APPENDICES

The Appendices gather together further information on how to play WiTE2. Some of this you may never need to check but in combination they will help orientate you to the game, provide detailed information on how to read the various information screens and the underlying rules that regulate unit movement and combat.

The appendices can be seen as being broken into the following groups:

FOCUS	APPENDIX	CONTENTS
Context	Players Notes	Designed to give you an overview of how the game works, help you see the differences to WiTE1 and WiTW and provide hints on gameplay options.
	Developer's Notes	A short discussion on the development process behind WiTE2.
	Evolution of Armour	Background context on the evolution of a key part of both armies across the war.
Definitions	Glossary of Terms and Abbreviations	
	Unit and Element types	
Commander's Report		How to use and read this critical source of information
Information tabs		How to interpret the information presented in the various information and administrative tabs at the top of the game screen.
Interface Windows		How to read the various detailed screens including those on the unit tabs, those that pop up when carrying out game actions and how to read screens such as the after battle reports.
Significant Tables		Most of the information in this section is designed to supplement the discussions in the main manual. All the relevant calculations are carried out by the game for you but the information here may help you to plan operations or to interpret what happens when you move units.
Miscellaneous	Hot key list	A list of the hot keys in the game
	List of Events	A list of the events that may occur during the game
	Using the Editor	A guide to some information that may be useful that can only accessed from the game editor.
	Credits	

30. APPENDIX A – PLAYER'S NOTES

The discussions below are designed to help players interpret the detailed rules elsewhere in the manual. In addition it might help orientate players with experience of either/or WiTE1 or WiTW as to what is different.

30.1. DIFFERENCES FOR PLAYERS OF WITE1 OR WITW

If you have played War in the West, you will recognize elements of the air war design and the logistics system. However, significant aspects of the game are totally different. For players of WiTE1 key differences are the air and logistics system, the layout of the map and the OOB. In addition the under-lying combat system has been completely redesigned.

This section works as a quick guide to the major differences if you have played one (or both) of the previous titles. The information is presented very briefly as the rest of the Player's Notes set out the implications of the new rules for both players with previous experience and those new to the Gary Grigsby War in the ... series of games.

30.1.1. PLAYED WITE1 BUT NOT WITW?

The discussion in this section assumes knowledge of the WiTE rules and the conventions that have emerged in playing that game.

ISSUE	REFERENCES	KEY FEATURES
22 June 1941 Rules	11.2	Note the difference between the rules that affect AGN and AGC and those that affect AGS. The D1 air base bonus does not apply later in the week so it is worth planning your air operations to exploit this to the maximum.
Administrative Movement	22.2.1	An important tool to bring units up to the front relatively well rested. Only moving in hexes that were friendly controlled (and that have no enemy interdiction) at the start of your turn brings advantages of speed, lack of fatigue and retention of combat preparation points.
Administrative Points	9.2	Unlike in WiTE1, you do not use these to transfer units between HQs or re-assign HQs. Equally there is no practical limit to how many can be stored for later use.
Airborne Operations	22.5.3 and 23.9	Note that these need to be planned 2-3 turns in advance and the target specified. Note also all the functionality about how they are set up and executed is completely different.
Air War	Chapters 16-19	Completely different. Airbases are on the map and have variable capacity. Air missions are (mostly) ordered during the air planning phase and executed during the air phase. So there is much more need for pre-planning of your air operations compared to WiTE1. Note that ground support missions and air transport are resolved in the movement phase.
Air Operational Groups	16.3	These are the basic tool for managing your air force, in one sense they form a role similar to the air base counters in WiTE1.
Air Transport	18.1.9 and 22.5	The method for setting this up and executing missions is completely different.
Artillery Brigades		The Soviet artillery brigades that can be built from early 1942 are all treated as off map SU not as on map units.
Assault HQs	21.11.2	Can be used to improve the performance of a number of Axis Army or Soviet Front HQs. Units attached (either directly or indirectly) gain in terms of the speed they regain CPP and the chance to pass leadership checks but are penalised by being able to only create level 1 fortifications.
Being Attacked	22.1.3 and 23.2.2	Note that if a unit is attacked, then its MP in the next turn may be reduced. Equally being attacked can reduce the CPP in the unit (and being forced to retreat will remove all CPP). In effect, spoiling attacks can be a very effective tool.
Combat Delay	22.2.7	The time spent fighting in a hex will generate a combat delay for any unit that moves out of a hex where the battle took place. The delay is 1 MP per hasty attack and 3 MP for a normal attack. This can be avoided in certain circumstances.
Combat Preparation Points	22.1.1, 22.2.2, 23.2 and 25.8.3	CPP primarily boost the notional CV of attacking units, making it more likely they will pass the 2-1 threshold and thus win a battle. There are substantial secondary advantages to having a high CPP and the rules for how to build up, retain and lose CPP are very important. Indirectly CPP affect almost everything from movement to supply to actual combat.
Command Points	21.11.3	Note if you attach units to a HQ of a different nationality this will cost additional command points, in effect lowering the Command Capacity of the HQ. In turn this will apply all across the HQ chain affecting corps, army and front/army group command capacity.
Commander's Report	Chapter 35	The layout (and functionality) of this is substantially different to that in both WiTE1 and WiTW
Depots	25.7	Note that depots are crucial not just for storing supply but also for its receipt and transmission on to combat formations. The capacity of the associated rail yard or port is very important as is the ability to boost this by placing combat HQs and your rail repair HQs on depots. Also keep a few depots in the rear along rail lines from the NSS to the front to ease re-supply.
First Winter Rules	8.6.1	The main impact on the Axis forces is in terms of attrition losses and more difficult movement of freight both by rail and road.
Game Interface	Chapter 6	This has been fully reworked since WiTE1 was released.
Garrison Requirements	13.4	These are not directly part of WiTE2. Instead the partisan war is conducted in the Soviet Union Garrison Theatre Box and the need to maintain forces in other theatres reflected in the event system and the various Theatre Boxes.
Heavy Woods	7.2.1	In WiTE2 these are substantial barriers to motorized units (including supply trucks) especially in hexes with poor roads. Plan your operations with this in mind.
HQBU		No longer in the game – but read the rules on Combat Preparation Points (23.2)
Interdiction	22.2.3	Air interdiction in a hex can both cause losses to any unit (including supply trucks) that move through the hex and, at certain levels, increase the movement cost for leaving that hex. Also any interdiction (anything over 0) will stop administrative movement in the hex.

