41
17th Air Fighter Sov 6/41
18th Bmbr Bomber Sov 6/41
19th Air Dive-Bomber Sov 6/41
20th Air Fighter Sov 6/41
21st Air Fighter Sov 6/41
22nd Air Fighter Sov 6/41
23rd Bmbr Bomber Sov 6/41
24th Bmbr Bomber Sov 6/41
25th Air Dive-Bomber Sov 6/41
26th Air Dive-Bomber Sov 6/41
27th Ftr Fighter Sov 6/41
28th Air Dive-Bomber Sov 6/41
29th LRB Bomber Sov 6/41
30th LRB Bomber Sov 6/41
31st LRB Dive-Bomber Sov 6/41
32nd LRB Dive-Bomber Sov 6/41
33rd LRB Dive-Bomber Sov 6/41
34th LRB Bomber Sov 6/41
35th LRB Bomber Sov 6/41
36th Ftr Fighter Sov 6/41
37th Air Dive-Bomber Sov 6/41
38th LRB Bomber Sov 6/41
39th Ftr Fighter Sov 6/41
40th LRB Dive-Bomber Sov 6/41
AIR GROUP ORDER OF BATTLE
AIR GROUP TYPE NAT AVAIL
41st Air Dive-Bomber Sov 6/41
42nd LRB Bomber Sov 6/41
43rd Ftr Fighter Sov 6/41
44th Ftr Fighter Sov 7/41
45th Bmbr Bomber Sov 6/41
46th Tran Bomber Sov 6/41
47th Air Dive-Bomber Sov 7/41
48th Tran Bomber Sov 6/41
49th Tran Bomber Sov 6/41
50th Tran Bomber Sov 6/41
51st Air Fighter-Bomber Sov 7/41
52nd LRB Dive-Bomber Sov 7/41

53rd Air Dive-Bomber Sov 7/41
54th Air Dive-Bomber Sov 8/41
55th Air Dive-Bomber Sov 6/41
56th Air Dive-Bomber Sov 9/41
57th Air Dive-Bomber Sov 6/41
58th Air Dive-Bomber Sov 10/41
59th Air Fighter-Bomber Sov 11/41
60th Air Dive-Bomber Sov 12/41
61st Ftr Fighter Sov 1/42
62nd Bmbr Bomber Sov 6/41
63rd Ftr Fighter Sov 1/42
64th Ftr Fighter Sov 2/42
65th Ftr Fighter Sov 3/42
66th Air Dive-Bomber Sov 4/42
67th Air Fighter-Bomber Sov 5/42
68th LRB Dive-Bomber Sov 6/42
69th LRB Dive-Bomber Sov 7/42
70th Ftr Fighter-Bomber Sov 8/42
71st Air Fighter-Bomber Sov 9/42
72nd Ftr Fighter-Bomber Sov 10/42
73rd Bmbr Dive-Bomber Sov 11/42
74th Air Fighter-Bomber Sov 12/42
75th Ftr Fighter Sov 1/43
76th Ftr Fighter Sov 2/43
77th Bmbr Dive-Bomber Sov 3/43
78th Ftr Fighter Sov 6/43
79th Air Fighter-Bomber Sov 11/43
80th Air Fighter-Bomber Sov 5/44
81st Ftr Fighter Sov 6/44
USAAF Air Groups
AIR GROUP TYPE NAT AVAIL
1st Bomb Bomber USA 8/42
13th Bomb Bomber USA 8/42
45th Bomb Bomber USA 5/43
304th Bomb Bomber USA 11/43
2nd Bomb Bomber USA 8/43
5th Bomb Bomber USA 8/42
20th Bomb Bomber USA 5/44
42nd Bomb Bomber USA 10/43
55th Bomb Bomber USA 3/44
6th Ftr W Fighter USA 8/42
7th Ftr W Fighter USA 3/43
8th Ftr W Fighter USA 3/43
65th Ftr Fighter USA 9/43
66th Ftr Fighter USA 11/43
70th Ftr Fighter USA 11/43
62nd Ftr Fighter USA 11/43
63rd Ftr Fighter USA 3/44
67th Ftr Fighter USA 5/44
71st Ftr Fighter USA 5/44

LEADERS

NAME RATING

Name	Rating
Balck	7
Blaskowitz	5
Bock	5
Brauchitsch	7
Busch	4
Busse	5
Constantinesc	4
Dietrich	4
Dumitrescu	4
Garibaldi	4
Guderian	8
Harpe	5
Hausser	5
Heinrici	7
Himmler	3
Hitler	3

