

Tactical and Operative modes
(for Achtung Panzer and Steel Armor series)

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Graviteam®

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ABBREVIATION LIST

AR	Artillery Regiment
AD	Armor Division
AI	Artificial Intellect
AP	Armor Piercing Projectile
APC	Armoured Personnel Carrier
APCR	Armor Piercing Subcaliber Projectile
APHE	Armor Piercing High Explosive Projectile
Arm Bde	Armor Brigade
Arm Bde	Armor Brigade
Arm Coy	Armor Company
Arty Bat	Artillery Battery
AT	Antitank
AT AR	AT Artillery Regiment
AT Gun	Antitank Gun
ATGM	Anti-Tank Guided Missile
ATR	Antitank Rifle
DVCP	Disabled Vehicle Collection Post
HE	High Explosive Projectile
HEAT	Anti-Tank Cumulative Projectile
IFV	Infantry Fighting Vehicle
Inf Batn	Infantry Battalion
Inf Bde	Infantry Brigade

LFHP	Lower Front Hull Plate
LMB	Left Mouse Button
MID	Motor Infantry Division
MMB	Middle Mouse Button
OS	Operation System
Recoil	Recoilless Gun
RKKA	Red Army
RMB	Right Mouse Button
Sep Arm Bde	Separated Armor Brigade
SPG	Self-Propelled Gun
UFHP	Upper Front Hull Plate

1 OPERATIVE MODE

Any operation consists of several turns; each turn includes four Phases: Player's turn, AI's turn, battle, results. Turn starts with a briefing (pic. 1.1) and operation schemes.

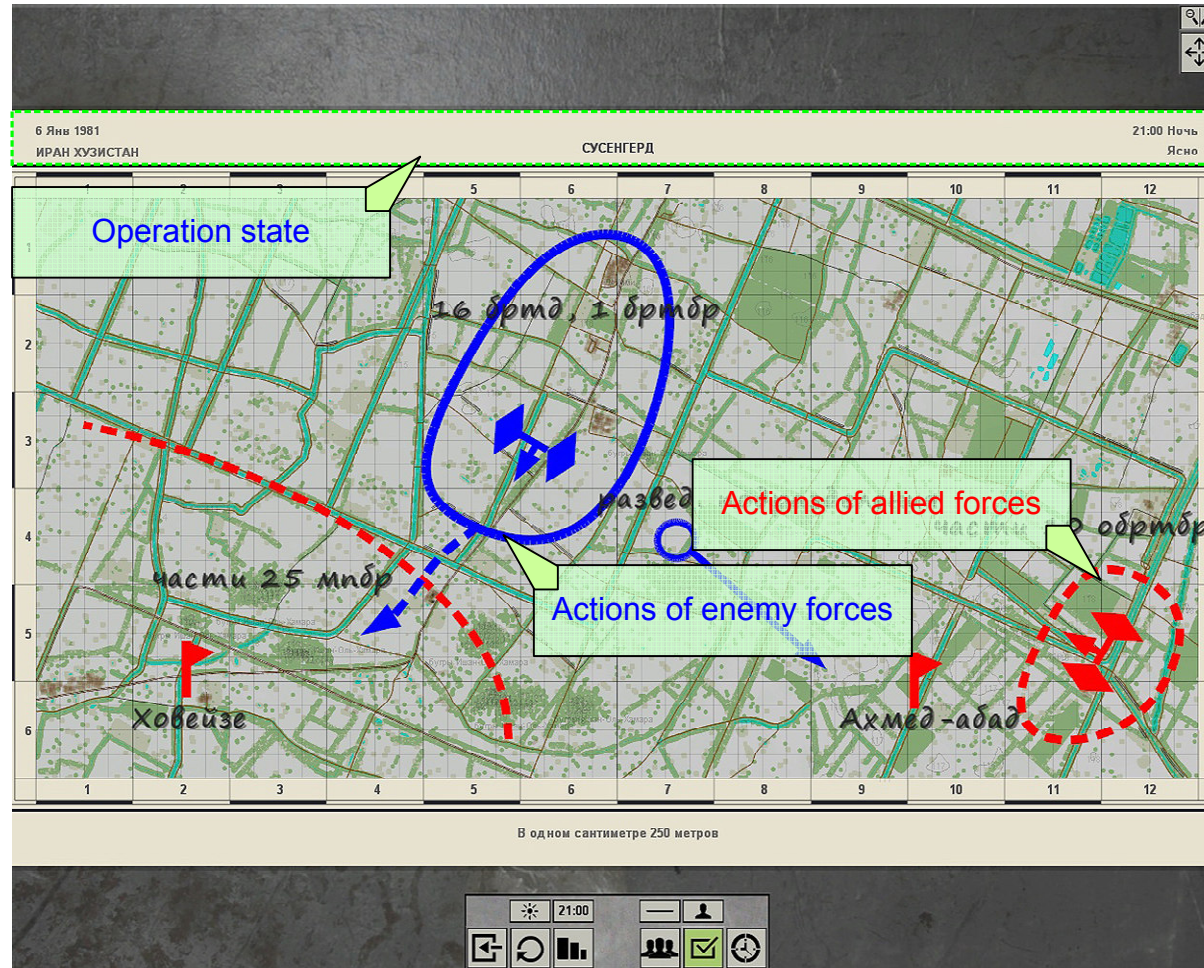
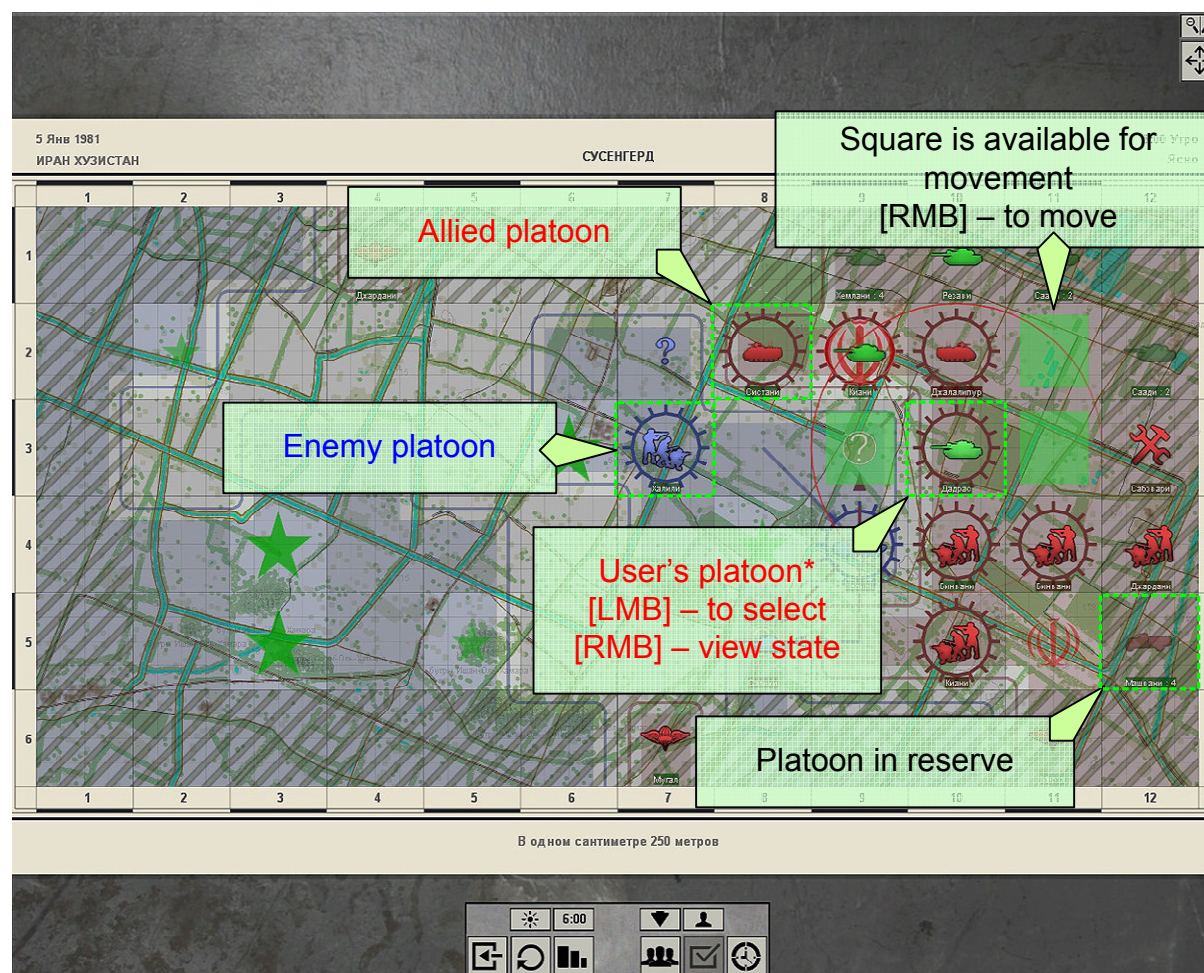


Рис. 1.1. - Briefings

Always: enemy units are **blue**; Player's troops are **red**; allied troops are **yellow**. Playing your turn (pic.1.2), you can move your platoons, attack the enemy, and replace units and/or vehicles (special units will automatically run repair, reinforcement and refueling tasks.) You can view the unit, platoon, and operation statistics.



Pic. 1.2. – Operative Phase

***Green:** platoons available to Player (Tank Simulator mode)

To move to the next Phase, press **[Enter]**. A turn lasts for approx. 4 real time hours (depending on your operation settings.)

The battlefield is divided by 1x1 km cells (1 unit). You can move over to any cell with the exception of the shaded cells lining the perimeter. A cell either belongs to any of the sides or is neutral. Red cells belong to allied troops, blue ones are taken by the enemy. Shaded cells are distributed by the current script.

Some cells are marked by flags. Such cells are called "key points" and give victory points to their owners. Player's goal is to capture and keep as many of key points as possible. Table 1.1 shows point importance/victory point rate.

Table 1.1. Victory point rate

Cell Type	Not Marked	Small	Medium	Large
Victory Point	1	2	4	8
Victory Point (encircled)	1/3	2/3	4/3	8/3

If a marked cell is encircled, it brings 3 times less victory points. The side getting more victory points is victorious. A key point brings victory points multiplied by 5 (once). Shaded cells are taken by fresh and reserve units. Such units cannot attack or join tactical battles.

Any platoon has its own Visibility Radius (the distance the platoon can detect an enemy at.) Enemy platoons that are not visible to the allied troops are not shown (you can turn this kind of visibility on with a special setting.) Visible units' data (type and statistics) are shown after the first battle. Some unit types (such as scout platoons) get visible only when they reach a neighboring cell. To terminate an operation, go to General Statistics and press End Operation button.

1.1 Troop Movements

Player can move and change his/her platoons in the first phase. Left click a platoon. Cells you can move it to will be shown in green (pic. 1.2.) You can move a platoon once in a turn. "Disabled" platoons and reserve forces are not moveable.

Under a platoon's icon the commander's name is shown. Red and green: player's platoons; blue: enemy platoons; yellow: allied troops under IA control. Green platoons are platoons you can use in a tactic Phase. Commander's name's background shows platoon's condition in red: brighter is the color, more losses the platoon suffers.

Platoon mobility defines the distance a platoon can move to: infantry can walk one cell or so while motorized and tank units move times faster. Movements are restricted by:





- 1) **Enemy in neighboring cells** (you can move one cell only);
- 2) **Terrain** (woods and rivers slow you down, a road let you move a bit farther);
- 3) **An "active" unit in the cell** blocks the cell completely.







NOTE! If a unit is not connected to a perimeter cell, it got encircled and is not available for reinforcement, refueling or repairs.







Platoons that were dispersed at a tactic Phase move randomly. If such platoon moves to a free cell under allied forces control, it becomes active and can fight again. There is a slight chance a dispersed platoon gets active in a neutral cell and a very low probability it gets back to active in a free enemy cell. Right click a platoon (playing your turn) to open its statistics window. Platoon type icons are shown in Table 1.2.







A hatched circle shows a platoon that stays in the same cell for several turns. It means, you can get it entrenched (at Tactic Phase.) A small circle shows encircled platoons.







Table 1.2. Platoon Types







Icon	Platoon description	Icon	Platoon description
	Tank platoon on T-62/T-55s		Tank platoon on M-60s
	Tank platoon on Mk.IA Oliphant tanks		Tank platoon on Mk5 Chieftain tanks







	APC Ratel -90 fire support platoon		BRDM-2 scout car platoon
	Motor-rifles platoon on BTR-60 APCs		Motor-rifles platoon on BMPs
	Paratrooper platoon		Motor Infantry platoon on M113 APCs







	ATGM battery		AT grenade launcher platoon
	AT platoon		Recoilless gun battery
	Tank platoon on T-60/T-70 tanks		Tank platoon on T-34 tanks, sometimes includes SMG and rifle- infantry squads







	<p>Tank platoon with Tiger tanks. Includes heavy and medium tanks Pz-VI Tiger and Pz-III N(L)</p>		<p>Tank platoon on Lend-lease British tanks Mk-II or Mk-III</p>
	<p>SPG/AT SPG battery with Stug-III assault guns or Marder series AT SPGs</p>		<p>Flamethrower tanks platoon. Includes special vehicles such as FT tanks</p>
	<p>Scout platoon on Lend-lease Universal IFV</p>		<p>Heavy tank platoon. Usually includes KV/KV-1S tanks</p>



	Medium tank platoon. Includes Pz-III or Pz-IV tanks		Armor car scout platoon
	Light tank platoon on Pz-IIs		AT battery. Includes Pak-38/Pak-40 guns
	AT SPG battery on Marder SPGs		AT SPG Panzerjager battery.

	Light tank platoon on Lend-lease American tanks General Stuart		ATR platoon or coy
	Scout platoon. Usually includes Universal or BA-64 IFVs. Swift and stealthy		Panzer grenadier platoon on Sdkfz-251 APCs. Each squad has an APC. Usually includes SPG or mortar units
	Cavalry scout platoon or saber platoon. Usually no heavy or support weapons		Rifle-Infantry platoon. Includes a gun or mortar or machine-gun.

	Flamethrower platoon or coy. Armed with hand flamethrowers		Flamethrower tanks platoon. Include OT-34 or KV-8 tanks
	Infantry or regimental gun battery		AT gun battery. With battalion or divisional guns
	Artillery regiment battery. Howitzers or regimental/division guns		Scout squad (foot)

	Machine-gun platoon		Mortar battery
	Conscripts platoon. Reinforces platoons at 1-2 square distance. Automatically disbands the moment all of the personnel are used up		Ammunition and fuel depot. Supplies platoons at 1-2 squares distance. Not moveable.
	Mobile repair shop. Repairs vehicles and weapons at 1-2 cell distance.		Unknown platoon type. By default, enemy platoon types are hidden till the first battle starts.

	<p>Modern army ammunition and fuel depot. Supplies platoons at 1 cell distance. Not moveable.</p>		<p>Modern army supply trucks. Supply neighboring cell platoons with fuel and ammunition.</p>
	<p>Supply trucks (Wehrmacht). Supply neighboring cell platoons with fuel and ammunition.</p>		<p>RKKA supply trucks. Supply neighboring cell platoons with fuel and ammunition.</p>
	<p>Air carriers. Can move to any neutral or allied cell once and set a depot there.</p>		<p>Transport helicopter. Can move to any neutral or allied cell once and set a depot there.</p>

	RKKA transport column (ZIS-5 trucks)		Light artillery regiment battery (85 mm 52-K guns)
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1.2 Tactic Battles

To start a battle, attack an enemy platoon based in an adjacent cell. Left click your platoon then right click the enemy platoon you want to attack. A flame icon will appear and an arrow pointing at the attack direction. You can start a battle in tactic Phase: left click a battle icon. To avoid a battle, right click the icon. Your platoon, if possible, will retreat to an adjacent (horizontally) cell under your control. The enemy will take the attacked cell without struggle (pic. 1.3.)