Logistics	Chapter 25	This is very different relying on finite capacity rail lines (with this determined by both the available rolling stock and railyard capacity), Depot size, type and priority and HQ priority settings. Read the players notes below for some idea of the main issues and how to manage logistics in WiTE2.
National Reserve	13.2	This can be used for both ground and air units. Units in the National Reserve and set to REFIT will be prioritised for the allocation of new equipment and/or replacements.
Naval Invasions	Chapter 24, especially 24.7	Note these need to be planned 3-5 turns in advance against a specified target hex. These are only allowed in the Black Sea and by the Soviet player only.
Mild Winter Rules	8.6.2	The winter of 1943-44 was relatively mild and this will affect the weather. In particular the degree of freezing of major rivers and snow levels in hexes combined with the risk of short term thaws.
Partisans	13.4	These do not appear on the map. Instead Axis security forces are allocated to the Soviet Union Garrison Theatre Box. Failure to control the partisan effort will see the loss of freight and possibly on-map interdiction.
Rail Lines	22.4 and 25.4	Note that dual track rail can carry 250% more freight than a single track rail line.
Rail Repair	21.6.1	Note that the range of Support Units that can be used for automatic rail repair is much more limited than it was in WiTE1.
Reassigning Units	15.5.6	While this no longer costs administrative points, units will face a penalty for any admin rolls during the full turn that a unit has been reassigned to a different HQ (including reassigned support units).
Retreat Results	23.12	Note that if the final odds are overwhelming, a unit may retreat 2 or more hexes rather than just one. Equally units that are low on morale, experience or TOE may face catastrophic losses if forced to retreat.
Roads	22.2 and 25.5	Each hex is coded for the quality of the road network. Good roads mitigate the effect of poor weather or particularly difficult terrain. For the most part the effect of roads is handled naturally as you select movement paths but it is worth using the road overlay display (7.2.6) when planning an offensive.
Soviet Army HQ Creation	27.2	There are several new rules in this respect. First you cannot create Army HQs in WiTE2. Second many will be created by converting existing Corps or Reserve Army HQs. Third Soviet Guards Armies are converted according to a historical schedule.
Soviet Corps HQ disbands and renames	27.5.3	Note that many of the at-start Soviet Corps HQ will not disband but instead convert to Army HQs. Since you cannot build Army HQs in WiTE2, it is essential not to disband the Corps.
Soviet Corps Formation	27.5.5	Note the rules for this are different both as to the component parts and where a corps can be created. In particular, Soviet Tank Corps can only be formed within the National Reserve. Also note that the Soviet player can form up to 2 Guards Rifle Corps in late 1941.
Soviet Factory Evacuation	28.7	This is fully automated. Only those factories that were historically moved can move, they will evacuate at the historical date or earlier at a cost in productivity if the player decides to do this manually. If the Axis player captures a city with a factory that can be evacuated it will be automatically moved (at a cost of more damage and delay in returning it to production).
Soviet Tank Brigades	21.5	Note that these are now off-map SU only and cannot be deployed on the map. When building Soviet Tank Corps, the brigades must be first assigned to the Soviet National Reserve (or report directly to the Stavka).
Support Unit assignments	21.5.1	In WiTE2 there are many more SU available, especially as most brigades are treated as MRU (i.e. can be an on-map CU or off-map SU). Note that Soviet Rifle Divisions can now be directly assigned a SU.
Stack Selection	6.7	The process of selecting all the units in a stack is different. Double clicking on the top unit or pressing the spacebar and single clicking will select the entire stack, otherwise just the top unit will selected. Repeated single left clicks will change the order that units are stacked in a hex.
Theatre Boxes	Chapter 13	These reflect either theatres where the Soviets and Axis powers are at war but where the combat was at low intensity (Arctic, Finland and Norway), are the location of the Partisan War, regions where the Axis are at war with the Western Allies or where the Soviets need to keep substantial reserves.
Weather System	Chapter 8	This is much more variable due to the interaction of weather fronts with the concept of prevailing weather. Equally poor weather in the form of rain hampers military operations but is not the overwhelming effect of rain/mud from WiTE1.

30.1.2. PLAYED WITW BUT NOT WITE1?

In addition to the issues identified below, be aware of the scale of WiTE2. In WiTW, even after the Western Allies invade France, the number of divisions, and the effective map area, is relatively small.

ISSUE	REFERENCES	KEY FEATURES
Air Directives	Chapter 17	Note that practically there is no limit to the number that can be set for each air command.
Air Operational Groups	16.3	While much of the air war will be familiar, the role of AOGs is important. In effect they are the tools you use to manage your air forces and, together with Air HQ Commands, allow a considerable degree of automation.
Air Transport	18.1.9 and 22.5	The method for setting this up and executing missions is completely different. This includes how you order and carry out airborne assaults.
Assault HQs	21.11.2	Can be used to improve the performance of a number of Axis Army or Soviet Front HQs. Units attached (either directly or indirectly) gain in terms of the speed they regain CPP and the chance to pass leadership checks but are penalised by being able to only create level 1 fortifications. Note the resulting command capacity bonus also applies to any HQ that is attached to the Assault HQ.
Combat Preparation Points	22.1.1, 22.2.2, 23.2 and 25.8.3	CPP primarily boost the notional CV of attacking units, making it more likely they will pass the 2-1 threshold and thus win a battle. There are substantial secondary advantages to having a high CPP and the rules for how to build up, retain and lose CPP are very important. Indirectly CPP affect almost everything from movement to supply to actual combat.
Command Points	21.11.3	Note if you attach units to a HQ of a different nationality this will cost additional command points, in effect lowering the Command Capacity of the HQ. In turn this will apply all across the HQ chain affecting corps, army and front/army group command capacity.
Commander's Report	Chapter 35	The layout (and functionality) of this is substantially different to that in both WiTE1 and WiTW
Heavy Woods	7.2.1	In WiTE2 these are substantial barriers to motorized units (including supply trucks) especially in hexes with poor roads. Plan your operations with this in mind.
National Reserve	13,2	This can be used for both ground and air units. Units in the National Reserve and set to REFIT will be prioritised for the allocation of new equipment and/or replacements.
Partisans	13.4	These do not appear on the map. Instead Axis security forces are allocated to the Soviet Union Garrison Theatre Box. Failure to control the partisan effort will see the loss of freight and possibly on-map interdiction.
Ports	20.6	In WiTW units in a port were deemed to be automatically within the command range of their HQ. This allowed the player to stack up to 3 combat units in the hex and retain full control. This does not apply in WiTE2 as the new City Fort unit type allows over-stacking in port hexes.
Rail Lines	22.4 and 25.4	Note that dual track rail can carry 250% more freight than a single track rail line.
Retreat Results	23.12	Note that if the final odds are overwhelming, a unit may retreat 2 or more hexes rather than just one.
Roads	22.2 and 25.5	Each hex is coded for the quality of the road network. Good roads mitigate the effect of poor weather or particularly difficult terrain. For the most part the effect of roads is handled naturally as you select movement paths but it is worth using the road overlay display (7.2.6) when planning an offensive.
Theatre Boxes	Chapter 13	These are more important than the East Front box in WiTW and reflect either theatres where the Soviets and Axis powers are at war but where the combat was at low intensity (Arctic, Finland and Norway), are the location of the Partisan War, regions where the Axis are at war with the Western Allies or where the Soviets need to keep substantial reserves.