Name	Rating
Hoepner	6
Hollidt	6
Hoth	7
Hube	5
Jany	5
Kesselring	9
Kleist	6
Kluge	6
Kuchler	4
Leeb	6
Lindemann	6
List	6
Luttwitz	6
Mackensen	6
Mannerheim	7
Manstein	9
Model	8
Paulus	5
Raus	6
Reichenau	7
Reinhardt	6
Rommel	8
Rundstedt	7
Ruoff	5
Schmidt	5
Schobert	6
Schorner	5
Strauss	5
Student	5
Stulpnagel	6
Weichs	4
Witzleben	5
Wohler	6
Zeitzler	7
Antonov	4
Artem'ei	4
Bagramyan	6
Batov	5
Belov	4
Bogdanov	5
Boldin	4
Budenny	3
Cherevichenko	4
Chernyakhovsk	7
Chuikov	6
Eremenko	7
Gerasimenko	4
Golikov	4
Govorov	4
Grechko	5
Kalinin	3
Kazakov	4
Kirponos	6
Konev	8
Kozlov	3
Kulik	3
Kurochkin	5
Kuznetsov	5
Leliushenko	5
Malinovskii	5
Maslennikov	5
Mekhlis	3
Meretskov	6
Pavlov	4
Petrov	4
Popov	3
Rodimtsev	4
Rokossovskii	7
Rotmistrov	6
Shaposhnikov	5

Shtemenko	4
Smirnov	3
Stalin	4
Starinov	3
Timoshenko	7
Tolbukhin	5
Tyulenev	4
Vasilevskii	5
Vatutin	7
Voronov	4
Voroshilov	4
Zakharov	5
Zhdanov	4
Zhukov	9

FORMULAS APPENDIX EVENTS FORMULAS

Western Front: Allied Strength = (Year - 1941) * 1500
[+1000 if weather is clear] [+500 if Random
> Axis Commander Rating]
Axis Strength = 3 per tank + 1 per squad,
recon vehicle, and aircraft + 1/5 per
artillery and flak assigned to Western Front
After the Allies have landed in France, the
Axis may add 1/4 of the OKW strength when
checking Western Front event checks.
Starting 1944 Axis strength in west is
randomized for event checks.
If Axis Elite SS is less than (Year - 1940) then
Axis strength is halved (including OKW).
Italian Front: Allied Strength = (Year - 1941) * 500 [+500
if weather is clear] [+500 if Random > Axis
Commander Rating]
Axis Strength = 3 per tank + 1 per squad,
recon vehicle, and aircraft + 1/5 per
artillery and flak assigned to Western Front
After Allies have landed in Italy, Axis may
add 1/4 of the OKW strength for Italian
Front event checks.

Starting 1943 Axis strength in Italian Front is randomized for event checks
made before the Allies have landed in Italy. If the number of Panzer Divisions is
less than (Year - 1940) then Axis strength is halved (Elite SS counts as 2 Panzer
Divisions).
NOTE: Axis Elite SS units are: the SS Panzer Divisions, SS Motorized
Divisions, and some of the SS PZGR Divisions.

COMBAT FORMULAS

Available Division Strengths: Infantry or Artillery Strength = Total Troops
* (Experience/100) * (Readiness/100)
Infantry Strength is halved when attacking across a river. Tank Strength
(while attacking) = (4 * Total
Troops) * (Experience/100) * (Readiness/100)
Tank strength is reduced to 1/3 when attacking across a river. Tank Strength
(while defending) =
(2 * Total Troops) * (Experience/100) *
(Readiness/100)
Bomb Loads: Bombs = Load in LBS * Experience *
(Number flying/500)
AT Bombs = (Load in LBS/10) * Experience
* (Number flying/500)
Bomb Strength = Bombs + AT Bombs
Bombard/Artillery: Bombard losses are taken from enemy
infantry, artillery, AT guns and flak only.
Bombard Losses = (Artillery Strength +
Bomb Strength * Random)/Fort Level
AT Fire (Anti-Tank): AT losses are taken only from enemy Tanks.
Average AT is the average combat value of
all engaged AT guns.

AT Losses = (((Average AT * Total AT/Target
Defense) + Total Flak + AT Bombs *
(Random))/Fort Level)/Target Defense
Combat Firing: Combat firing losses are taken from enemy
infantry and AT guns.
Attacker Inflicted Losses = (Infantry
Strength + Tank Strength *
(Random))/Fort Level
Defender Inflicted Losses = Infantry
Strength + Tank Strength * (Random)

CREDITS

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related problems you can call
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Always make sure to include your name, address, and daytime telephone number with
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soon as possible.

KEYBOARD
COMMAND
SUMMARY
Q
Quit General Orders
G
Get Unit
N
Next Unit
C

Examine City
R
Remove orps
P
Plot Mode
H
Find Parent HQ
D
Delay Menu
U
Move Factories
O
Show HQ
Objectives
Shft/S
Special Supply
Shft/F
Factory Control
+ or -
HQ Replace Level
Shft/?
More Commands
F1
Strat/Tac Map
F2
Center Map
F3
Change Corps
F5
Add New Corps
F6
Add New HQ
F8
Remove Unit
F9
View Enemy Hexes
F10
View Active Rail
Alt/K
Set HQ Control
Alt/G
Set HQ Objective
Alt/P
Replace Pools
Alt/C
Off Map Cities
Alt/O
Victory Cities
Alt/U
View USAAF
Alt/V
March Mode
Alt/H
Change HQ
Alt/V + R
Rail Mode
Alt/T
Transfer Mode
Alt/A
Air Transfer
Alt/F
Bomb Airfield
Alt/S
Bomb City
Alt/I
Interdiction
Alt/L
Airlift
Alt/M
Soviet Review

Alt/N
Axis Review
Alt/T + R
Rail Transfer