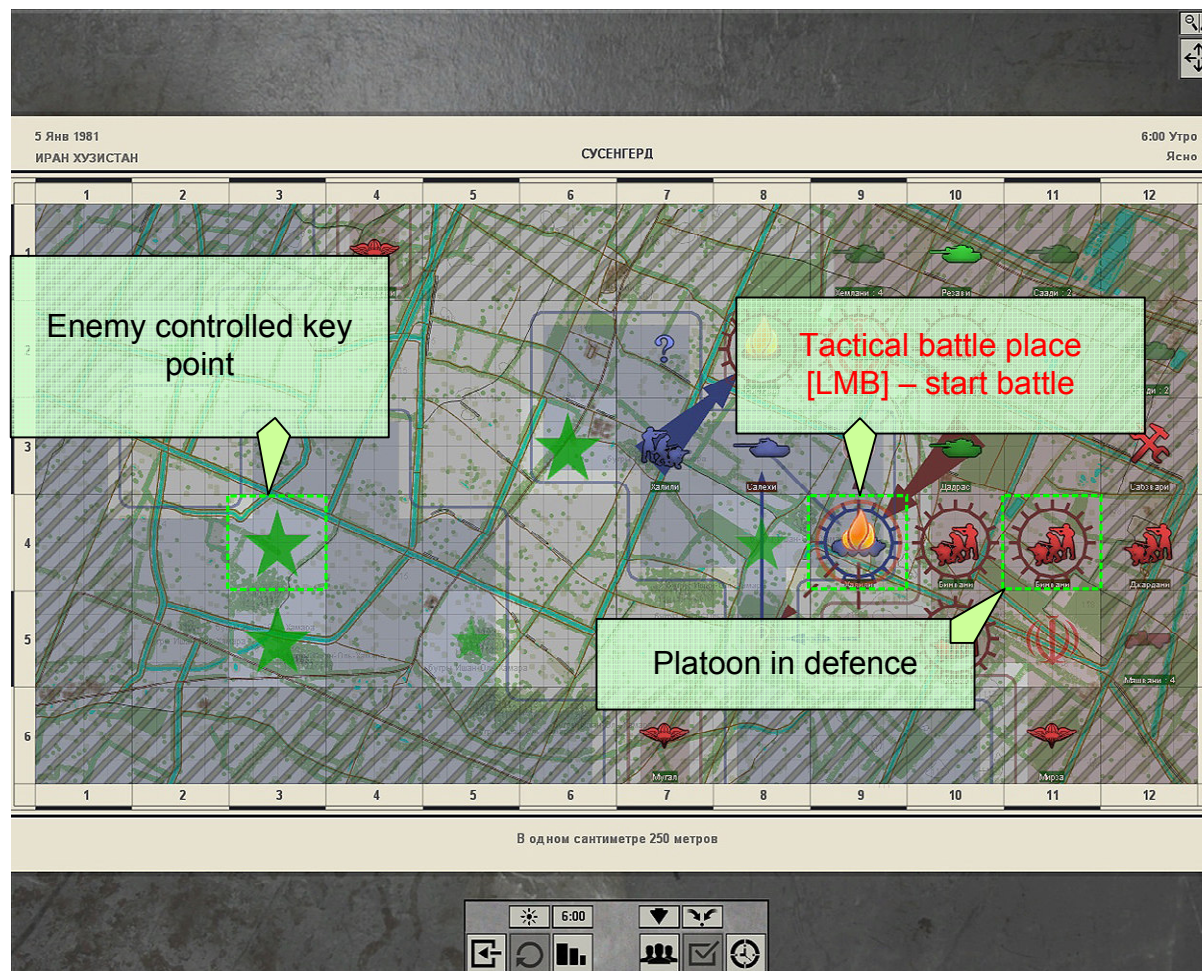
If your platoon have attacked or moved in the current turn, it can't dig trenches (to entrench a platoon, it must stay put for 2 full turns.) If a platoon gets into a battle right after a movement, it gets a bit exhausted.

If an attacking platoon is attacked by an enemy platoon, its moral decreases. A platoon under attack cannot move.

In Tactic Battle Phase, you choose a battle to start **[LMB]**. All active platoons from the cells adjacent to the battle cell (if those are not perimeter cells) can get into the battle.

A platoon that hasn't attacked or moved can dig foxholes (Tactical Phase.) After 2 full turns without movement, it can dig trenches.

Try to meet an enemy attack in a defensive stance. Keep troops together; be careful not to put support units such as artillery or mortar batteries under fire without a good defense.



Pic. 1.3. – Tactical Phase

Tactical Phase. A platoon that is attacked by tanks or attacks enemy units, who probably have tanks, receives (if possible) a special ammunition load of sub caliber or armor-piercing gun projectiles. Under an air attack, the units get AA ammo and missiles.

1.3 Platoon personnel and condition

In the first Phase of a turn, Player can change his/her platoon personnel and check its condition. Change to Statistics mode: press **[F1]** or right click the platoon you want to view (pic. 1.4.)

Reserves pool, by default available only on first turn

РЕЗЕРВЫ

ОБТ
Танк М60А1
Кермани Хейдар

ПОДРАЗДЕЛЕНИЙ

92 бртд, 3 бртбр
1й развед взвод

Пурдастан

46

||||

||||

92 бртд, 3 бртбр
2й развед взвод

Пурдастан

46

||||

||||

92 бртд, 3 бртбр
1 тр 1 взвод

Ноорани

24

||||

||||

92 бртд, 3 бртбр
1 тр 2 взвод

Сабзавари

12

||||

||||

ОБТ
Танк М60А1
Сабзавари Ава

ОБТ

4

||||

200%

300%

Vehicle for user manual control*

Агха Джавад

4

||||

200%

300%

92 бртд, 3 бртбр
1 тр 2 взвод
В РЕЗЕРВЕ

Ширази

12

||||

||||

92 бртд, 3 бртбр
2 тр 1 взвод
В РЕЗЕРВЕ

Хорасани

24

||||

||||

92 бртд, 3 бртбр
2 тр 2 взвод
В РЕЗЕРВЕ

Джафари

24

||||

||||

Platoon in reserve, be available from past turns



Pic. 1.4. – Platoon's condition

** for Tank Simulator mode*

On the right you see Platoon Panel. On the left is Reserve Units List. Select a platoon to see its units. To exchange units, first left click a unit on the right and then choose a unit to put in its place from the left. After that, click any of the selected units to change places. The same operation can be executed by the corresponding menu button. Please remember that a unit can change places only once in a turn!

You can use reserve units:


- for any platoon at the first turn of an operation;
- in later turns, for reserve platoons only.

Question mark next to a unit icon  marks men and vehicles that did not participate in the real operation but could be there in theory. You can block them from Menu. Star  marks historic units you can't remove until they are destroyed by the enemy (usually it means loss of platoon/company commanders.) Hover over the unit's description to see a historical note.

Units must belong to the same type: commander can change places with another commander, guns with guns or machineguns, tanks with tanks.


NOTE! Some platoons can share personnel and vehicles reserves. Men from a destroyed unit move to their platoon's active units.


1.3.1 Personnel reinforcement and vehicle repairs




Vehicles are repaired by repair platoons ( icon.) Repair platoon includes a few repair teams; each team can repair a vehicle or a single heavy weapon per turn (4-8 man-hours.) Teams automatically repair vehicles and guns up to 2 cells away. For an encircled platoon, the distance is 1 cell only.

NOTE! You can't use vehicles and guns in a battle if they are being repaired.

Vehicles can also be repaired by their crews. A four-man tank crew with 25% experience: 0.5 man-hours; 50%: 1.3 man-hours; 75% 2 man-hours. A six-man gun crew with 25% experience: 0.8 man-hours; 50%: 2 man-hours; 75% 3.2 man-hours. An exhausted (or wounded) crew works much slower. An encircled squad works 2 times slower.

March platoons marked with  serve as reinforcements. A conscript platoon includes several rookie units. Platoons in the adjacent cells are reinforced automatically. A used up conscript platoon is disbanded.

You can set repair and reinforce priorities by a left click on unit's icon in the list. An exclamation mark  will appear and the unit will be reinforced before the others. Left click again to remove the priority.

Supply trucks  and transport aircrafts  bring ammunition and fuel from static depots . Platoons in the adjacent cells are resupply automatically.

Personnel of conscript platoons (as well as of repair and supply teams) can fight but they are equipped with light weapons only and are almost useless in a combat. If a conscript unit or repair team is destroyed, your reinforcement and repair possibilities decrease.

Transport planes can move over the whole of the battlefield (to neutral and allied cells) but only once; after that, a permanent depot appears at their landing point.

Note! There will be no repairs/supplies if a repair/supply platoon is set for reserve (at the map perimeter.)

1.4 Statistics

Platoon statistics data are presented by two figures divided by "-" symbol. The first figure is the sum and the second is the last tactic battle data. Statistics present: personnel; weapon and vehicle losses; enemy personnel destroyed; vehicles and weapons captured; awards. The current condition is also shown. Ammunition column shows relative resupply cost (% of one ammunition load.)

РЕЗЕРВЫ		ПОТЕРИ СОЮЗНИКОВ									
	[резервы недоступны]	70 гв. омсбр 1 развед. взвод Плюхов	8	1	9	18					
		70 гв. омсбр	13 - 13	16 - 16	29 - 29					2 - 2	
		Сидорович									
		70 гв. омсбр 1 рота 3 мстр. взвод РАЗБИТ	2 - 2	13 - 13	1 - 1	15 - 15	29 - 29			1 - 1	
		Командир (бмп) Мотострелковый взвод Ангелов Виктор РАЗБИТ	5 - 5	1 - 1	5 - 5	11 - 11					
		Отделение (бмп) Мотострелковое Яковенко Яков РАЗБИТ	1 - 1	4 - 4	5 - 5	9 - 9				1 - 1	
		Отделение (бмп) Мотострелковое Фомичев Ибрагим РАЗБИТ	1 - 1	4 - 4	5 - 5	9 - 9					
		70 гв. омсбр 2 рота 4 мстр. взвод									
		Бонинкин									
		70 гв. омсбр 2 рота 3 мстр. взвод ПРИБЫЛ									
		Кудюркин									

Pic. 1.5. – Platoon losses

Personnel and vehicle losses (pic.1.5); enemy soldiers destroyed and vehicles captured (pic.1.6); awards; the current condition of the units. The ammo column shows reammo costs (% of the ammunition load.)

РЕЗЕРВЫ		ПОТЕРИ НАНЕСЕННЫЕ ПРОТИВНИКУ									
[резервы недоступны]		70 гв. омсбр									
		Доренко									
		70 гв. омсбр 1 развед. взвод									
		Плохов	6					1			
		Командир (бтр) Мотострелковый взвод Плохов Макар	3					1			
		Отделение (бтр) Мотострелковое Козаков Константин	1								
		Отделение (бтр) Мотострелковое Шмукин Леонид	2								
		ПУСТО									
		70 гв. омсбр 1 рота 1 мотр. взвод РАЗБИТ	3 - 3								
		[нет]									
		70 гв. омсбр									
			1 - 1								

Pic. 1.6. – Lost personnel by platoon

General statistics (pic.1.7): second column - active/destroyed platoons; third column - victory points; losses and damages sustained by the enemy.

СТАТИСТИКА ПО ОПЕРАЦИИ

	22 - 0	128	107 - 8	0 - 0	0 - 1	0 - 2	15	2	0	0	3	9	0	6
	19 - 2	38	15 - 0	1 - 1	0 - 0	0 - 0	115	0	1	2	12	64	8	43

Statistics on losses for the entire operation

Terminate the operation ahead of schedule

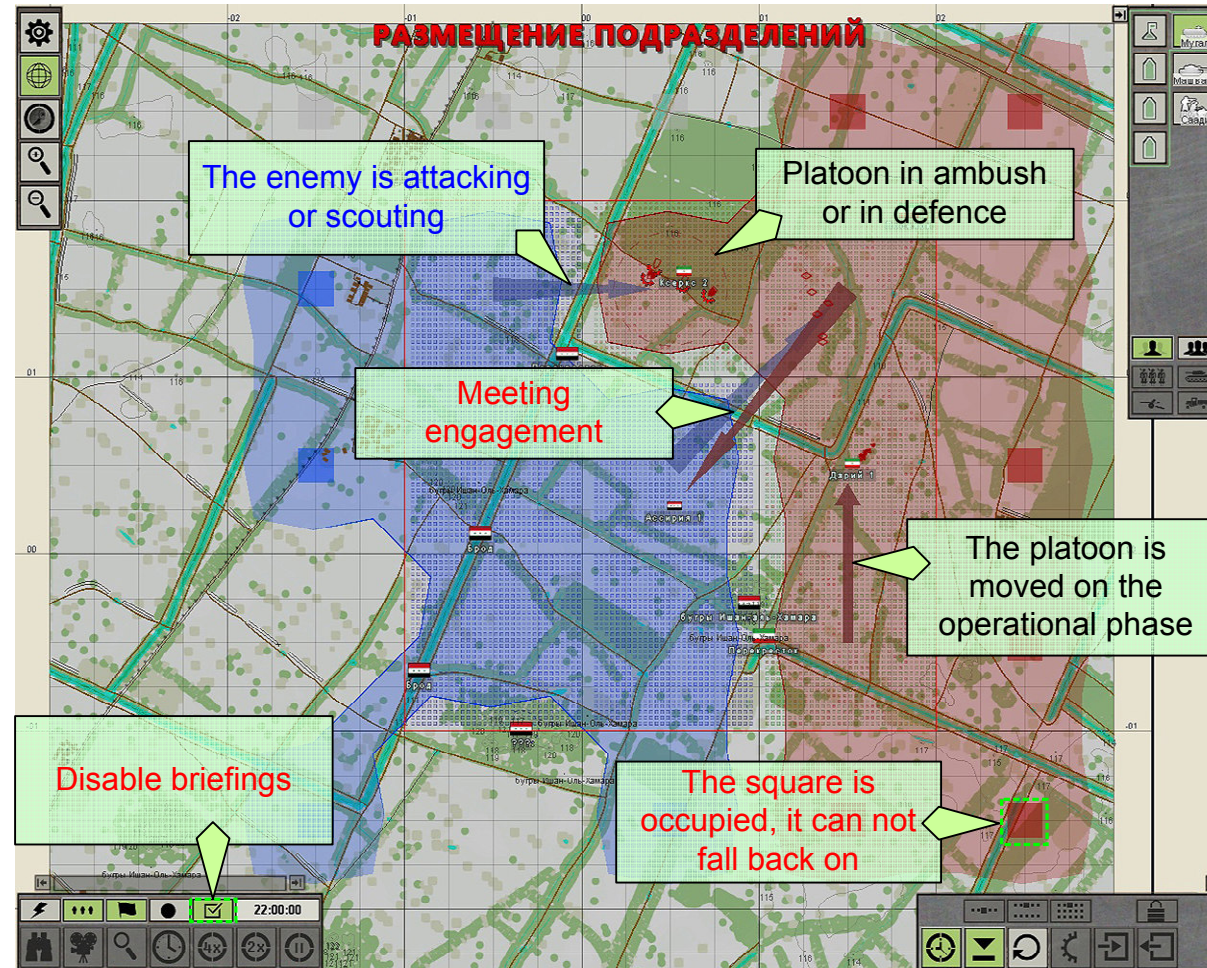
Pic. 1.7. – General operation statistics

If you terminate an operation, you cannot continue it later!

2 TACTICAL MODE

2.1 Tactical Briefing

In the beginning of the Tactic Phase, in the Map Mode you can see Tactic Briefing (pic.2.1.)



Pic. 2.1. – Tactical Briefing

Blue: enemy areas; **Red:** areas captured by your (or allied) troops. Active zone is framed with red; squares along the perimeter are occupied by operative platoons (you can't retreat there.) A dotted circle shows that the platoon cannot entrench or is encircled. Key points sectors demand defense. In the beginning, all your men will be placed in their platoons' squares.

Rectangular arrows show platoon movements in the Operative Phase; triangular show attack direction (if pointed to a key point), or scouting direction.

Enemy movements are shown for info only: the enemy can change their plans before or during the battle, and the attack direction will change.

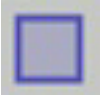
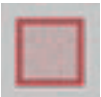

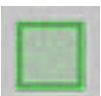


If you are ready to retreat, study the map carefully and see if there are available red cells (no squares) beyond the active zone. If there is no such cell close to your platoon, it will be dispersed and you won't be able to control it for several turns (Operative Phase.)