30.1.3. PLAYED BOTH WITW AND WITE1?

In this case, you are relatively well prepared to play WiTE2. Scan the issues in the sections above, and read the strategy tips and key rules below.

30.2. KEY RULES CHANGES THAT AFFECT GAME PLAY

A number of rules that have a major influence on gameplay are now different.

30.2.1. FACTORY EVACUATION

This is now largely automated with factories evacuating either at their historic date or when threatened. Evacuation cannot be stopped simply by placing a city in a zone of control as was common in WiTE1. Equally a factory that was historically not evacuated cannot be moved.

There are three ways in which a factory can evacuate (in all cases the factory must have a scheduled evacuation turn showing in the factory navigation menu in order to evacuate):

- Based on the evacuation schedule listed for the factory in the factory navigation menu.
- For any factory that has an evacuation listed, the player may initiate an immediate evacuation. The factory will take additional delay and damage over the normal evacuation delay/damage due to moving before the evacuation date.
- For factories with an evacuation date, the computer will initiate an emergency evacuation when the city is captured. The factory will take additional delay/damage in addition to the damage caused by normal evacuation.

30.2.2. UNIT MOVEMENT COSTS AND ADMINISTRATIVE MOVEMENT

Players should note that moving in hexes previously held by the enemy is more costly and inflicts higher fatigue. Thus converting hexes to your control (or denying this) can increase the speed of units following behind (such as the Axis FBD rail repair units) and reduce their fatigue.

Also units moving in friendly territory will be better placed to regain Preparation Points after they move. The key is to make their final hex one that was friendly controlled at the start of the turn and not in an enemy ZoC. In addition, they will need to have some SMP remaining. Learning how to balance the urge to move as far as possible against CPP retention and recovery is a key part of good gameplay.

However, note that the Administrative Movement bonus is cancelled if there is any enemy interdiction in the hex – this includes interdiction with an actual value less than 1.

30.2.3. COMBAT PREPARATION POINTS

Note that units gain more CPP per unused Strategic Movement Point (SMP) when in a friendly hex rather than a pending enemy hex (i.e. one you have captured this turn).

Since prep points also reduce fatigue, stopping in a friendly hex has a big impact on unit status. Moving one hex into an enemy hex can use lots of MPs and lots of fatigue for that 1 hex, and then the prep points gained will be much lower for each MP remaining. Those prep points will reduce unit fatigue in the next logistics phase. So stopping and resting units in a friendly hex is an important part of unit management in WiTE2.

In effect, if a unit has not moved very far this turn, has few CPP and high fatigue then players are strongly advised to leave it in a friendly controlled hex unless there is a real need to move it further.

The obvious impact of gaining combat preparation points is in terms of the offensive capacity of a unit. However, there are a number of secondary gains, including:

- units will reduce fatigue more quickly if they have a higher level of combat preparation.
- units at 100% combat preparation can acquire and store up to 150% of its supply needs.
- units with higher combat preparation will make better use of support unit allocation in combat (this affects both the attacker and the defender).

Note the interaction between retaining CPP and Administrative Movement. Especially for the Germans in 1941, if you want your infantry to be capable of launching an offensive when they catch up with the armoured spearheads then trying to minimise the loss of CPP in movement is essential.

Remember that you lose all CPP if you are forced to retreat and a proportion if attacked in force (even if you win). Thus spoiling attacks, if you think your opponent is building up for an offensive, can be very effective.

30.2.4. ROADS

In previous games in the series, roads are not directly modelled. In WiTW road quality was set at the national level. In WiTE2, each hex on the map has its own default road quality and the few paved roads in the Soviet Union

are modelled. This can create corridors of faster movement – especially in poor weather turns.

30.2.5. POOR TERRAIN

Linked to the new rules on roads, note the higher movement costs for Mountain, Heavy Wood and Sand hexes compared to WiTE1 and WiTW. In particular motorized movement into these hexes, in regions with poor quality roads, is difficult.

When advancing in such areas, remember that trucks, and thus supply, pays motorized costs.

30.2.6. THE WEATHER SYSTEM

As noted in the rules, the Soviet player has two advantages in this regard. The weather in the following German turn will be identical to the Soviet turn (so the weather in the Soviet phase of T3 will be same as the weather in the German phase of T4). In addition, the Soviets will have more accurate forecasts of weather in their next turn.

For play purposes, it is worth noting that while rain/mud will slow movement and reduce combat power, it does not lead to the complete cessation of all military activities as tended to happen in WiTE1.

Again, bear in mind that the better quality road networks mitigate many of the movement costs due to poor weather.

30.2.7. CITY FORT UNITS

The ability to create these – in effect to overstack in some city and urban hexes – has a major influence on defensive play. This will allow the major sieges (Odessa, Sevastopol and Leningrad) to take place and make large cities major obstacles. On the other hand, some such locations can be bypassed and surrounded.

It will also allow the German player to create the various fortresses that broke up the Soviet offensives from 1943 onwards.

30.2.8. CONSTRUCTION UNITS

Note that apart from the AI-controlled rail repair units, these do not appear on the map but instead will be attached to the relevant hex (airfield, depot or population center) and carry out their repair mission. They will be sent back to their HQ once they have completed their task.

30.3. STRATEGY TIPS FOR BOTH PLAYERS

30.3.1. LOGISTICS

Rail Capacity

There are a number of aspects to the logistics system to take into account. First, and probably most important, the capacity for a given rail hex is limited. A single track line can only easily support the transfer of a limited amount of freight and units (this can be exceeded but at an escalating cost in terms of rail capacity). In particular, transferring units along a single hex line will quickly increase the cost of strategic movement and limit any subsequent freight movements.

This means that for both sides, some sectors will be hard to reinforce and will tend to be quiet due to the challenge of supplying active combat forces on such a sector.

In any planning of operations, always remember that single track rail lines have only 40% of the capacity of a dual rail line.

Port Capacity and supply transfer

Assuming you have enough shipping, and control the seas via naval interdiction, sending supplies via ports can be very effective. There are two aspects to bear in mind. All ports can be set to either 'send' or 'receive' supplies. Second supply will move from a lower priority sending port to a higher priority receiving port.

As an example, if Danzig is set to send and at priority 1 it will move supplies to Riga if that is set to receive and at least at priority 2.

Depot Placement

The placement of depots is an important part of game play. Given that the western regions of the Soviet Union lacked the infrastructure of Western Europe both players will have to rely on a number of small depots rather than a few very large ones. To reflect this, the highest capacity of an Axis or Soviet depot is 60,000 tons (apart from National Supply Sources).

Depots still need to be connected to operate but can be created outside the friendly rail net. This allows a player to ensure that the needed railyard is fully functional before the depot is actually in full use.

Note also that depots can be created on any hex with a rail line – not just in named towns and cities.

In addition, remember that units within 3 hexes of a depot do not use trucks to draw supply (if there is enough supply in that depot – remember units will draw from more distant supply sources if the nearest ones lack freight).