[F7]: turn the Briefing off.

2.2 Troop Deployment

Upon Tactical Phase loading, the Troops Deployment Mode automatically turns on. Blue: enemy areas; red: allied troops (you can't deploy here); white: square unavailable. Deployment Mode interface is shown at pic. 2.2. Squares available for deployment are divided into 32x32 m cells; each can contain one unit or a vehicle.


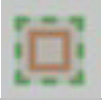
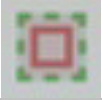

Each of the cells is marked by two frames (inner and outer.) Outer frame shows the cell's availability. Dotted line: you can't dig trenches here; solid line: trench digging allowed. Outer frame shows how good is the cell for deployment.

	Enemy cell
	Allied cell
	No-man's land: either a neutral cell, or space between platoon's squares
	Very good (green)
	Very good (green) but doesn't allow digging (dotted line)
	Infantry only (e.g., the cell contains a building)

Dotted line: you cannot dig trenches; solid line: the troops can entrench. Outer frame color shows how good for deployment the cell is.

Inner frame shows camouflage level. No frame: the units in the cell are fully visible.

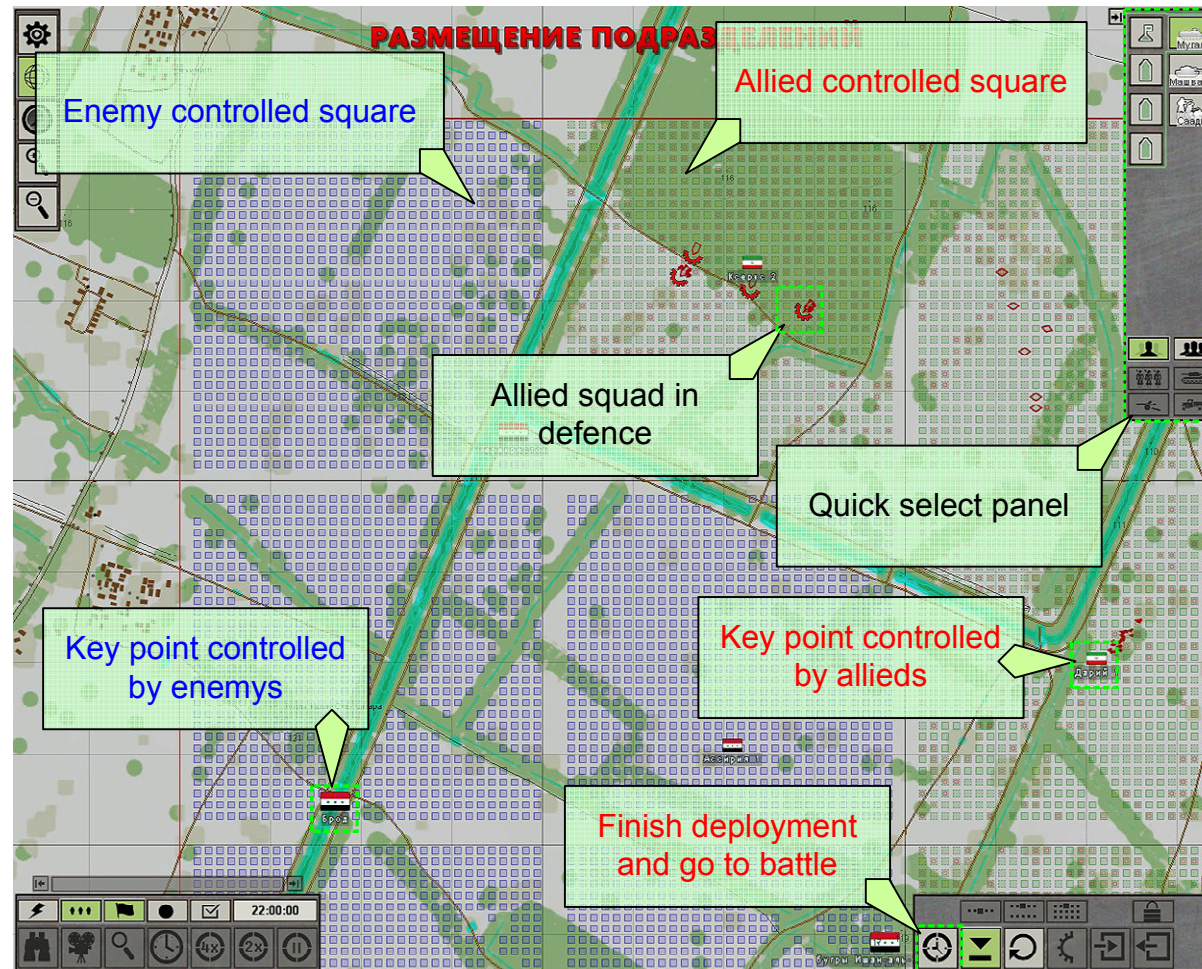
Camouflage level by inner frame color:

	excellent; very good for laying an ambush (usually woods or bushes)
	good for hiding infantry units/machineguns
	average
	poor

Select units to be moved. Select a mode in the Deployment Panel, new position and direction (**RMB**). The center of the selected group will be moved to the new point and the units will keep their relative positions (whenever possible).

If a unit cannot be moved, it will keep its position. You can order infantry to leave their vehicles (Deployment Panel buttons.) Hold RMB and draw a line to turn the troops in a new direction. Select Unit + [**SHIFT**]: the unit will follow the mouse cursor. Let [**SHIFT**] go to drop the unit.

Platoon units can be placed into Player's squares (if those are not taken by an allied AI.) The square must border the platoon's square. To find and show a unit, right click its icon in the right of the Select Unit Panel. To find a squad or vehicle and jump to its position: select panel entry, right-click its icon in the right column. For Deployment Interface, see pic. 2.2.



Pic. 2.2. - Deployment Interface

Turn on automatic trench digging: select units and press [T] (Trench Digging at the Deployment Panel). The Defense icon will appear beside the units. Press again to turn off Defense Mode. Red Defense icon: trench digging is not allowed (you can't dig in this cell; cell occupied by a building; the unit's platoon has been moving in an operative Phase and hasn't got time

to build a defense line.) In this case, in the end of the Deployment Phase, the units will take the nearest defense points: buildings or some old trenches.

Always check the right direction so that the troops housed in trenches and buildings could fire effectively. In the first place, this concerns: entrenched guns, machineguns and SPGs.

Entrench guns so that they had an open arc of fire (no hills, embankments, thickets before them). In the Defense Mode, small trees and bushes are removed from heavy weapon arcs of fire.

If a platoon doesn't move or attack for a few operative turns, it can dig enhanced trenches. SPGs, mortars and cannons will be dug deeper and get harder to hit from the flanks, and infantry will dig trenches instead of foxholes. Some soldiers will be placed into foxholes closer to guns, machineguns and SPGs.

To end Deployment and start giving orders, press **[Enter]**.

2.3 Order system

All orders can be divided into three groups: (pic. 2.3):

1) **Movement orders**: middle of the Order Panel. Here you can set the destination point and direction.

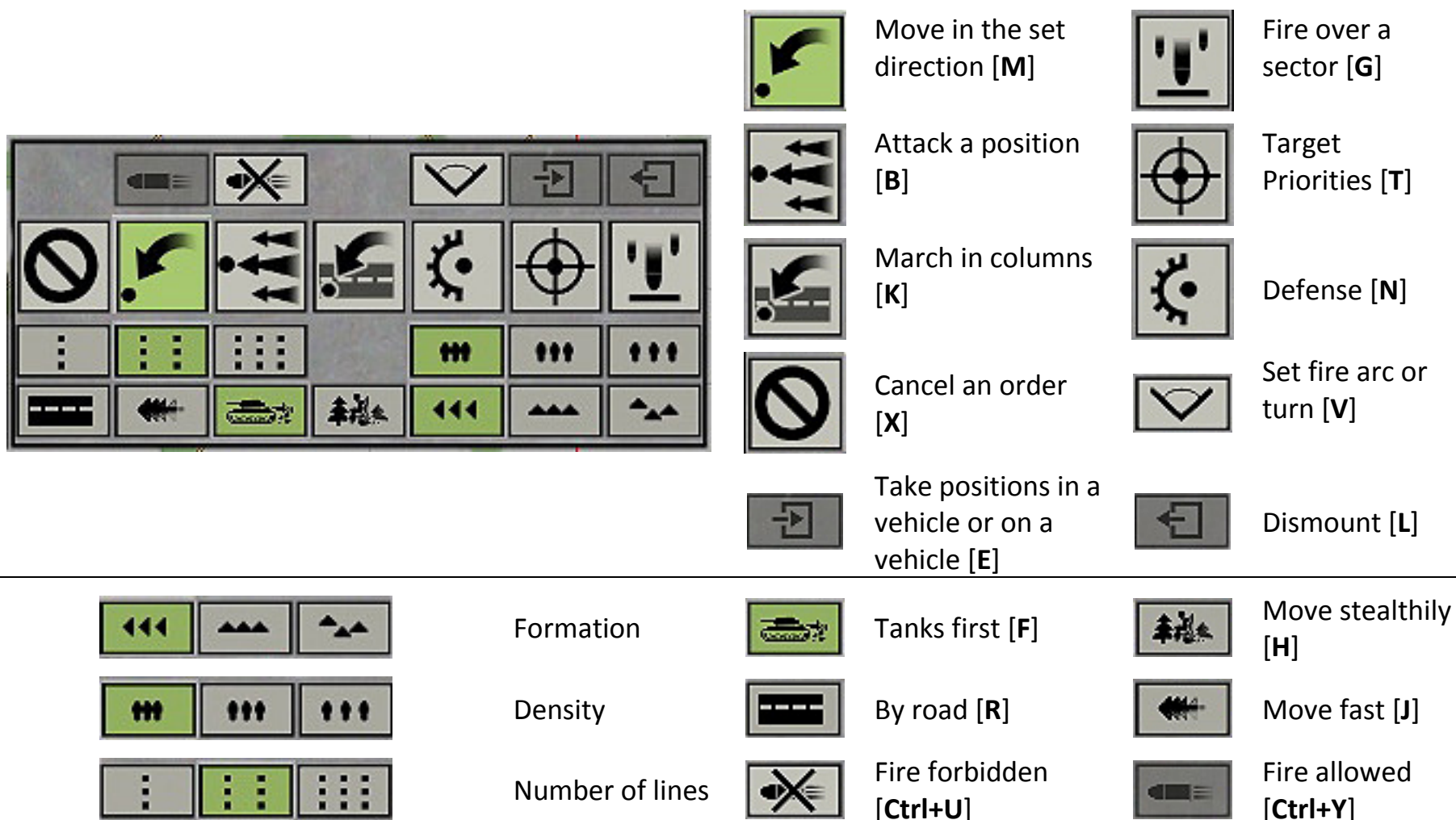
Attack	Attack enemy positions. Infantry and vehicles will move according to the situation: charge, retreat, outflank
Move	Troops take a strictly laid route
March	Troops move in columns as fast as possible and take defensive stance at the destination point
Defense	Units won't keep formation and will take cover wherever possible: in trenches, buildings, thickets, shell holes. To set fire direction, hold RMB and draw a line. Without direction, the men will take the nearest possible cover.

Movement orders are the only way to make selected units move. The orders are issued with the Mode And Modifier Panel down left. **Movement modes**:

Formation	Line; column; no formation
Density	Density and number of the lines
Movement type	By road; stealthily; fast; tanks first

Fire orders: set fire priorities and limitations.

2) The upper part of the panel contains **Quick Orders**. From here, you can cancel previous orders or give simple commands (such as mount/dismount, or turn.)



Modifiers can be set for order of any type and will prevail till the end of the Tactical Phase.

"By road": units will move by a road only: it is faster; soldiers tire less; the chance vehicles get stuck is very small. From the other hand, the chance to get ambushed is higher.

"Tanks first": tanks take place in front of a column or infantry line. This is good for attacking enemy's infantry defenses.

"Move stealthily": units move as stealthily as possible taking low places and bushes, crawling and without much fire.

"Move fast": soldiers move as fast as possible without much fire. If it's dark, vehicles turn on the lights. If you turn on this modifier together with "Move stealthily" modifier, the soldiers move with the maximum speed and don't lay down not till they see an enemy.

Formation modifiers: soldiers will move either in line (angle), or in column, or without formation. Units will take their positions and try to keep them as much as the terrain and enemy actions allow. The line formations are very vulnerable for enemy fire.

Line moves in the direction set by a movement order. E.g., 45 degrees anticlockwise means the line will move in this angle. Fire order sets fire direction for the selected units (press and hold **[RMB]**). To cancel fire, right click the button. Artillery will use HE and shrapnel shells. Shrapnel will blow up with a delay.

Press **[SPACE]** to turn on Quick Order Panel. Here you can use ready orders: march, move fast, charge etc.

Use the following modifiers together:

Order	Movement	Tanks first	By road	Move stealthily	Formation	Density	Number of lines
March and take defensive positions	March	No	Yes	No	Column	Average	3
Deployment	Movement	No	Yes	No	Column	High	2-3
Attack	Attack	Yes	No	No	Line	Average	1
Recon	Movement	Yes	No	Yes	Line	Low	2
Assault	Attack	Yes	No	No	Line	Average/ High	2-3
Movement	Movement	Yes	No/Yes	No	Column	Average	2
Hunt	Movement	Yes/No	No	No	Line	Low	1
Defense	Defense	-	-	-	-	-	-
Advance	Attack	No	No	Yes	Line	Average	2

3) Fire orders

Priorities [T]: sets priorities for selected units. It is more of a recommendation than an order. If an aim cannot be hit or is out of the visibility or fire range, soldiers won't shoot. To cancel priority, right click the button.

Fire arc [V]: set fire arc and distance. Any aim more than 100 m out of the sector will not be fired at. This command is good for ambushes (the units will not fire till the very last moment). Press the button to cancel. When you set an arc, vehicles and guns move in the **set direction** (along the center axis of the arc). With arcs under 15 degrees, the order can be used as a "turn" command (the arc will be highlighted with red) and arc will not be set. To cancel an arc, right click the button.

Pic. 2.4 shows Orders Interface or Tactical Map Interface (for Tank Simulator Mode.)



Pic. 2.4. - Tactical Phase Interface

Current orders visualization: command ranges, current commands and targets. Blue lines show movement directions, orange lines show the current target. By default, the feature is turned off. To see fire efficiency, turn on dynamic damage highlights **[F8]** or check the line of fire [~] (right-click.)

By default, you start the game with Short Order Panel where you can set simple orders without using modifiers. By default, the troops charge in line (angle), tanks first. Troops move fast in columns by the roads. Defense stance is taken without formation.

Hold [**SHIFT**] while choosing destination point to set a succession of orders.

2.4 Battle

The main goal is to occupy and hold maximum of territory (squares). Changing from tactic Phase back to operative, the game counts each side's squares. In case the central square where the tactic battle started was taken by the attacking side, the platoon which started the battle moves there automatically. If the player's squares are taken by the enemy, the platoons get "dispersed": they won't be able to take part in the battle or be controlled for a certain time (see Section 2.1 for details.)