Depots, HQs and rail repair units

The maximum capacity of a depot can be increased temporarily if there are HQs stacked in the hex with the depot. Basically, if you can, always place your HQs on a depot as this will improve the functioning of the depot and reduce the resupply cost for any Support Units in the HQ.

Having depots large enough to attract and retain a large number of attached trucks is important. This prevents units from losing MPs due to having to use their own trucks for resupply efforts.

When drawing supply down a long rail line from a National Supply Source you will need a network of intermediate depots. These can be left at a low priority but help with the storage and transmission of freight.

Related to this, bear in mind the difference between using HQs and your rail repair counters to affect the supply system:

- A HQ will increase the capacity of a depot, thus more supply can be stored or sent on to local combat formations. However, the depot will be assigned freight using the normal routines and wider shortages may well mean that the full capacity is not used.
- A rail repair unit increases the importance of the depot relative to others on the same network. Thus that depot will allocated freight before the others and to some extent will claim supply that would have gone elsewhere in the supply network.

Depot Priority

How you set your depot priorities is important. Basically a depot will only send freight to a depot with a higher priority level (there is a small exception in that intermediate lower priority depots will claim some freight if there are nearby airfields that are in active use).

So for a port to export supply, it cannot be set to level 4. In general, since exporting ports are a priority in the supply system you can safely set them to level 1 or 2 as they should claim enough to be able to support the network of importing ports.

If you do not want a port depot to import freight by sea, set it to level 1 and leave it to 'import' freight. That way it may still take some supply from the rail system (if it needs it for local airbases). If you set it to level 0, it will take no supply from the network.

30.3.2. RESERVE THEATRE BOXES

The Reserve Theatre Boxes for both sides can be seen both as a generic training region and a place to rebuild units damaged in combat.

You can use the various filters in the CR to determine which units will refit (if any). In general units will refit more quickly in the National Reserve than on map but you need to balance this against the delay in moving to/from the map and that such transfers also cost you rail capacity.

30.3.3. UNIT REFIT AND RECOVERY

Units in contact with the enemy will not refit and will tend to weaken due to attrition.

However, this can be partly mitigated through having a high level of CPP.

To receive substantial reinforcements a unit needs to be not only in 'refit' mode but its relation to the supply grid is also very important. If a unit is to refit on the map, the best location is on a depot, stacked with a HQ and in refit mode. Assuming the depot itself can draw sufficient freight this will speed the process.

The alternative option is to move the unit back from the front line and to the off map reserve.

Note that units in the reserve and set to refit will be the priority for available equipment. It is possible that these units may take up all that is available, leaving little if anything for on map units. To manage this, ensure you are careful how many units in the reserve are set to refit at any one time.

30.3.4. EVENTS

The event system relates to the Theatre Boxes and on-map issues. Thus one sequence of events models the gains of the Western Allies first in North Africa, then Italy and then in Western Europe and into western Germany. Others reflect the shifting intensity of the campaign in the Arctic or the Allied strategic bombing campaign.

Others affect the rules for the surrender of various Axis-Allied nations.

Equally some reflect the shifts in the Soviet war effort and the various ways in which the Red Army was restructured from late 1941 to 1943 and provide bonus allocations of Administrative Points to ease the restructuring process.

30.3.5. THE MAP

This is very different to WiTE1. There are more hexes.

The new supply rules create bottlenecks – you can only supply so many units at the end of a single track rail line ... even if you have depots.

The new rail rules make it very hard to redeploy substantial number of units in a given turn ... and if you fill up the rail capacity on a given link with units very little (if any) supply will pass to that sector in the next logistics phase.

Stay out of heavy woods (if you can).

Use the road overlay when planning offensives. The game system handles the process of calculating actual movement costs etc. but this can help if you are thinking about where to attack as better roads ease supply costs.

30.3.6. VICTORY CONDITIONS

Note that the Axis player gains victory points up to the point where the initiative is deemed to have changed hands (usually in late 1942 to early 1943). After this the Soviet player gains and has to ensure they have a certain level by the start of 1945 or the game ends with an Axis marginal victory. Pay close attention to the dates for when certain cities changed hands and try to maximise (or minimise) the bonus for early capture.

30.4. TACTICAL TIPS FOR BOTH PLAYERS

This section highlights a few rules that are important when actually carrying out your operations. Some of these are already identified in the 'differences' and 'key rules' but are repeated here for completeness.

30.4.1. AVOIDING COMBAT DELAY

Combat delay can be a major problem, especially when you are trying to convert a breakthrough into an encirclement. Setting aside the special T1 rules (11.2) the only way to avoid this penalty is if the final odds are 10:1 (or more) and that there is no enemy unit (including the original defender) still adjacent to the hex.

In effect if you want to achieve a clean breakthrough you need to attack units either side of the key hex first and then hope that the defender retreats more than one hex – something that is more likely if you can attack in overwhelming strength.

30.4.2. IMPACT OF ROAD MOVEMENT

Again there are times when being able to move as fast as possible in enemy terrain is critical. Note that if the hex has poor roads, then German mobile divisions will pay 3 MP per hex (if the hex was originally enemy controlled) for clear terrain rather than the expected 2. It can be very useful to use the road display map mode when planning a move into enemy controlled terrain.

30.4.3. BRIGADE AND REGIMENT MOVEMENT COSTS

Note that these unit types must pay at least 3 MP to enter an enemy controlled hex (regardless of roads) but pay the normal movement cost to enter a pending hex. This means that using broken down regiments to complete an encirclement can be inefficient and it is often better first to move a complete division behind enemy lines and then follow up with brigades or regiments to fill in the encirclement.

30.4.4. ADMINISTRATIVE MOVEMENT AND HEX OWNERSHIP

The interaction of these two concepts is important.

Movement in hexes that were controlled by the player at the start of the turn is faster (assuming no interdiction is present) and generates less fatigue than movement into pending (captured) hexes. This applies to both unit movement and supply movement.

More importantly, if a unit ends its turn in a hex that was friendly controlled at the start of the turn it will regain more preparation points and shed more fatigue. Thus, quite often, stopping movement in a pre-controlled hex rather than a pending hex will mean that units are far more combat ready when they finally come into contact.

Especially for the Germans in 1941 this means it is important to use the mobile units to capture territory that will flip to your full control the next turn. Thus the infantry marching in the wake of your spearheads will be much more useful when they finally arrive at the front.

30.4.5. COMBAT PREPARATION POINTS AND MOVEMENT

This is closely related to the point above. Units with a high number of CPP have a chance to pass a test that removes the negative impact of fatigue and of failed initiative and administrative tests on their movement allowance. Thus

on balance a formation that moves up keeping its CPP relatively intact will move faster over multiple turns.

30.4.6. MOTORISATION

It is worthwhile deciding to motorize a few infantry units. For the Germans something like a regiment or two per Army Group in 1941 will provide considerable additional mobility. For the Soviets perhaps one rifle division for the main Fronts once they return to the strategic offensive in late 1942.

This is expensive in terms of trucks and admin points, but the additional mobility can make a substantial difference.

30.4.7. RETREAT RULES

The combat engine in WiTE2 has been completely rewritten compared to the earlier games but units that retreat can still suffer substantial losses. This will mostly happen to low morale and/or low experience or if the unit is forced to retreat through multiple ZoC. In that case retreat losses can escalate rapidly.

Equally if a unit is forced to retreat more than once in a turn, it is possible that its losses will increase as it loses cohesion.

This particularly affects the Soviets in 1941-2, Axis Allies and German infantry units later in the war and allows the player to damage their opponent even if they do not create a pocket and force the units to surrender in a later turn.

In effect, the focus on creating pockets that was such an aspect of WiTE1 is less important, sustained pressure can badly weaken your opponent.

30.5. GAME MANAGEMENT

This may give you some idea of how to manage a typical turn.

Since you start with the air phase it makes sense to start a turn by setting low morale, high fatigue or weakened units to rest (or even send back to the reserve – if you are using the AI-assist this will be done automatically for weakened units).

Every few turns, review what planes are in use. You might want to upgrade to newer models but also you may need to downgrade to older types if you are running short. For the Soviets, after the first phase, use the obsolete I-series fighters as training aircraft in the national reserve and preserve your modern fighters for front line formations.

If you are controlling the air force manually, consider whether to move any Air Commands or AOGs. If you are using the AI-assist, review your stances, priorities and which HQ they are 'following'.

Before starting your ground phase, it maybe worth reviewing your Support Units (use the Commanders Report) and move any that have a low TOE % either back to the OKH or Stavka or the reserve to refit.

At some stage in the ground phase, review your reserve and see if there are units you can move to the map, this may mean resetting the arrival hex one or more times as you do so.

Towards the end of the ground phase, check that your HQs are deployed within command range and that, if at all possible, they are stacked on depots.

At this stage, you may want to build any new depots and review the priority of your existing ones.

It is also worthwhile to use the Commander's Report to check for units that have just arrived or that are loaded on trains. It can be easy to overlook these if your focus is on the front lines.

You can conduct air supply at any point in the ground phase, but generally it is best done towards the end.

30.6. THE AIR WAR

Players used to WiTW will recognize the basic principles of the air war in WiTE2. However, it is worth noting that neither side can generate the sort of comprehensive airpower that the Western Allies can from 1944 onwards.

In particular, the Soviet Union east of the Dneipr, had few major airbases in 1941. Since both sides tend to have relatively short ranged fighters and tactical bombers, it is important to start building a network of airbases early in the game.

A secondary advantage to an airbase network is that air delivery of supplies is far more effective if the target hex contains an airbase.

30.6.1. SOME KEY MISSIONS

Especially if you have had no experience with the WiTW air rules it is useful to bear in mind how some missions operate and when they are appropriate. Note that not all these missions are available for all Air Operational Groups depending on their command assignments.

- Ground attack-interdiction and ground attack-unit. The first of these missions will tend to attack moving targets

(this can include units that move, attack, retreat, support a battle from reserve status as well as the movement of supply). It will not tend to inflict heavy losses when first conducted. The second is designed to damage/disrupt the enemy immediately (so is useful if you then plan to attack that hex) but will generate much lower levels of actual interdiction.

- For interdiction missions you are often better using agile planes with many bombs or rockets. For unit attack missions, planes with larger bombs will often be more effective and level bombers are very valuable in this role.
- Ground support. Is actually flown in the ground phase and only if the designated units are in combat. Note you can link GS to any level of HQ from a Front/Army Group to a single corps. The more precise you are, the more control you have over where the air support is actually flown. Equally being prepared to reset the parameters in your air doctrine screen can be useful to avoid excess losses (17.4.3).

Note that the rules for fighter auto-interception, especially in the context of GS missions are very different to both WiTE1 and WiTW (18.1.3 and 18.1.10).

In addition, do not over-use your reconnaissance assets. Both sides have substantial numbers in the early game and run short by the mid-game. Often low level reconnaissance, enough to detect if enemy units are present is all you need. If not, then both sides may lack much intelligence of behind the lines build-ups from 1943 onwards.

30.6.2. AIR OPERATIONAL GROUPS

Air Operational Groups (AOGs) are the main tool for managing your air force in WiTE2. They provide considerable functionality and are the only way you can redeploy your air units (either manually or using the AI-assist).

Note that if you have ticked the AI-assist option, you cannot change this in a MP game. In that case, air directive creation and unit redeployment will happen when you press the F12 button to either initiate the air phase or end the game turn.

Otherwise you can mix using the AI-assist and a degree of manual control as you wish.

30.6.3. AI AIR ASSISTANCE

The detailed information in sections 17.1 and 17.2 provides a good basis for understanding how this function works. In addition it is worth stressing two key points.

First, AOGs will usually only move on the map when you redeploy the HQ they are set to 'follow'. Note that moving the air command HQ makes no difference in this regard.

Second, air doctrine is probably more important than when playing with manual control. If you set your own air directives, the values in the air doctrine are used to initially fill out the mission parameters but in practice can be over-written as you desire for that particular directive. The AI-assist uses the doctrines to create the air directive. So it is useful to review those settings as the game progresses. The default values may be sufficient but you may find that either your air losses are too high or missions not very effective and amending those variables might improve performance.

30.7. PLAYING AGAINST THE AI

These short notes summarise some aspects of how the WiTE2 AI behaves and the effect of changing difficulty settings (especially for morale).

How you choose these levels is your own choice. In early games, don't give the AI too many advantages (you may find 100-100 perfectly adequate) as you work out the game systems. Once you feel confident, it is probably best to set the AI (for morale at least) at 110 and if it will be doing the bulk of the attacking then at 120.

30.7.1. AI HELP LEVELS

The performance of the AI will improve due to how you set the various levels. Morale is particularly important. However, the effect for the AI is not just an improvement in relative importance it gains additional bonuses the higher you set the help value.

110 enables the AI to use a different set of movement rules on the defensive. This is essential if it is to manage its defensive deployments so should be seen as a standard choice once you have some understanding of the game.

The 120 value is particularly important in this regard. At this level it will automatically pass all leader checks. This alone is a major gain beyond the notional gains of inflating specific values.

In addition, at 120, the AI will gain particular combat bonuses which will increase the number of disruptions it generates during a combat.

30.7.2. AI ON THE DEFENSIVE

On the defensive the AI will ignore most movement restrictions in its own territory and prioritise forming a

stable line if the morale value is set to 110 or higher. It will try to move by the normal rules below this level.

The main exception to this is it will move using standard movement points if it needs to pass a hex that is covered by enemy ZoCs, such as:

If the Axis turn ended with the situation above, those Soviet units will be moved by the AI (assuming it has a morale level of 110 or higher) without regard to the movement rules.