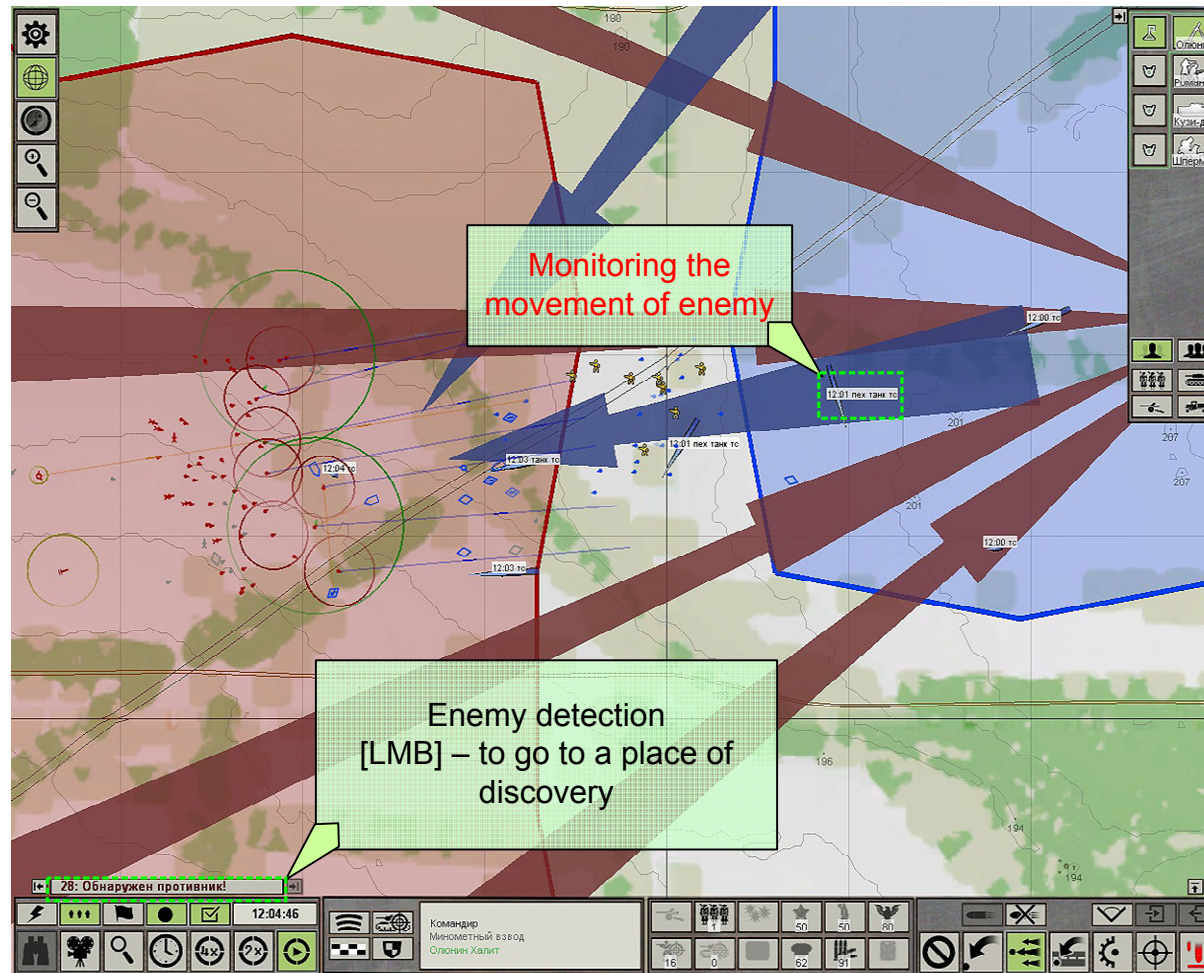
In forced retreat, all squares will be taken by the advancing enemy. To see who's in control of a given square, do the following:

Advantage	Any square is controlled by the side whose troops got superseding overall effectiveness inside the square. Overall effectiveness is defined by the number of soldiers, condition of the vehicles, morale and the unit type.
Key points	Every key point inside a square increases corresponding side's overall effectiveness. Automatic keys (small flag) increase effectiveness up to 1.2-2 times, historic points (marked by a big flag) increase effectiveness 2-8 times. It means, the side in control of the points can defend the square with minimum force.

To take a point, place either a platoon/company commander or vehicle or gun next to it. Remember that in this case, infantry and motorized infantry are far more effective than vehicles.

NOTE! If there are no troops of yours in the square, any enemy unit getting there will capture the point as well as the square!

In Tactic Mode player controls units and single vehicles. Enemy vehicles and infantry are marked with blue markers; allied and player's troops are marked with red. Point - a soldier; horizontal line - a gun; vertical line - a mortar or a machinegun; triangle - a tank or an SPG; rectangular - an APC. Show/Hide markers: **[F6]**. In Tactical Map (Briefing Mode **[F7]**) you can see an enemy movement in case any of your units sees it (pic.2.5).



Pic. 2.5. – Enemy battle movements

The point where the enemy was detected is marked with a direction arrow and a text icon (time of detection; target type: infantry, artillery, transport vehicles. Marks are updated every 5 minutes and are saved for 25-30 minutes since the last update.

Your main goals: capture territory (flagged key points) and destroy enemy forces with minimum losses.

Battle basics:

- 1) Set simple and attainable operation goal.
- 2) Lay out simple clean-cut schemes.
- 3) Try to move your forces to the right place at the right time.
- 4) Push enemy into an untenable position.
- 5) Hit at the very time the enemy cannot strike back.
- 6) Seize the initiative.
- 7) Use your forces as effectively as possible.

Ambush the enemy and make your infantry units defend your artillery. Send scouts ahead to intercept the enemy.

Platoon/company commanders fighting side by side with their men prevent panic and increase defense. Place them a step behind the defense to let them cover their units' field of action. A commander let you advance even if the enemy furnishes a great resistance.

A Commander has two features: Commander Radius and Commander Level. Radius shows the distance his commands work; Level defines effectiveness of his orders.

The units inside the Radius never panic, even under a heavy fire, and they never surrender or leave their positions, even if the enemy gets closer or their weapons got broken.

If a Commander got wounded, his Radius and Level decrease. To see Radius and level, use the [\] key.



Commander Level by color:

Green	the highest level: the troops (almost) never panic and fight in the best possible way
Yellow	middle level: the troops may cease fire and panic under heavy fire
Red, black	low level: the troops are prone to panic, and surrender under heavy fire






Artillery spotters correct fire while shelling enemy positions, suppressing enemy firing points, dispersing advancing enemy forces, or setting a smoke screen.

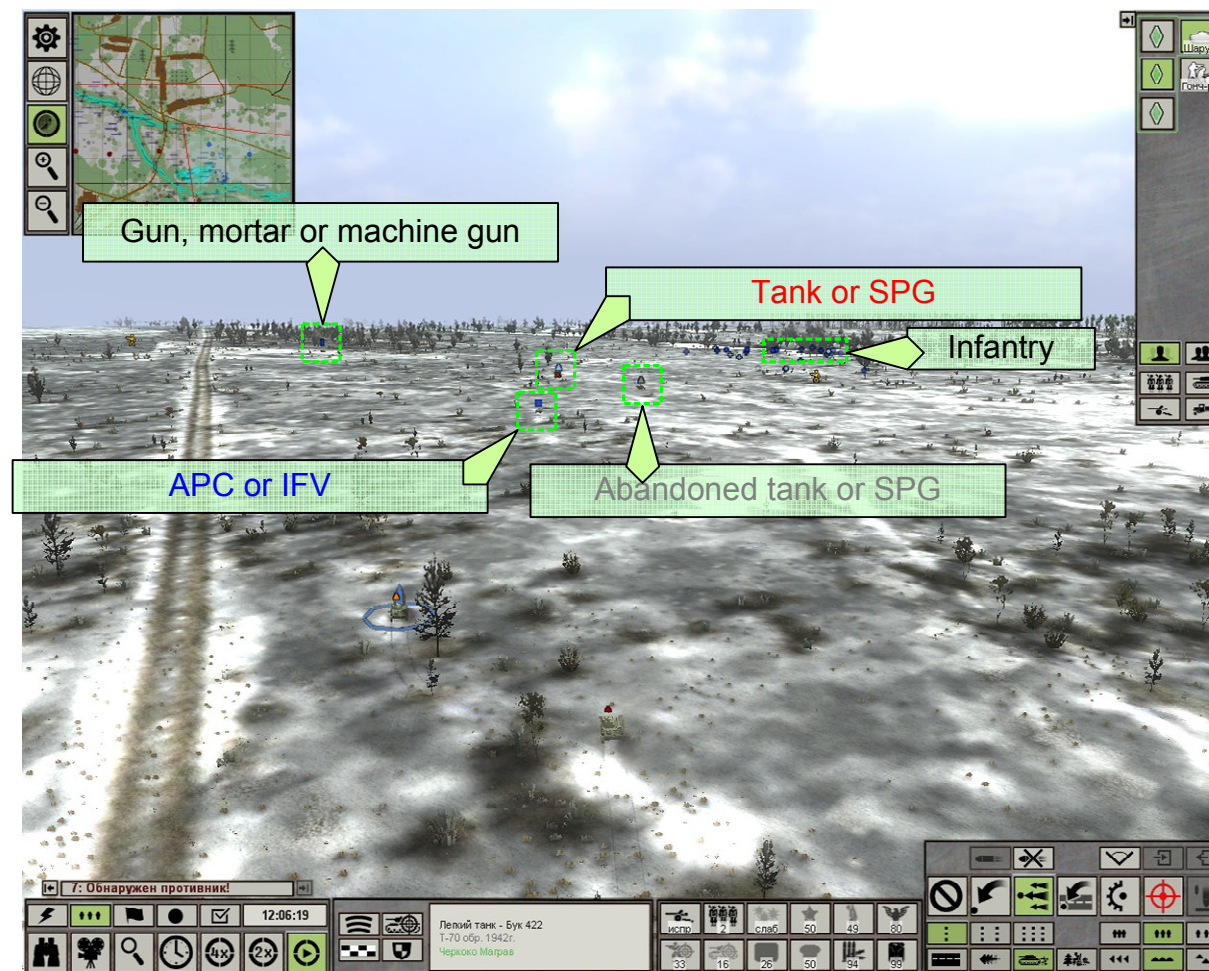
Use flares to spot the enemy in the night.

To set target priorities, hold **[T]** and draw a frame around the targets. The targets will be marked by crosses.

2.4.1 Unit markers. In Tactic Mode player controls units and single vehicles. Enemy vehicles and infantry are marked with blue markers, allied and player's troops are marked with red. Point - a soldier; horizontal line - a gun; vertical line - a mortar or a machinegun; triangle - a tank or an SPG; rectangular - an APC. Show/Hide markers: **[F6]**. Right click  button to turn on individual markers  (pic. 2.6).

Target markers:

	Armored car or APC		Tank/SPG
	Gun		Commander/Soldier with a heavy weapon
	Infantryman		Mortar or Machine-Gun



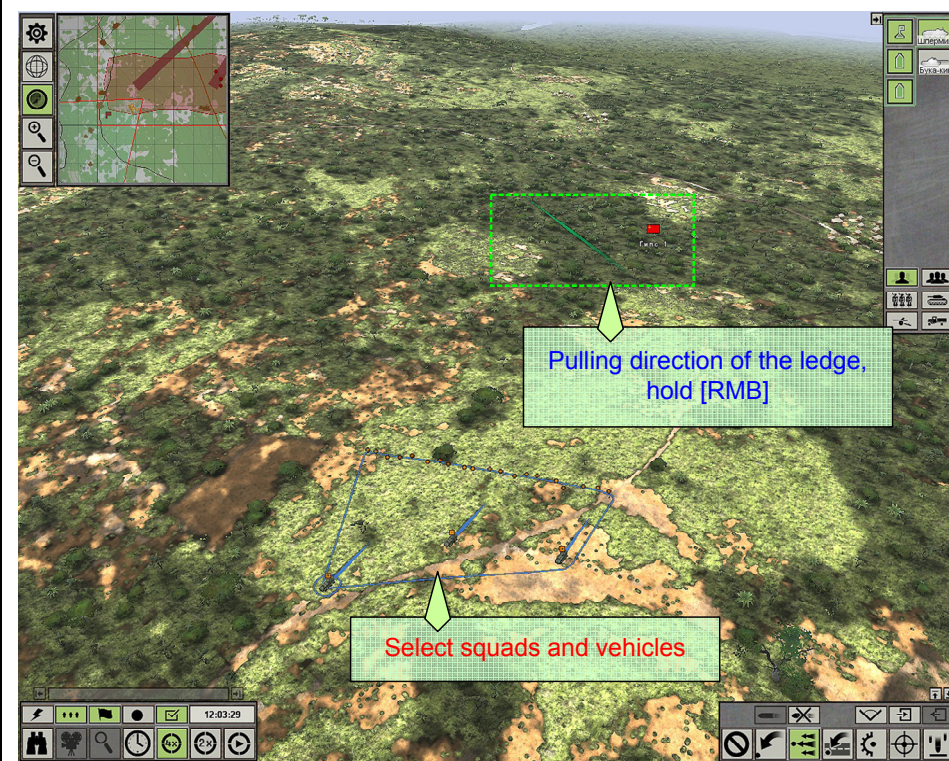
Pic. 2.6. - Unit markers

Destroyed vehicles/dead soldiers are shown in grey.

2.4.2 Formation. There are three formation types: in line (echelon); in column; without formation. For moving in echelon, see Table 2.1.

Table 2.1. The basic principles of "ledge" movement

1) To set echelon angle and direction, hold **[RMB]** and draw a line in the direction of the destination point.



2) The formation will move to the destination point keeping the angle.



Formation type buttons:

	Column		Line
	Without formation		Echelon

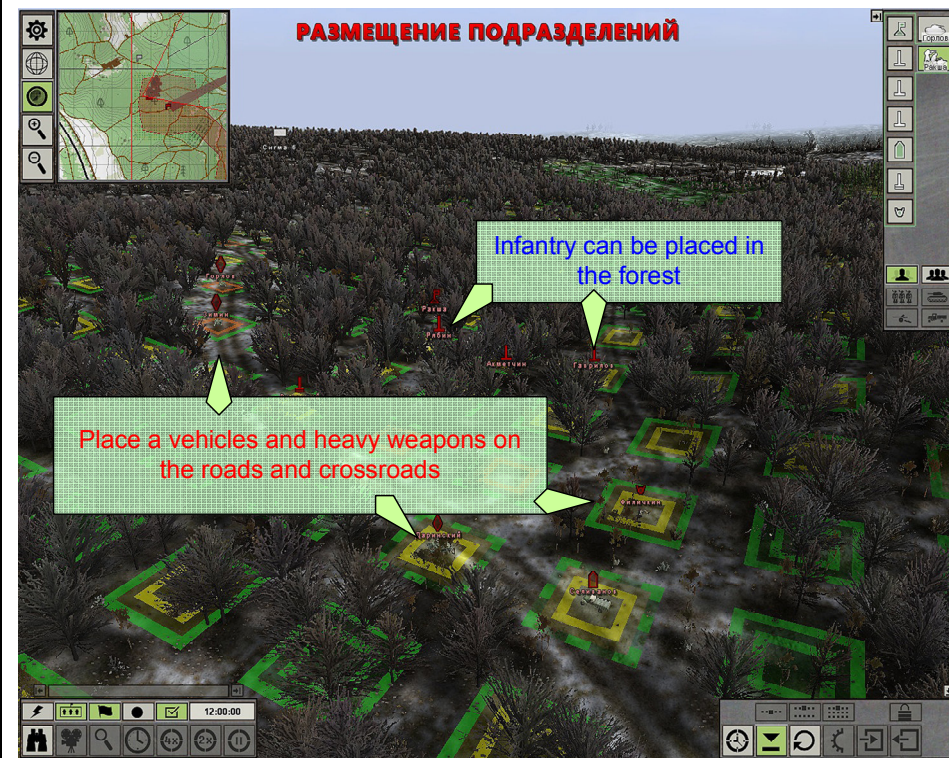
Each formation may be of 1-3 lines and three density levels. If the enemy puts up a fierce defense and the terrain allows it, use low density formations to minimize losses under gun and mortar fire. To concentrate troops in a small area, put them in several dense lines. To navigate narrow places (bridges, fords, ravines etc) and roads, move in columns.

You can change formation only if you give a new movement order!