However, if the turn ended as below, and the AI failed to broaden the gap by counter-attacks (which it mostly likely will) then the partially encircled units will be forced to use their normal MP. In that case the Soviet tank division will probably escape but the security and rifle division will be fully encircled in the next turn.

In effect, if it cannot create a ZoC free exit route from a partial encirclement, then it is unlikely to be able to escape, if it can manage this, then it is likely that most AI controlled units will be able to fall back.

If it believes that the relative ratio of forces is even (or in its favour), it will tend to form its line in contact with the player. If it believes it is outnumbered, it will tend to a line one or more hexes back as it seeks to fall back.

30.7.3. AI ON THE OFFENSIVE

In general, on the offensive the AI operates by similar movement rules to the player. It pays the cost of hexes it enters and uses up MP as it moves and attacks.

If in a scenario (or phase of the longer game), the AI is expected to be on the strategic offensive, it is suggested that it is given at least 110 morale. Depending on your expectations, you may find a higher level will produce a more balanced game with the AI able to sustain an attack.

As noted above, at 120 morale it gains some specific combat bonuses.

30.8. A SUMMARY OF THE LOGISTICS SYSTEM

30.8.1. THE FLOW OF SUPPLY

The impact of freight and unit movement is shown by an increasing SMP cost for each hex. For a dual rail this increase caps at +6 once 30,000 tons of freight have gone down that hex.

> To stress, 30,000 (+) usage, does NOT stop any further movement, it just makes it expensive in terms of usage of SMPs.

For units, you can see this reasonably clearly. A unit grabs enough train stock to move (it matches its load factor), you get 200 SMP (some of this might be spent loading onto the trains), it can move till its expended this allocation. So it could move 200 hexes if there is no penalty (see 22.4.3 of the main manual on the details). It can move 100 hexes if usage is already in the 5000-9999 turns (i.e. each hex costs 2 SMP, this is for a dual rail) and only 28 hexes if every hex was at capacity.

The impact is clear enough, another unit sent down the same track will either move less far or arrive at its destination with less SMP.

However, for freight the effect is a bit less clear. Not least as this is all conducted in the logistics phase and you see none of it actually being done. In theory every ton of freight has up to 200 SMP and moves as above, the obscure bit is where this SMP comes from and how does congestion influence the outcomes.

Freight obtains SMPs from level 2 or higher rail yards - in this context think of these as representing rolling stock. A given bit of freight will try to grab rail capacity from as near as possible (up to 30 hexes away). For a player it is impractical to either estimate this or influence what goes on. You could in theory take a single hex on the map and add up all the level #2 railyards in 30 hexes (along rails), but the problem is (especially for the distant railyards) is that they are providing rolling stock to more than just your chosen hex.

This cannot be stressed too much. Only railyards of 2 or more actually generate rail movement capacity. Thus capturing, repairing and integrating these locations into your rail system should be part of your early game planning. Especially for the Axis player in 1941 and the Soviets once the Axis starts to fall back from 1943 onwards.

So at a practical level, every ton of freight has a notional 200 SMP, but after some time the local rolling stock is fully allocated (the equivalent of running out of load to move your combat units). As it moves it lays down usage on the rail net and as this increases so does the cost - or in other words a later ton of freight can't move as far. In the end you run out of rail capacity to push freight down a given line.

If you are the Soviets and the front line is within 10 hexes of Moscow, your depots will get the freight they need (up to their capacity) simply as Moscow has a huge railyard and you use up relatively little of your SMP stock - even if the local rails are congested. If you are trying to supply units on the Volkhov, you are probably reliant on one or two single track lines that have no large rail yards to hand. Or in other words, you will run out of SMP stock very easily.

When estimating rail line usage, remember that unit moves happen before the logistics phase but their rail usage is not cleared till the end of the logistics phase. So if you have just sent several Corps down a single track rail line very little freight is going to squeeze along behind them.

It is also worth remembering that not all usage is cleared during the logistics phase. So if you have run a sector of your rail net at over capacity, it will have less capacity in the next turn.

30.8.2. DEPOTS

Related to this, remember that depot capacity matters - even if more freight could be delivered it won't if the depot is already at its processing capacity.

This is also why you want a network of intermediate depots from NSS to the front line. These provide a resting point for freight that lacks the SMP to complete its journey, they also provide unloading capacity, so that freight can be stored here for the units to pick up.

30.8.3. INFLUENCING THE SYSTEM

You cannot really influence the flow of supply except in how you set up your depot network and being careful over troop movements. However, you can significantly influence the effectiveness of your depots.

First a HQ on a depot (especially an Army Group or Front level one) will have a significant impact on the capacity of that depot. Capacity influences both the ability to unload and send out freight as well as storage.

Second, leaving an unmoved FBD/NKPS unit on a rail yard depot will effectively distort the pattern of freight delivery. That particular depot will be seen as more important than others (of equal importance) in the local network and more freight will be allocated to that location (at the expense of other local depots).

In combination these two units will boost capacity (throughput and storage) and assigns rail cap to meeting that capacity.

A good scenario to test these concepts is to take the Soviets in the Vistula-Berlin scenario. The need to supply a large army, with many mobile formations, that can advance rapidly is a real challenge. The identification of key depot locations is the key to success.

This will happen anywhere on the map but is more valuable in certain locations. Particularly, (a) it is more effective multiplying the effect of a large railyard; and (b) if the local rail capacity is limited, say at the end of a single track rail line, you can boost capacity and priority all you like, very little is going to happen.

On the other hand a high priority depot with a rail repair unit and HQ(s) can be critical to bring supply to a given location. Locations such as Minsk for the Germans in the early 1941 battles or any major rail yard for the Soviets after 1943 can make the difference between your key offensive being supplied or your units too weak to sustain an attack.

30.8.4. HQ PRIORITY

Be careful about setting too many HQs with too high a priority level. This aspect works slightly different to depot priority (as that really is about supply of freight) as this is used to set the demand.

At worst, a high priority HQ (and its attached units) will do its best to find the freight it needs to meet the set level of supply in the unit (25.8.1). If this freight is not available locally it will use more and more of the trucks in its combat

units to find that freight (25.5). In the end this lack of trucks (even if they have actually delivered the freight needed) will badly hamper your combat values (23.8.3) and movement points (22.1). In effect, you can have a unit that is less effective than if it had received a lower allocation of fuel and ammunition due to being set to a lower HQ priority.

Given the complexity of the supply system this is not easy to work out but basically if you are operating at the end of a single track rail system (or have a lot of mobile formations in a particular sector) then you do run the risk of units becoming less useful simply as they seek out the supply they need.

The other reason to set HQ priority relatively low is that this allows freight to build up in the local depots. If you then set a higher priority just before an offensive your units will at least have the benefits of a one-off supply allocation.

30.9. AXIS STRATEGY

This section and the discussion on Soviet options reflect ideas and views of various beta-testers of the game. The discussion is designed to bring all the various specific rules and advice into some rough guidance on how the game fits together.