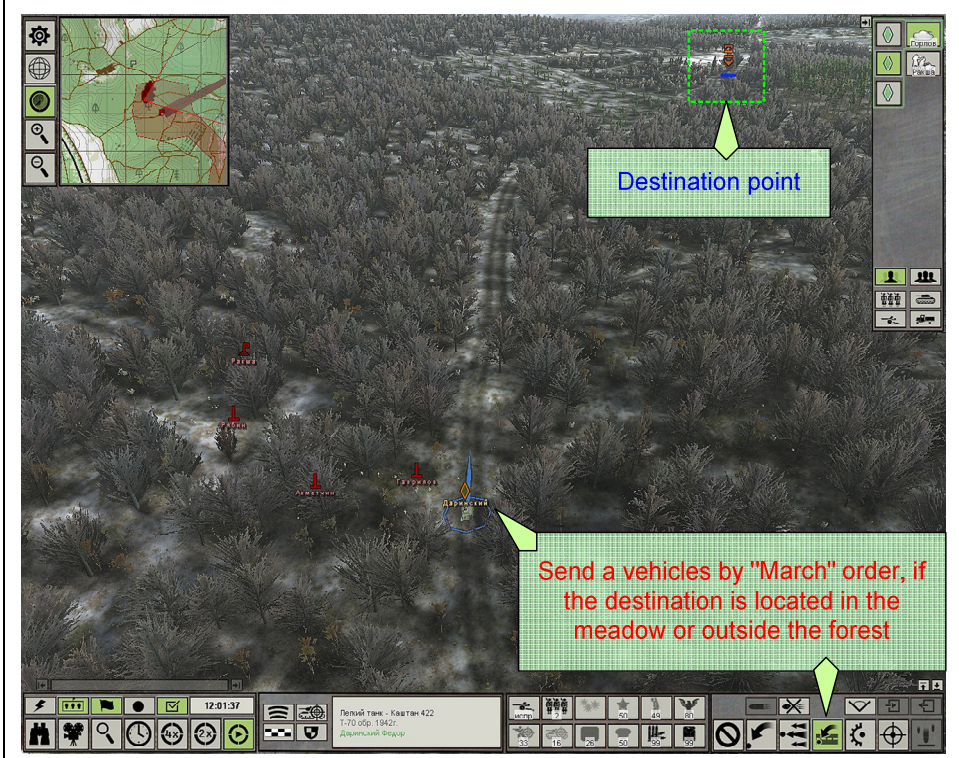
2.4.3 Forest and savanna. To move through dense woods and bushes, you need full control over your troops' movements. Sometimes vehicles can move by roads and cuttings only (brown lines on the map.) For details, see Table 2.2.

Table 2.2. Moving through woods and savanna

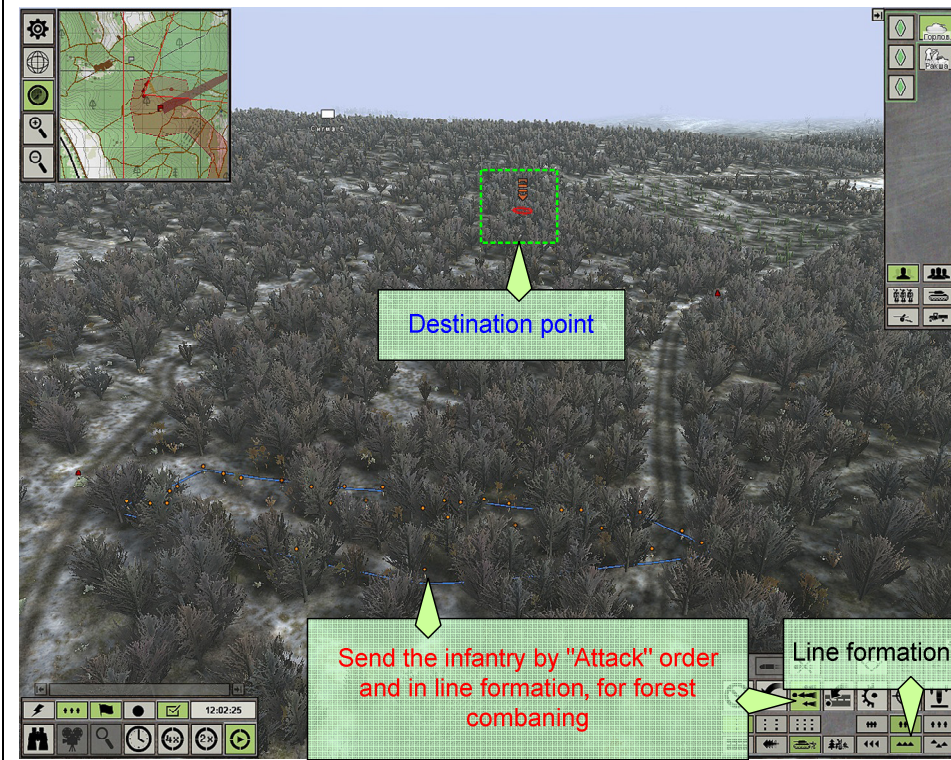
1) Place vehicles on the roads and crossroads so they couldn't stuck



2) If the destination point is out of the woods or in the clearing, give March order [K]



3) In the wood (low visibility conditions), put infantry in a loose line and give Attack order **[B]**: in this way, you have a chance to spot the enemy.



4) To move vehicles through woods, use Movement order **[M]**. The vehicles won't look for a cover in the destination point, and so won't get stuck.



If a vehicle got stuck, give Reverse order: select Movement **[M]** and set a point in the rear semi-sphere not farther than 30 m from the vehicle. The vehicle will go backwards; control its movements.

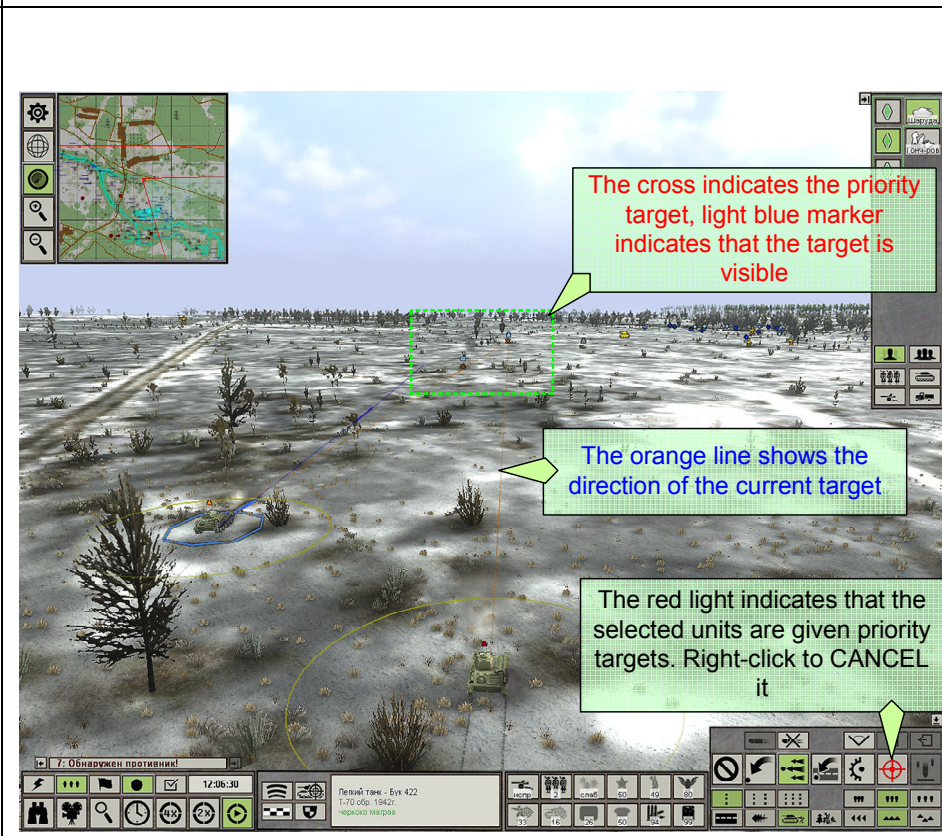
2.4.4 Vehicle turn and target designation. To turn a vehicle, choose Sector [V] and set a point (right-click): the vehicle will turn in that direction and make a short stop (a movement order will not be cancelled.)

Table 2.3. Setting target priorities

1) To set target priorities, hold [T] and draw a frame around the targets. The targets will be marked by crosses. They will be attacked whenever possible.



2) Cross marks a high priority target. Orange line shows the current target. To remove priority, right-click the Priority button.



2.4.5 Water obstacle traverse. You cross water obstacles by bridges and fords. For heavy vehicles, fords are preferable (a bridge may collapse.) Use maps to find bridges and fords (pic. 2.7.) Remember that a vehicle can easily get stuck traversing a ford!



Pic. 2.7. - Bridge and ford icons

For water obstacle traverse basics, see Table 2.4.

Table 2.4. Water obstacle traverse

1) We need to send vehicles over a bridge from one river bank to another. Select March [K] (or any other command with Road Modifier turned on.) Move in column. Give order (left click on the destination bank.) Vehicles start moving.



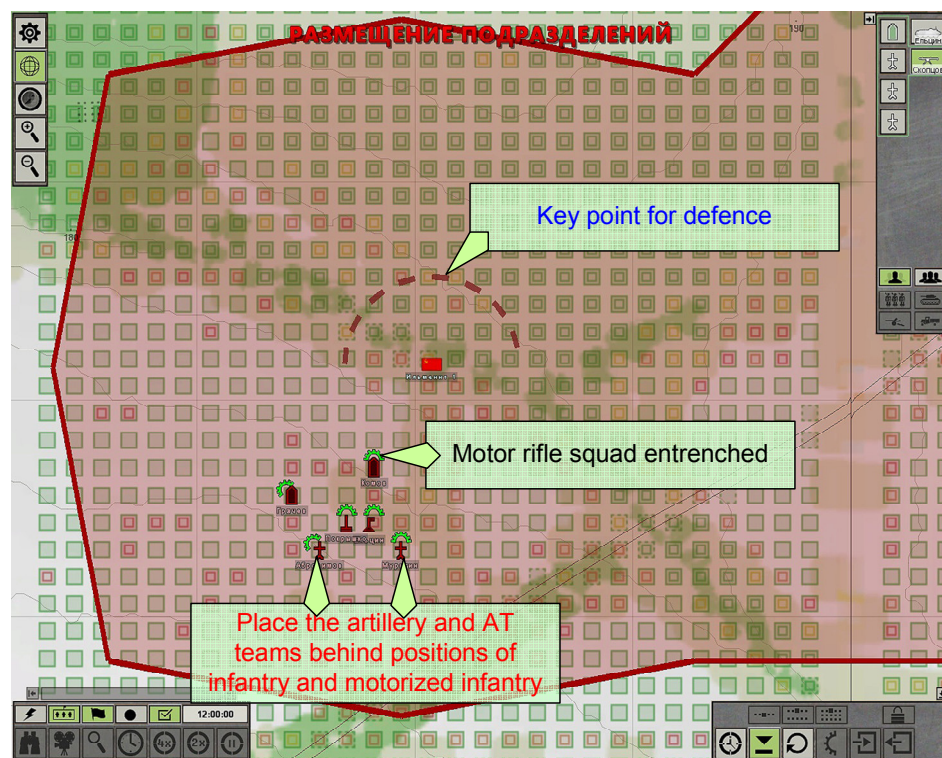
2) A tank crosses a bridge. Remember that a heavy tank has a good chance to destroy a bridge. In this case, the tank either goes through very fast, or falls down.



2.4.6 Defense and ambushes. For defense basics, see Table 2.5.

Table 2.5. Defense basics

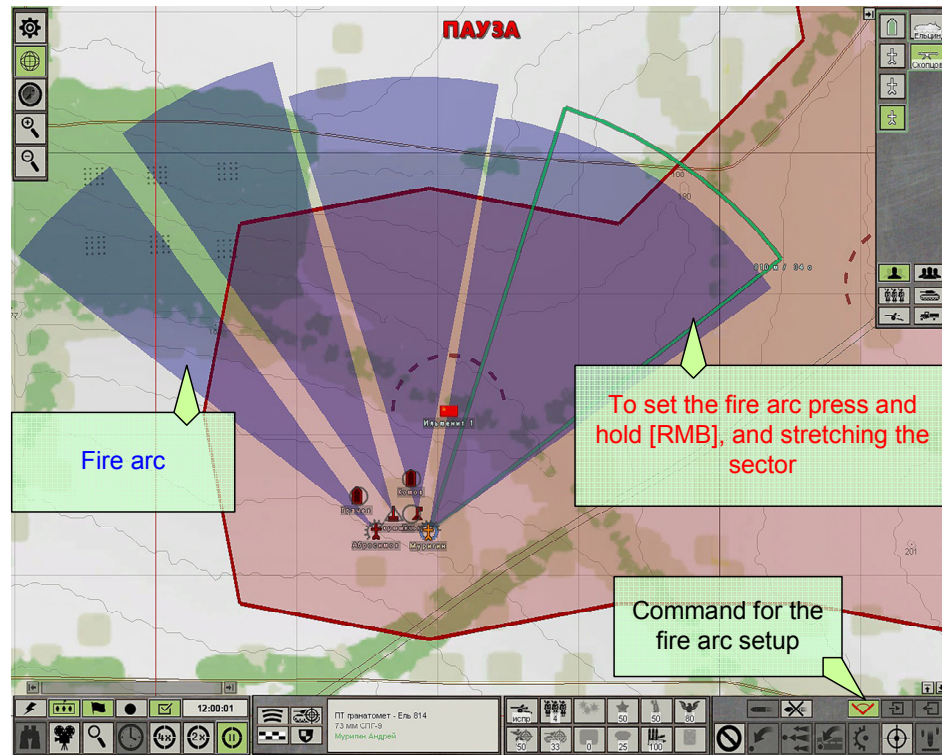
1) Select key points you want to defend, then set heavy weapons (guns, machine-guns, mortars) at the vantage points



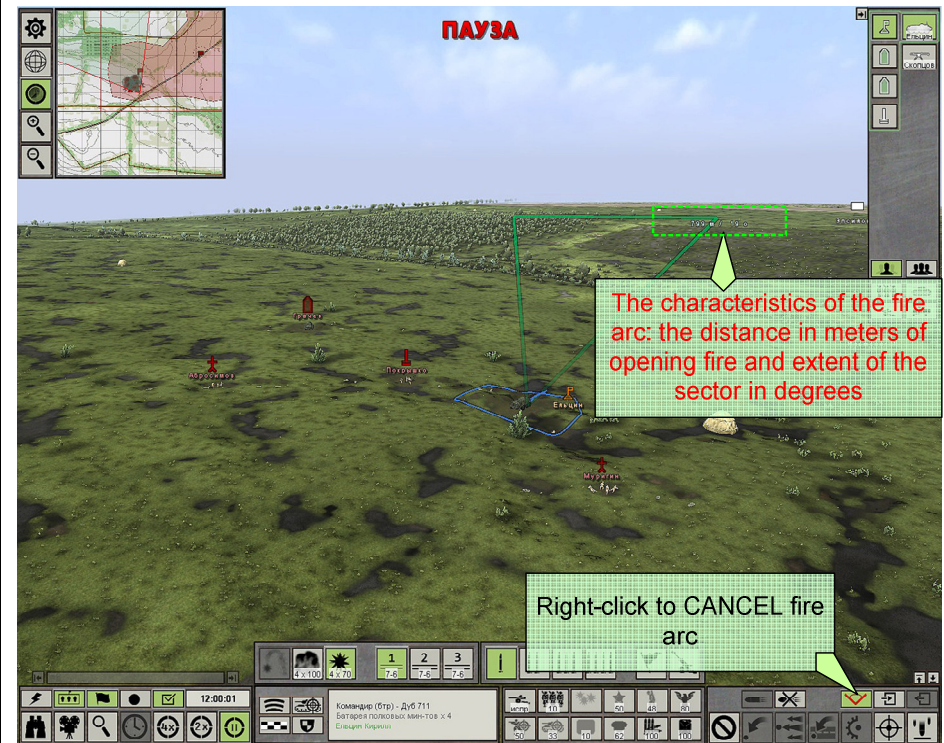
2) Entrench



3) Set fire arcs and distance: select Sector [V], press [RMB] and stretch it out



4) Sector parameters will appear at the cursor: fire opening distance and sector size



Place infantry to cover heavy weapons from all probable directions they can be attacked from. Set command units in second and third defense lines. Set ambushes to intercept the enemy: at crossroads, woody valleys, in buildings (if those places are not exposed to fire.) Set an infantry squad and (at some distance) a Commander and a gun (machine-gun, mortar)

with good view of the road. Give Defend order. In the initial order Phase, set No Fire modifier for the squad and Commander, and a fire ark for the gun. When the enemy appears, let the infantry throw grenades and incendiary bottles. Set priority targets for the gun/machine-gun/mortar (APC, tank or SPG.)

2.4.7 Unit and vehicle data. With a unit/vehicle/gun selected, in the lower center of the screen an info panel appears showing squad/Commander name; side; specifications; experience; moral; physical condition (pic. 2.8.)



	Heavy weapons		Personnel
	Shelling		Personnel experience
	Moral		Stamina
	Efficiency against infantry and non-armored targets		Efficiency against armored targets
	Defense		Commander level
	Ammo		Fuel
	See penetration defense diagrams		Check line-of-sight / line of fire
	See main projectiles penetration diagrams		Show scope
	Side		Squad/vehicle type (see Table 2.7)

Pic. 2.8. - Unit and vehicle data

Hover over panel entries to see pop-ups: number of active/dead/wounded men; heavy weapon condition; ammo/fuel supply.

There is a fire exposure gauge; under a heavy fire, the men take ground and cease fire.

Press [~] to check line-of-sight and line of fire (for heavy weapon or Commander.) Switch checking mode with [RMB]. Cursor will show target hit chance and weapon efficiency.

NOTE! Green: there is line-of-sight/line of fire; red: there is none. If the line of fire is not blocked, the distance gauge gets bright orange.

You can switch number and text distance data and line-of-sight check on/off.

Unit condition:

Black	Best
Grey	Low/No demand (no heavy weapons or armor; no fuel needed)
Red	Critical: unit/vehicle destroyed

2.4.8 Binocular Mode. In Tactic Simulator, Binocular Mode lets you zoom in an area and see it in detail [Tab].) For details, see Table 2.6.

Table 2.6. Using binoculars

1) Press [Tab], move the cross to the object you want to scrutinize, and release [Tab]



2) The object will be magnified about 8x



3) To check fire results, press and hold **[Tab]**, move green frame to the area your want to see, and release **[Tab]**



4) In this way, you can watch the area closely



In this mode, you control the camera as usual but it moves slower. Zoom x8. To turn Binocular Mode off, press **[Tab]** again. To activate Thermal binocular – right click on binocular icon.

2.4.9 Lock camera to unit/vehicle. To lock camera to squad/vehicle, select it. Press [Q]. Camera will follow it. To change direction/distance, use camera controls: extra keyboard, or arrow keys and [PageUp]/[PageDown] (up/down), [W], [A], [S], [D] and mouse wheel to zoom in/out. Use [MMB] to move camera around a vehicle.

To get camera to default position, press [Num5]. To unlock, press [Q] or move cursor to the edge of the screen.

NOTE! In Lock Mode, you can't turn on Binocular Mode (see section 2.4.8.)

2.4.10 Setting landing force to a vehicle. To set infantry on a vehicle, select vehicle and infantry units [E]. The soldiers will get on the vehicle. Remember: the infantry cannot be farther than 100 m from the vehicle.

Men on a heavy tank – 16; middle tank /SPG – 12, light tank – 8. An infantry unit includes 8-10 men.

2.4.11 Moving guns and machine-guns. When you move guns, machine-guns, and mortars, their ammo load decreases. The speed it is replenishes depends on the distance from the ammo crates. If a unit uses up its ammo load, it can replenish it from the ammo crates of the guns of the same type next door.

NOTE! Moving guns and machine-guns, the crew gets exhausted and will fire slower.

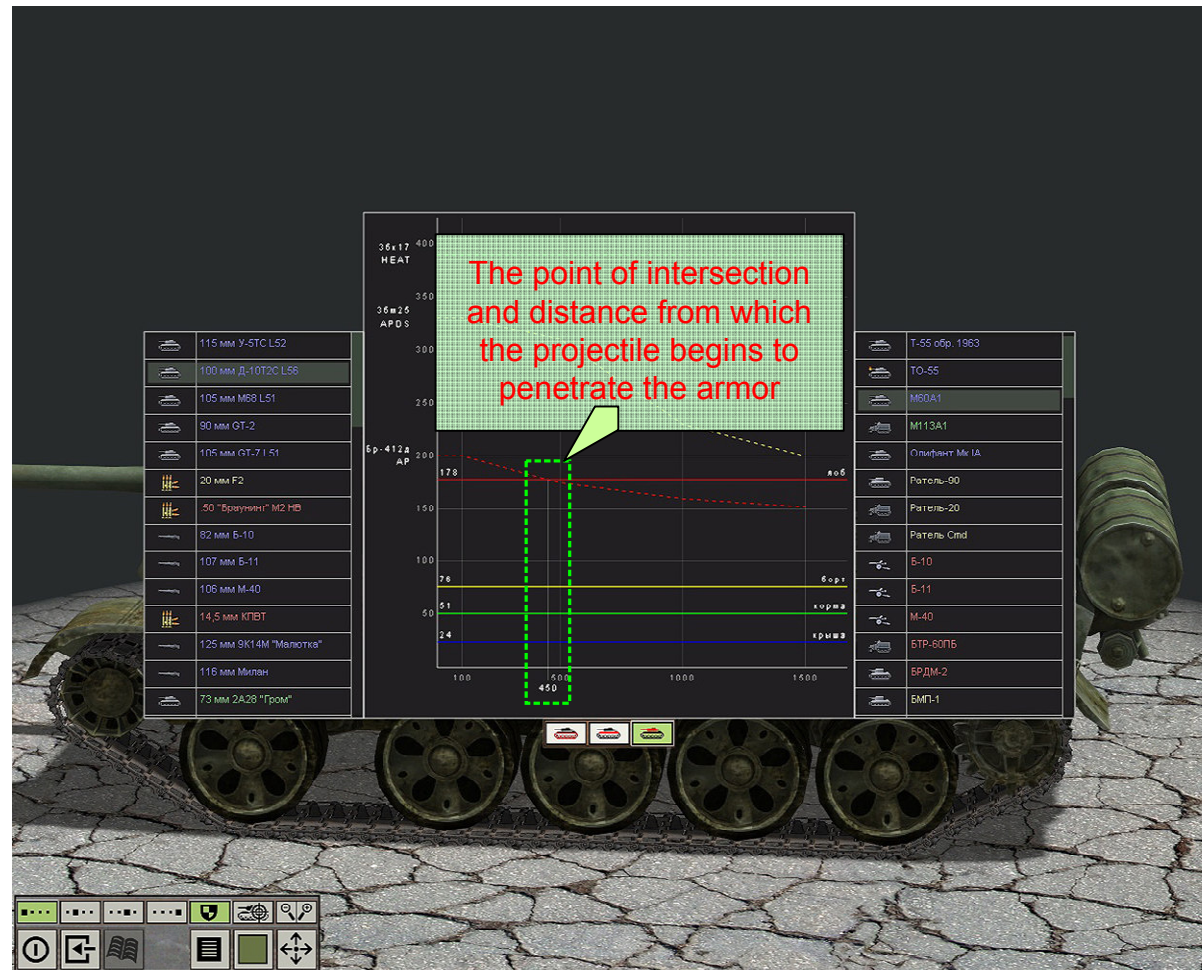
2.4.12 Screenshots. To make a screenshot, press [F12]. The image (.jpeg) will be saved in the "users\scrshots" folder in the root folder.

To create a shot of a screen without the interface (in Tactic Battle or Statistics Mode) press [Ctrl+Back] to turn off interface. Press [F12] to make a screenshot, then turn interface on pressing [Ctrl+Back] again.

2.4.13 Game controls. To start the game, press [Enter], to stop press [Enter] again. To speed the game 2/4 times, press [F11]/[Ctrl+F11].

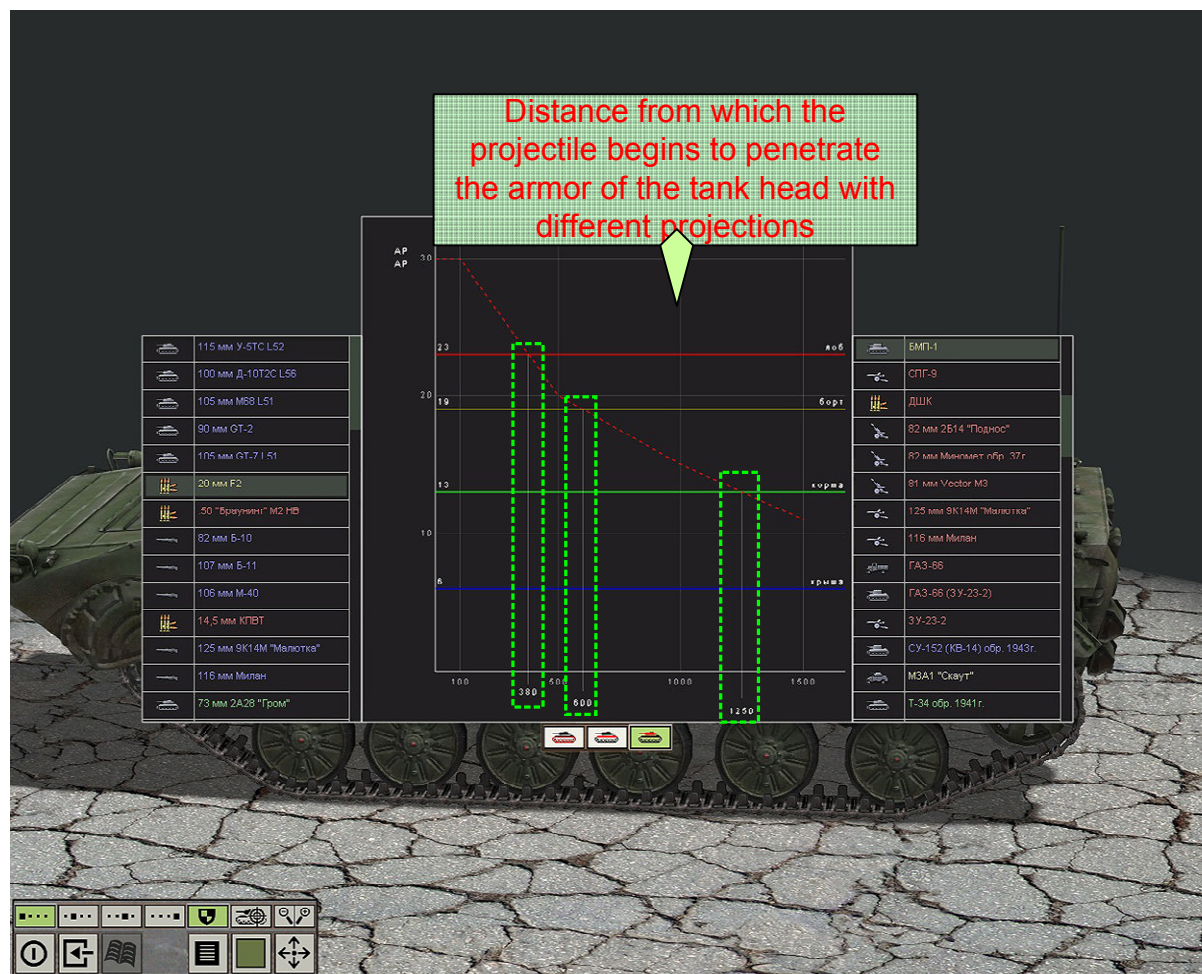
This indicator  shows actual battle time. Left-click it to see the time left.

2.4.14 Penetration diagrams. Those are used to see the penetration distance (pic.2.9.) Turn on the diagrams with the buttons on the Unit Panel. If there is a target set, the diagram will automatically show it (or its weapon.)



Pic. 2.9. – BR-412A sell penetration diagrams (against M60A1 turret front armor plate)

Horizontal lines show defense levels (mm) for different parts and from different directions. Broken lines show penetration levels for all ammunition used by a selected weapon. Crossing points are marked by vertical lines; at a point where such line crosses a horizontal line, the weapon's maximum penetration distance is shown.




















Pic. 2.10. – Penetration diagrams for F2 gun for armor-piercing shell against various points of a BMP-1 turret.

Tilt is 0-30 degrees. The diagram data are for info only and may not be the same with those used in the game. The distances are calculated without taking into account armor specifications. The distances may vary.

Pic.2.10 shows turret penetration distances for 20 mm armor-piercing shell for F2 gun mounted on a Ratel-20.

2.4.15 Tactical icons. Map and interface icons are shown in Table 2.7.

Table 2.7. Map and Interface unit icons

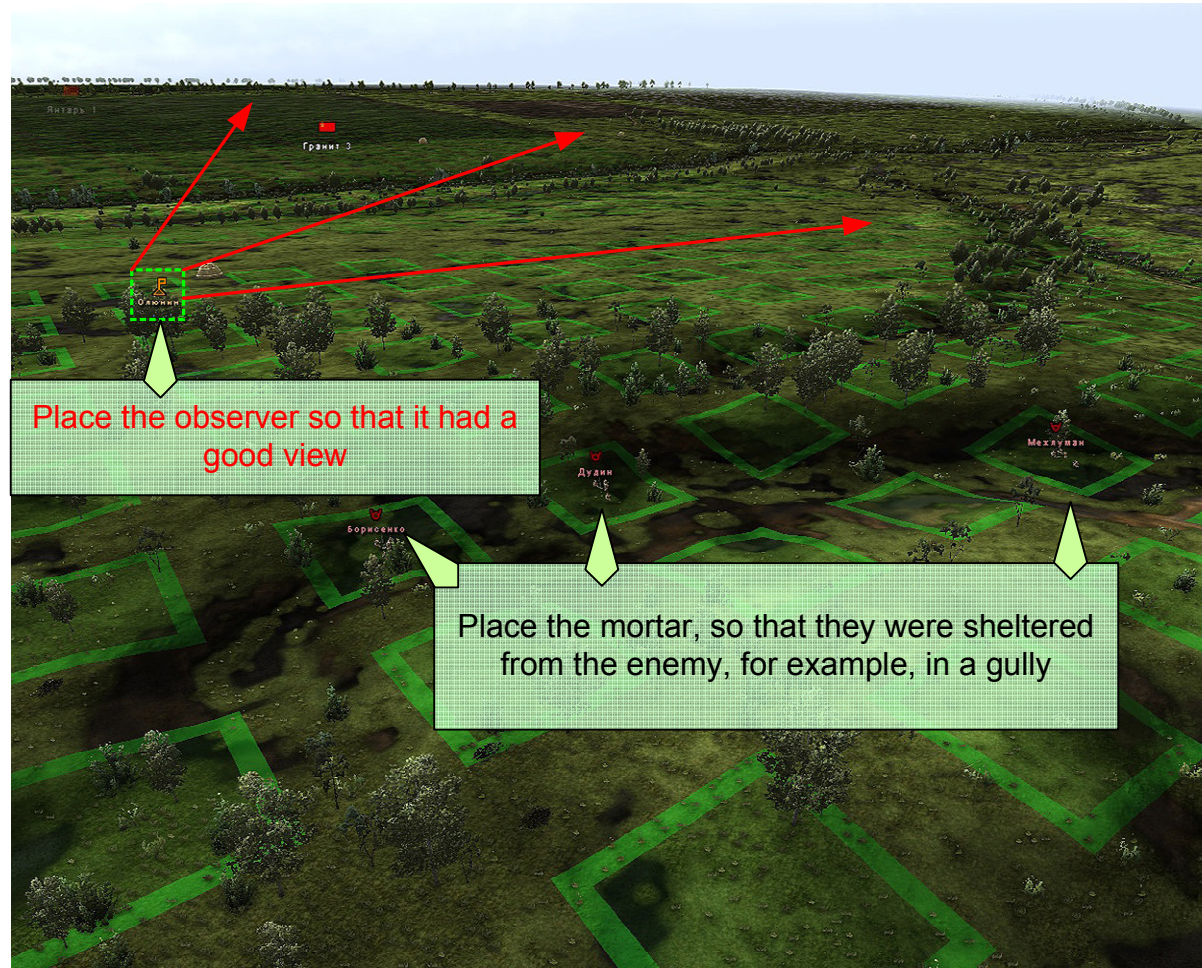
	Tank		SPG (on APC)		Assault Gun
	Scout Platoon		APC (grenadier unit)		Mortar
	Machinegun		Infantry Unit		Gun
	Flamethrower		Commanding Unit		AT SPG
	AT Gun		AT rifle		AT Gun (on APC)
	Artillery spotter		Air spotter		

2.4.16 Tactical Map and Search. In the upper left you can see a Minimap [F9]. Press [F10] to see it in detail; [Num+] and [Num-] keys to zoom the Map in and out. Key Points: red are controlled by the Player; blue are under enemy control; white points don't belong to anybody. Visible enemy units are marked by blue dots; player's units are marked with red.