30.9.1. OVERALL OPTIONS AND FACTORS TO CONSIDER

Before committing your units on the first turn you should have an overall strategy to guide your choices. Clearly the deployment is historical and that may encourage you to keep the original plan. Other options are to weaken AGC to improve either (or both) of AGN and AGS with extra assets.

One key element to your planning is to study where the VP locations are, which you think you can capture early and how this might alter your force allocation. Given how the concept of the High Water Mark and Initiative Change interact, you cannot be too cautious in your overall plans for 1941.

Come the end of the 1941-42 winter you will need to decide on the focus and goals of your 1942 summer offensive.

At start, AGN will struggle to take Leningrad due to the heavy woods and poor transport links. To have any chance of this, you will need to maximise the local supply network (to sustain your mobility) and allocate extra air support. If you decide that Leningrad is out of reach, then think about your practical goals. At the least, you should be aiming for Novgorod, the line of the Luga and to cut the main Moscow-Leningrad dual track rail line.

An early capture of Pskov is essential, when it falls it may be more effective to stop your FBD there to improve logistics rather than keep on repairing northwards. Estonia should fall easily and the ports will help your supply situation.

AGC will probably determine your overall strategy. If you want to seriously threaten Moscow you cannot weaken AGC in the early turns. Try constantly to look for opportunities to outflank the Soviets and to push past Smolensk (which can be turned into a major fortress if you give the Soviets too much time).

Placing a depot in Minsk and repairing its railyard is essential for the battles from Smolensk to Vitebsk and Bryansk. Again, it is useful to hold one of your FBDs static here rather than prioritise rapid rail repair.

The South is where it is easiest to attack because of the open terrain. The VP locations will force a Soviet player to fight west of the Dnepr or lose a lot of VP bonus scores. Gaining ports can really help your supply and be prepared to divert forces to clear Odessa and Sevastopol. If the Soviet player is prepared, they can turn both into substantial fortresses which will tie up 11 Army for a number of turns. You may also need to allocate extra air assets to isolate both ports.

Think carefully about when you will pause your 1941 offensive. The winter rules are more nuanced than in WiTE1 and you may need to attack after the autumn muds to disrupt the Soviets and to gain the VP needed to avoid a sudden death defeat in January 1942 (29.1.4)

Be careful as both Soviet cavalry and tank and mechanized divisions can be very mobile (if weak). A poorly secured flank risks them disrupting your supply lines.

For 1942, you need to think about how to maximise your victory points so as to optimise your 'High Water Mark'. The German army should recover from the winter battles and you should have a good rail and depot network close to the front. The historical focus on the south may be an attractive option but this may also be a good chance to take Moscow and the large VP cities behind it. In a reasonably balanced game, it is likely that the second half of 1942 is your best chance of an automatic victory.

At some stage the initiative will change. If they are careful, the Soviets will build some very strong stacks making almost any position hard to hold. On the other hand, Bielorussia and the region around Novgorod are

excellent defensive terrain. The south is more open and requires pre-building defensive lines.

As 1943 progresses, your infantry will be more and more a purely defensive force. At this stage, think carefully about how you use your Panzers. If they are on reserve reaction they may stop some Soviet attacks but you will find they have very low MP and combat values for your turn. In effect, there is a trade-off between immediate response to Soviet attacks and retaining a counter-attacking force.

As the war crosses back over the 1941 border you can start to use the City Fort concept against your opponent. At one level this can generate real strong points but you run the risk of encirclement. If the game runs into 1945, be aware you will lose vital cities to the Western Allies. In the end this will destroy your logistic network as you will have no functioning National Supply Sources.

30.9.2. T1

For the air war, the preset Air Directives are effective and will destroy a substantial amount of the VVS at the forward air bases. If you choose to amend these, remember that air base bombing is of little value after D2. Ground Support can be useful as you are likely to face Soviet reserve reactions but be prepared to turn it on and off as you make your turn (it is unlikely to be needed when just attacking border fortification units).

If you want to amend the missions then your Bf-110s and Stukas are very useful aimed at the nearest airbases, the Ju-88s are useful for the next group and your long range bombers can hit bases along the Dnepr.

Remember that damaged Soviet planes will be destroyed if their air base is over-run so you should be able to destroy more planes during the ground movement phase.

On the ground, you have three basic goals: pocket as much of the Soviet army; secure the rail lines and movement corridors; and, push towards Pskov and Smolensk. You can limit combat delays by ensuring the resulting battle ended at 10:1 or better, in some circumstances it may be better to attack with overwhelming force to achieve this rather than minimise your commitment.

For AGN, the main goal is to secure the rail line to Daugavpils. Most players will clear the coastal ports in Latvia but you will need to decide whether to divert forces to clear Riga or to prioritise reaching the Daugava to prepare your move towards Pskov.

It might be useful to add some formations from Pzr Grp 3 to AGN, either for T1 to complete the encirclements or as reinforcements to ensure an early attack towards Pskov.

AGC needs to generate a large pocket west of Minsk (which should fall easily on T1) and clear the rail lines running from Brest-Litovsk north and Kaunas eastwards. How far you can push beyond Minsk will depend on your force allocation as you may want to release some Panzers to either AGN or AGS.

A key issue for AGC is to secure the Brest Litovsk-Minsk rail (at least the western end) so your FBD can use administrative movement on T2. Keep this out of Soviet control if you can when screening the pockets.

The other issue is whether you want to risk a single continuous pocket from the border to near Minsk or break this up. A single pocket frees up more or your units and may allow you to reach the Berezina but if it is broken you have a major problem. On balance it may be better to separate the Bialystok portion of the pocket from the section west of Minsk.

AGS. Be aware that the Soviets are better prepared here so there are likely to be more reserve reactions and higher movement costs. Seek to secure Lvov and the dual rail line leading to it. Much of your motorized units are frozen on T1 so you have limited options. If you drive south, there is a risk of releasing the Soviet Southern Front forces so it may be better to attack towards Rovno as historically and assess your options on T2.

On the other hand, the Soviet forces in the south are more likely to start to collapse from T4 onwards as you apply sustained pressure. So early pockets are not as important as they have become in WiTE1.

30.9.3. THE AIR WAR

Whether you use the AI-assist or manual control, be prepared to concentrate your air force. This will mean ceding substantial regions of the front to the VVS as you lack both numbers and range to do anything but support the key sectors.

In the main, leave your longer ranged bombers as far back as possible (so if using AI-assist, link the air commands to real area HQs). Ensure your transport aircraft are clustered around well supplied depots so there is freight to bring forward.

In terms of missions, you will find that Ground support is the most effective use for Axis bombers. You can lose

a lot of aircraft doing GS so use it only for the important attacks, in such cases, heavy GS makes quite a difference.

The Ground attack mission is probably of limited use in 1941 but as the war progresses, interdiction missions are useful for disrupting Soviet offensives.