Minimap also shows elevation contours, roads, buildings, forests, bushes, bodies of water etc. In case Show Units Mode is on [F6] and fire arcs are set, they will be shown in blue.

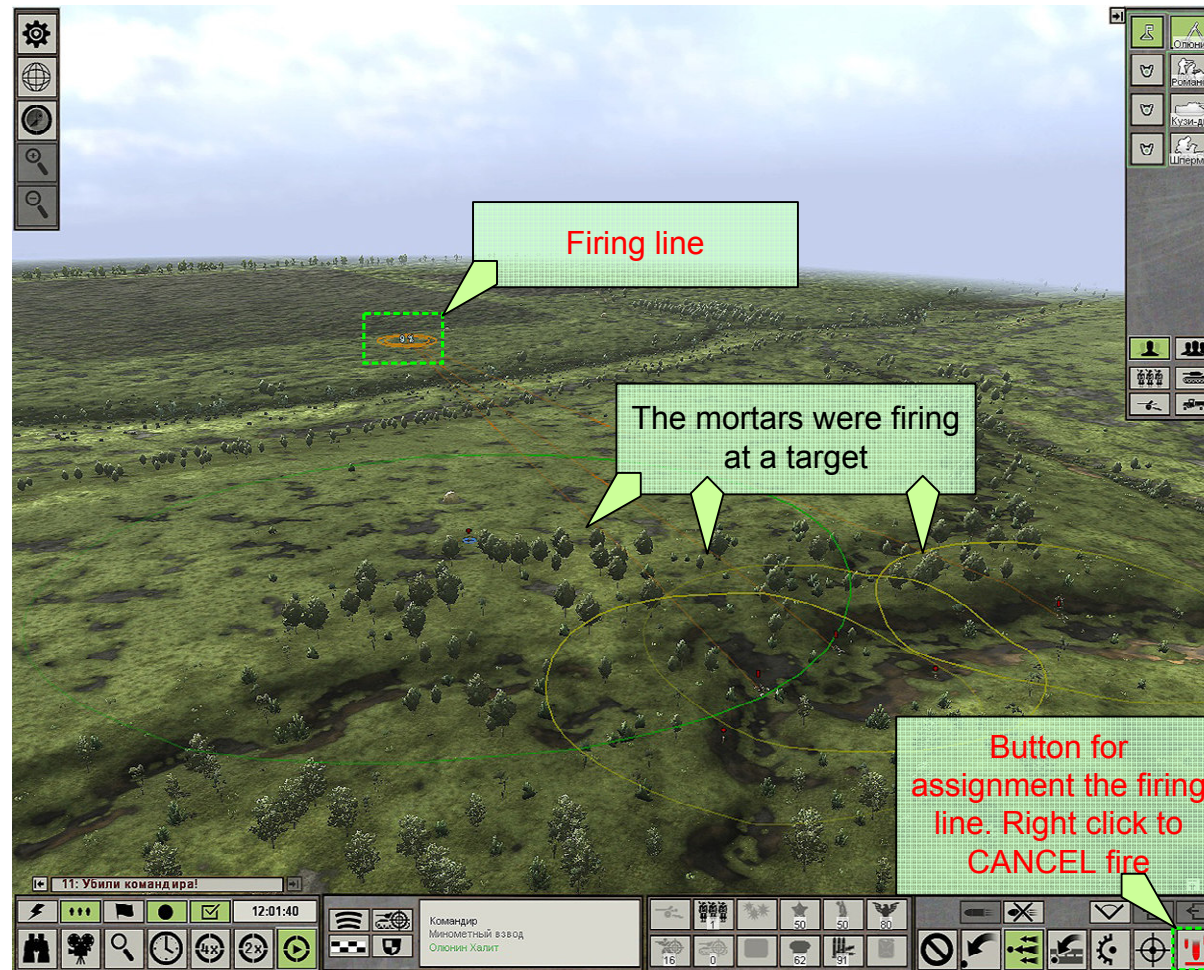
2.5 Fire adjustment and air request

You can adjust fire for two types of artillery: battlefield based (mortars, machine-guns, battalion guns), and far-range artillery (regimental guns and rockets.)



Pic. 2.11. – Positioning mortar battery and forward observer

For basics of battalion artillery fire adjustment, see (pic.2.11-2.12.) Commander (or observer) controls all fire and fire adjustment. Place the observer at a vantage point and camouflage the guns. (pic. 2.12.)



Pic. 2.12. – Fire by external target designation


To set firing line, do the following: select a commander/spotter and press [**G**]. Then set firing line (right click); draw a line to make it longer.) Number inside the line shows fire accuracy: 0 for minimum, 100 for maximum. Accuracy depends on how far the spotter is and on the firing line visibility. Accuracy will increase if the spotter sees the firing line and is not under fire himself. Press [**`**] to check the firing line visibility.

The units will fire even if they don't see the target point (as far as it stays within their weapon range.) Try to set guns, machine-guns and mortars at higher places.

NOTE! In this mode, the units use up their ammo loads too fast!

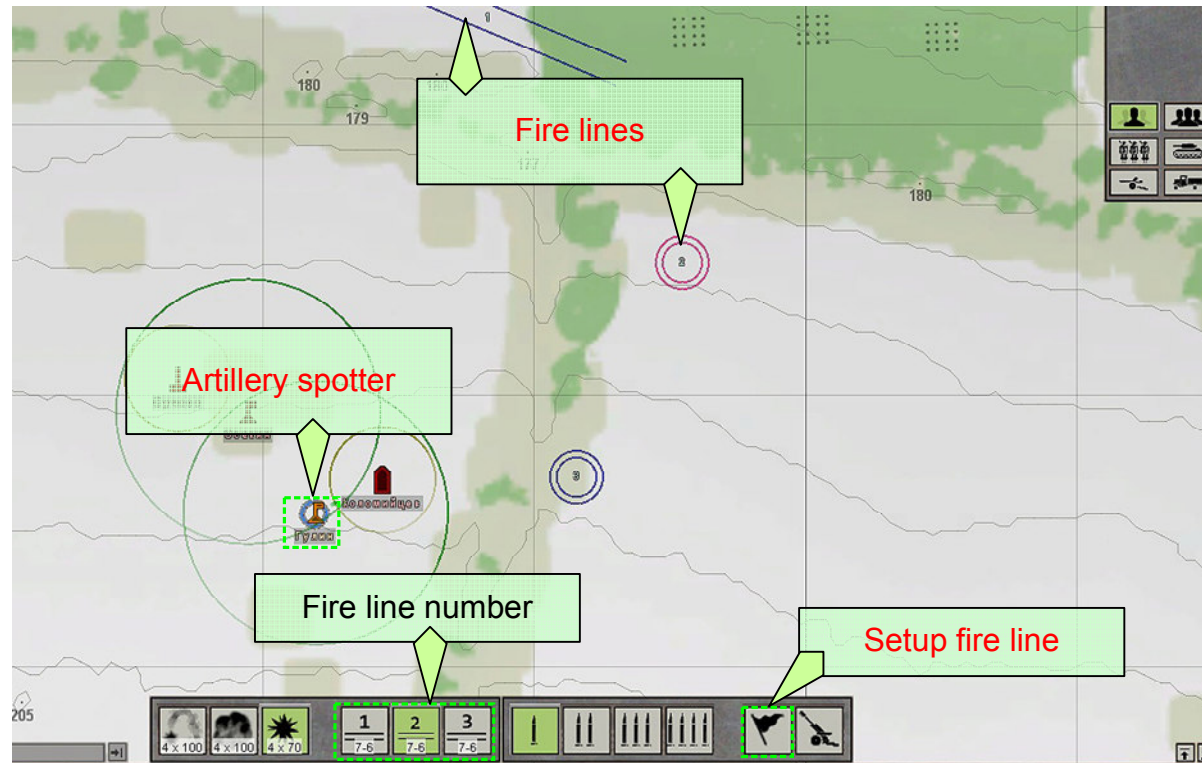
Orange lines: open fire commands and firing line were given to the fire units, and they are ready to fire. To cease fire, right click the firing Line button.

Set firing line for regimental guns and rockets in the same way: select spotter; select firing line; press the button; set the firing line position (pic.2.10.)

Set firing line (right-click  button), then set firing point (right click) or firing line (hold [**RMB**] and draw a line.) Please notice that a firing line cannot exceed 350 m. If you set a point, the fire will be limited within its area (~50 m); with a firing line, all units along the line will fire.



You can check your fire lines in Commander Radius Mode [****]. They are shown as blue circle/line. Selected line is light-violet; line under fire is red. Select a spotter unit to see lines' numbers (pic.2.13).

By default, fire lines are set in the spotter's direction for 90 degree sector. Accuracy and initial error depend on how far the spotter is and on the firing line visibility. If the spotter doesn't see the line, the error and time of control increase. If the line is closer than 500 m and is visible, the error is minimal. It increases with the distance and at 1000 m gets to 100.

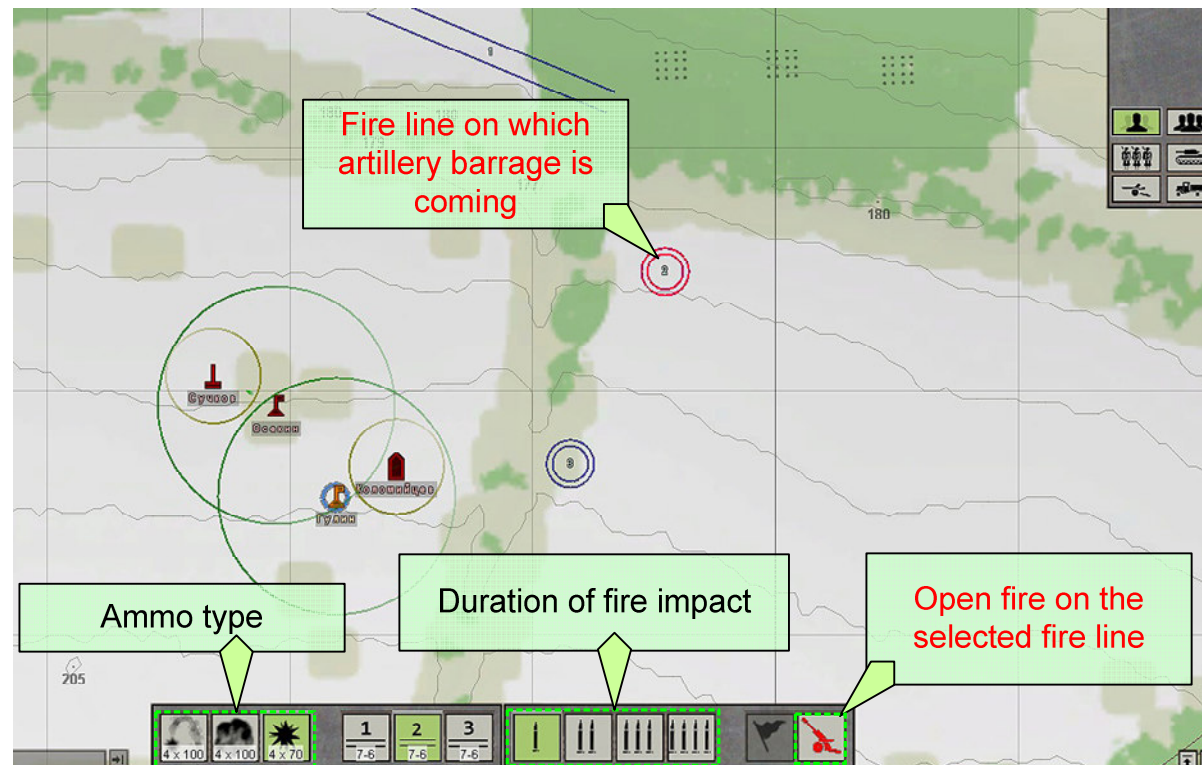


Pic. 2.13. – Setting fire lines for regimental artillery and rockets

At the Initial Order Phase the error and time levels are minimal, and non-error distance increases (1000/2000 m.)

To start fire, select a fire line, expenditure of rounds (time of fire) and press fire button (pic.2.14) . The button will turn red, and fire will start. After the fire starts, you can't change the fire line till fire stops or is cancelled. To cancel fire, right-click the  button.

If you have artillery spotters, you can fire flares at night. Fire and indicate targets the same way as you do it with guns: select a projectile. The spotters also allow you to set long smokescreens.



Pic. 2.14. – Start fire with regimental artillery or mortars





Fire lines are marked with numbers 1-3. Under a line, you can see two numbers divided by "-". The first one is target-servicing time (delay in 10 second intervals.) 3 is a ~30 s delay. Delay depends on the gun type and the spotter's experience. The second number is relative lay error for a fire line (10 m intervals.) 10 is a ~100 m lay error.

If you move the line slightly (up to 250 m), accuracy and time lost is insignificant. Lay error and time are corrected when fire starts. If a spotter squad has no commander, the fire will be corrected later. If the squad is destroyed, there will be no correction and fire orders are useless. One battery (spotter) can fire one type of projectile at one fire line at a time.




NOTE! Set fire lines in Initial Orders Phase to minimize target designation time and error!


NOTE! To hit the targets, set the first and last fire line points (in the spotter unit visibility area.) Place units so they could see their targets.

Fire duration:

	3 shell queue. Used to adjust fire
	10 shell queue
	30 shell queue
	Fire all shells

Projectile types:

	Flares (night time only)
	Smoke shells
	HE/mortar shells

2.5.1 Air spotters can request an attack plane/dive-bomber flight support. Set target for the planes (left-click  button.) The planes will arrive in 10-30 min. If you request air support in the Initial Orders Phase, aviation will arrive 10 times sooner. Planes arrive to the place where spotters are located (500 m radius), so put spotter units close to air support targets. To check aviation, hover over the Spotter Panel button.

Air spotters can set target priorities: select a spotter unit and set targets with [T]. The targets will be highlighted with flares from the ground; the pilot will attack the targets in first turn (if possible.)

In night time and bad weather air support is unavailable! If the spotter unit is destroyed, you cannot request air support!


NOTE! If you request air support in the Initial Order Phase, the planes will arrive sooner.

2.6 End of Tactical Phase

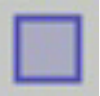
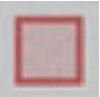
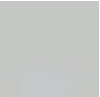
Tactic Phase is at the end if:

- 1) One of the sides retreats
- 2) Both sides agree to cease fire
- 3) Tactic Phase lasts over 60 min (or 30/120 min depending on settings)

Retreat order ends Tactic Phase in 30 seconds; the whole of the area is captured by the enemy. If your units couldn't retreat to the nearest squares, they got out of control for a period of time.

To request cease of fire, press  and wait for the enemy to agree. If the enemy already requested cease of fire, the button turns green. Upon the agreement, the sides keep their respective squares. AI offers cease of fire if its troops' effectiveness is less than 25% of what it had in the beginning of the battle, or if it doesn't plan an offensive. In the last case, it may offer to cease fire in the very beginning of Tactic Phase. Cease Fire Request is shown in Events Panel (above Order Panel.)

At the end of Tactic Phase the captured areas are shown:

	enemy controlled
	player (ally)
	neutral

Turn on Show Control Points option **[F5]** to see the captured area. Vehicles abandoned in the enemy territory are lost; vehicles left at the allied forces' territory get back to battle. Vehicles abandoned in neutral squares get back to battle with 0.5 probability.

2.6.1 Post Battle Statistics. After a battle, the full statistic and achievement info is shown (pic.2.15). You also can press **Statistics** button to see condition of both yours and enemy's units.

ПОРАЖЕНИЕ

Стороны конфликта: СССР, Германия

Силы после боя: 100, 241

Общие потери п/с: 27 (27), 13 (13)

Убитые: 9, 6

Раненые: 19, 2

Пропавшие: 0, 0

Общие потери техники: 3 (3), 3 (3)

Танки: 3 (3), 0

Пушки и пулеметы: 0, 1 (1)

Машины: 0, 2 (2)

Menu: СТАТИСТИКА, ОТСУПИТЬ, МИССИЯ ЗАНОВО, ОПЕРАЦИЯ, ОСНОВНОЕ МЕНЮ, НАСТРОЙКИ, УПРАВЛЕНИЕ, СОХРАНИТЬ И ВЫЙТИ, ВЫХОД

Callouts: Show squad and vehicles statistics, Total losses of personnel and equipment

Pic. 2.15. – General battle statistics

In the bottom right of the Summary Table (pic.2.17), you can see condition of every crew or unit. Losses and units destroyed by the unit are shown in pop-up windows.

Platoons are marked with flags; units are marked with icons. Figures show personnel number (active/lost). Destroyed units and crews are shown in red. In the far right column you see heavy weapons' condition.

To see selected unit, press **[Ctrl+F]** or click it in the table.

If a unit is equipped with heavy vehicles, shell and bullet hit vectors (as well as distance, projectile type, normal to surface, and damage) are shown (pic.2.16.)

Projectile types:

blue	shrapnel
dark blue	HE
yellow	subcaliber
green	HEAT
red	armor-piercing
white	incendiary

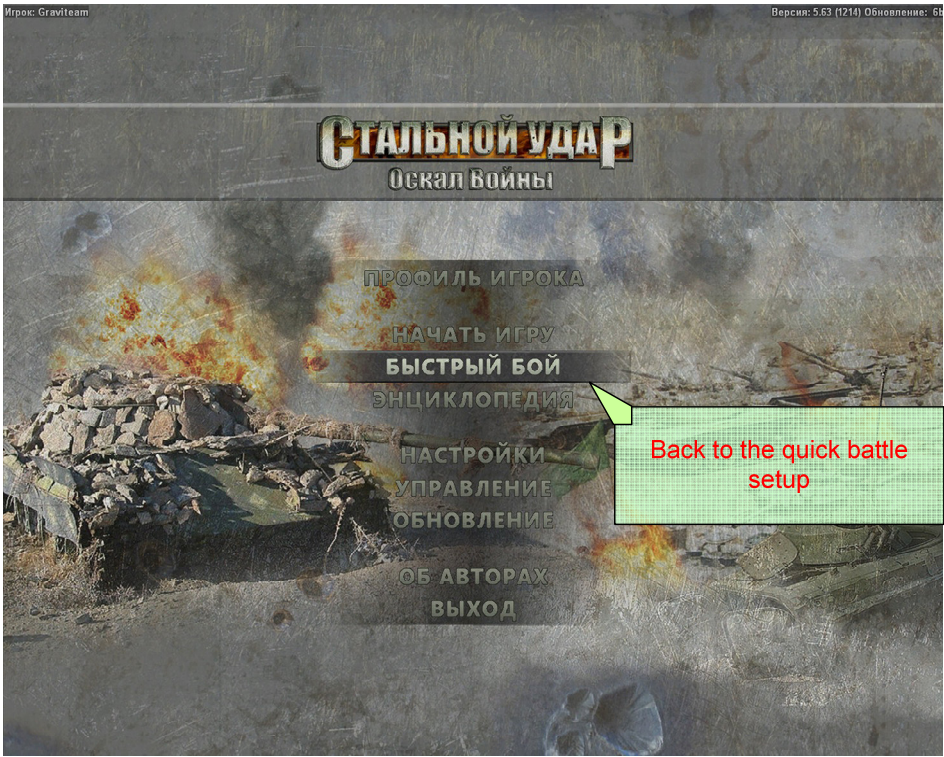
If a projectile pierced armor, the color of the vectors will be brighter.

3 QUICK BATTLE EDITOR

There is a Quick Battle Editor in the game: you can set battle parameters and start it. The main parameters are summarized in a table: side; type of the battle; troop condition. The settings are shown in Table 3.1.

Table 3.1. Quick Battle settings

1) *To Tank Simulator Quick Battle settings.



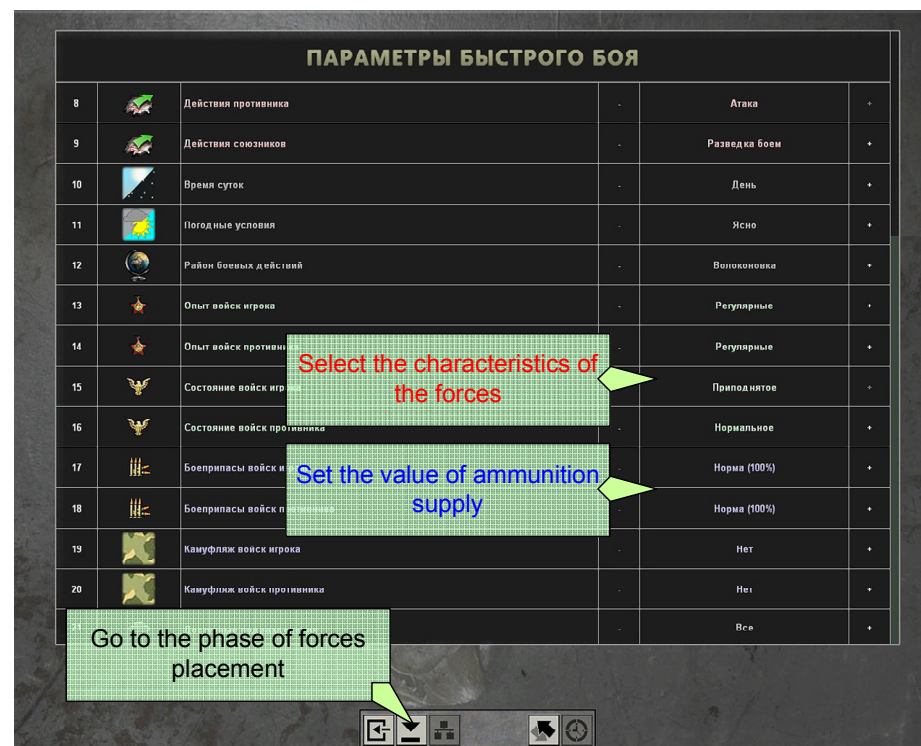
2) To Tank/Tactical Simulator Quick Battle settings.



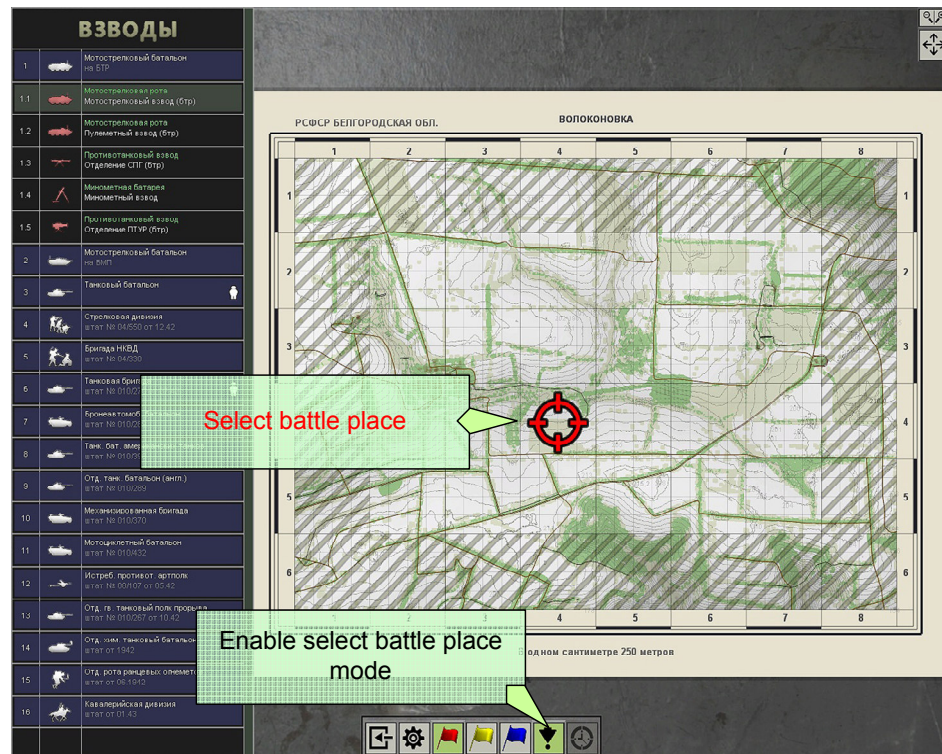
3) Select ally and enemy sides and type of battle. Set a battle area.



4) Set troop/supply parameters.

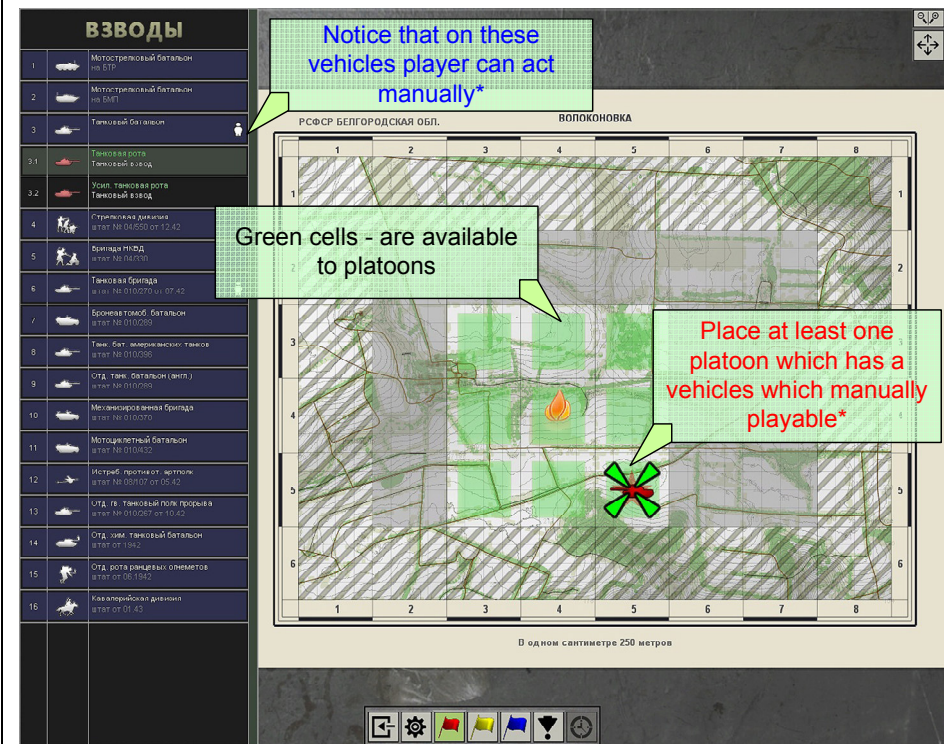


3) Left-click to set the central square of your battle.

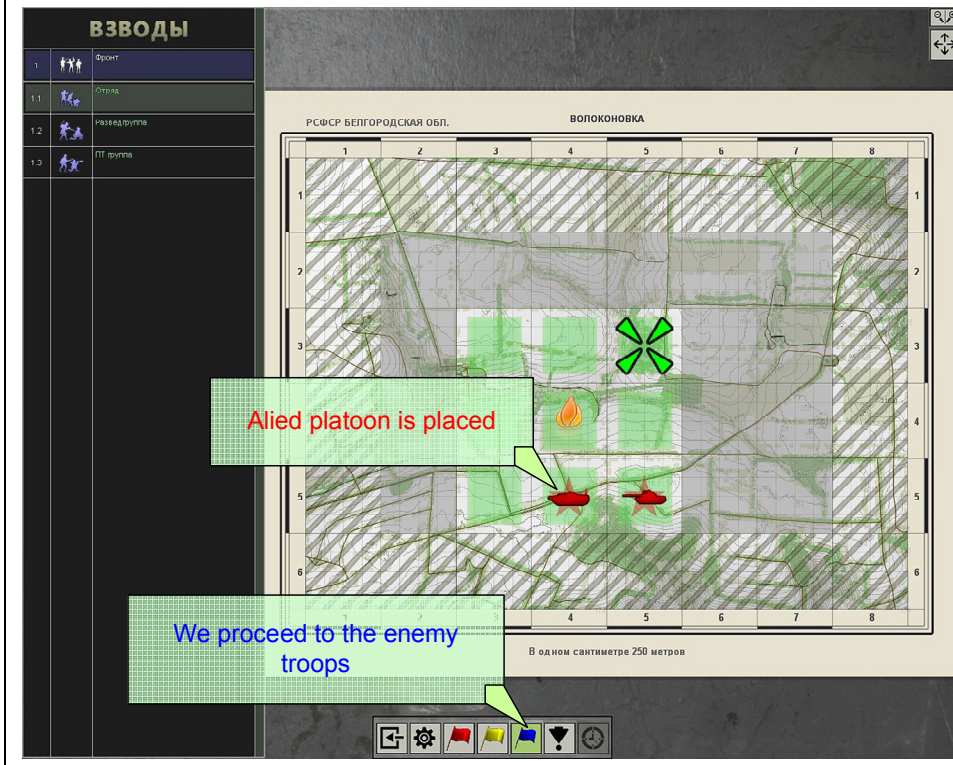


4) Squares available for fighting squads are green.

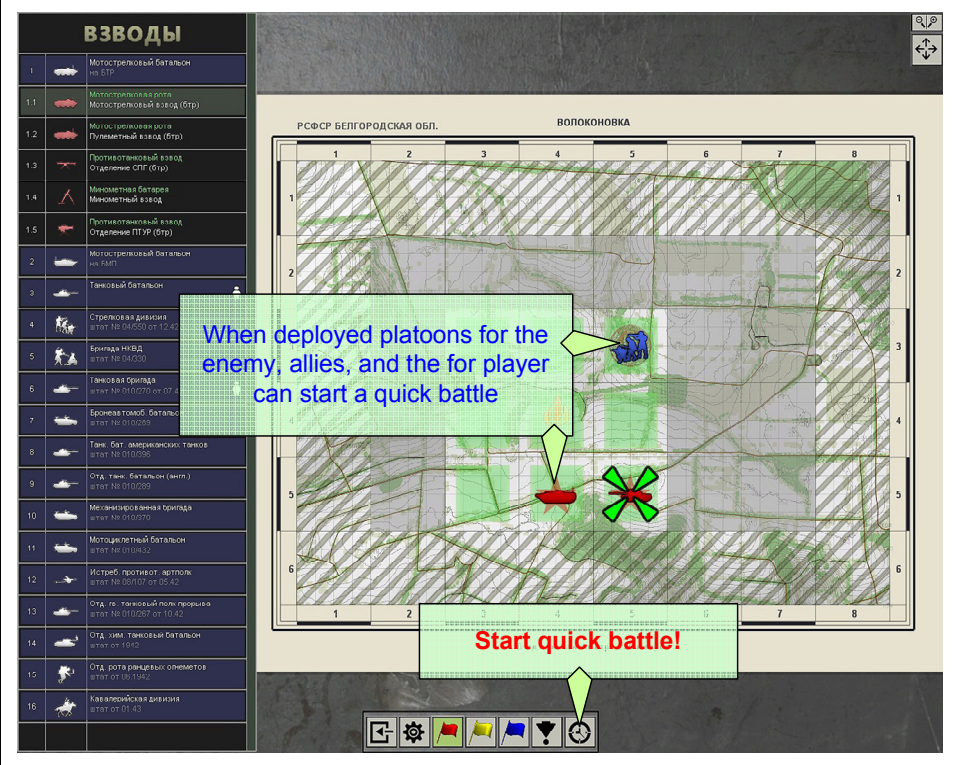
*In Tank Simulator, you should place at least one player's squad.



5) To start a battle, place at least one squad for each side (right-click a green square.) Right click to remove a squad or assign a square.



6) After the squads are put into their positions, Quick Battle button gets available. Press it to move on to Operative Phase.



Profile's settings are saved automatically. Start a quick battle and get to Reinforcement Menu [**F1**], or right-click any squad and select any unit. You can replace default units and vehicles with ones of your choice, for both your and enemy's troops.

In Operative Phase, you can't move squads or attack the enemy. When you are ready, click the battle area to start the battle!