Naval Interdiction can be very useful especially for your naval air units and any unit with Ju-88s (for their mine laying loadout). Naval interdiction is probably more effective than port bombing so can help isolate Odessa and Sevastopol and disrupt supply movement across Lake Ladoga.

The short range reconnaissance units are very useful for low intensity, wide area style missions. They will give you some idea of the layout of the Soviet defences. Your longer range reconnaissance units should be targeted at particular areas where you really need better detection levels for making your plans.

Your allies have some useful planes but all suffer for low replacements and relatively low morale. Ideally they should be either working with the main Luftwaffe formations (for protection) or on a quiet sector.

30.9.4. SUPPLY

It is worth restating that while you want to push your rail head as far into the Soviet Union as you can, equally leaving a FBD on a depot might generate more supply in the short term. In this respect, Pskov can be critical for the moves towards Leningrad, Minsk for any fighting around Smolensk. There is a constant trade-off between using them for rail repair and using them to enhance the effectiveness of your depots. In addition, there are 7 R.A.D. SUs that will repair rail lines. Put them with a low level HQ to manage where they do their repairs. These can be particularly useful for AGN as they can connect the broken links between rails you captured intact.

You will become very reliant on your trucks. These will be needed to maintain your supply lines and the mobility of your units. As such, think carefully about advancing through high cost terrain with poor roads. You may make gains, but there will be a long term cost to your trucks as they try to bring supply across such terrain.

Note also that many Soviet players will seek to deny you the advantages of administrative movement (which also influences supply costs) by generating low levels of interdiction with their airforce.

Finally, while replacement manpower is moved as part of freight, in practice it has lower priority. So weakened units will not refit very effectively at the far end of your logistics network and you may need to be prepared to send them away from the front to recover.

One consequence of this is that Panzer divisions near the front will struggle to replace lost tanks. The replacement Panzer battalions offer one solution if they are left to refit in the National Reserve. While it may be tempting to use these as normal Support Units, if they are attached to a Panzer division they will merge and reinforce the host unit (26.1.6).

30.9.5. GROUND COMBAT

There are several issues to bear in mind.

First, the shown CV is an indication of combat effectiveness but is not definitive. Particular issues include:

- Any unit with morale below 50 will have an inflated displayed CV in that it is correct but they will lose many elements during combat. Likewise Axis Panzer units will have a deflated display CV because of their high morale and tanks (the system makes very little distinction between the type of tank actually in use, so the formations that use Czech or French tanks may take heavy losses against Soviet T-34s and KV-1s).
- Isolated units have their display CV halved, but in practice their CV only drops slowly. So the first turn of Isolation their actual CV will be higher than suggested, while after a few turns or it will begin to drop.
- Sometimes you can guess at an enemy CV better by looking at the unit type and the terrain/fortification level than by looking at the displayed value, so if you see a Soviet Infantry Division in open terrain with a CV of 5 or so it is likely to be incorrect.
- CV is a rough measure, an obsolete BT-7 adds the same notional value as a T-34, so sometimes an enemy unit may be stronger than you expect.

Also numbers count, so a Brigade in Heavy Woods (even if well dug in) will often lose if attacked by several infantry divisions, even if the CVs suggest otherwise.

30.9.6. PLAYING THE AI

First you need to understand how the AI plays. Units that are not pocketed or caught up in Zones of Control have unlimited movement (except on NORMAL setting – 100 morale for the AI), so the AI will attempt to rebalance the whole front line every turn. In 1941, as the Soviets it likes to have two solid lines of units but will use just one if that is all that the troops it has available. All of them will be on Reserve so you can expect lots of activations.

Activations are a real problem. To counter this first ZOC everything within range on the front line before making any attacks. Broken down motorized divisions are good for this. Other tactics you can use are attacking at huge odds (defenders will not activate if the odds are too bad) or doing less critical attacks first to absorb some of the activations.

The AI will not do many attacks up to T4 so use this period to advance into contact with your Panzers every turn (broken down units will do) so that the infantry can follow up quicker. Pockets can be sealed with weak units.

Later the AI will start doing some attrition attacks and attempting to break pockets so your pockets need to be stronger. AI attacks can be used to work in your favour, set some Pzr divisions on Reserve and a few heavy failed attacks can really weaken the Soviet front line at a critical position. But remember that MP used in reserve combat will be taken from the next turn's MP allowance so you need to decide how to balance this.

30.10. SOVIET STRATEGY

Broadly, the first phase of 1941 is a matter of survival but you need to control their advance or you will lose a lot Victory Points and find the Axis close to Moscow and Leningrad with their army still intact.

You can expect to lose almost all of the border units north of the Pripyet in the early turns. On the other hand South-Western Front should be able to manage a fighting retreat back to Kiev.

In the main, as your army recovers, a defence in depth is more effective than one that relies on a single strong line. Your main choice is where you allocate your reinforcements, most will probably have to go to Moscow and Leningrad but do not completely neglect the south.

In the north in particular use the terrain. The Axis will struggle to advance far in heavy woods (even against light resistance) and as they move closer to Moscow and Leningrad their supply situation will worsen (so they will have less MP). There are a number of sectors where 2 rifle divisions well dug in using poor terrain will effectively block any Axis moves. The problem is you lack the resources to do this consistently and, in the end, any such line will be outflanked.

In terms of defensive deployments, city forts allow the stacking of many units, just be cautious that they are not then cut off by a wider Axis advance. You should create these at Leningrad, other major ports and Moscow. Due to the rules for their creation, you need to start planning such a commitment at least 2 turns before it will be needed (20.6.1).

During the first winter, you will struggle to mount a coherent offensive. It is usually better to regard this as a chance to regain some key terrain, weaken the Axis forces and create a number of Guards formations. Also most German losses will be 'damaged' due to frostbite and supply problems. Around 15% of these losses will have returned to the front line units by June 1942.

The summer of 1942 will see a major Axis offensive and they will start close to your critical cities, with a much better supply situation than they had in 1941. They will have to decide between the VP rich options in the south or Moscow and/or Leningrad, so once they are committed you can try to match their build up. The rail net from Moscow to Stalingrad and the Caucasus is poor so you may struggle to send significant reserves and to maintain an effective flow of supplies.

At some stage, the initiative will change. Attacking in the south has the advantage of relatively clear terrain and being able to take Romania out of the war. However, it is a long way to Berlin and the critical Axis National Supply Sources, so you also need to attack in Bielorussia. This is difficult terrain but in the main the Axis side will struggle to replace their losses while you can often add fresh units.

Some of the advice in the German notes apply equally to the Soviets, especially after you regain the initiative in late 1942. By 1944, it will be the Axis that is trying to cope with the reduced combat value of low morale formations and using terrain to create barriers that you need to move around.

30.10.1. MANAGING THE RED ARMY - 1941

You will lose most of your at-start units and for most of 1941, your rifle divisions will be weak (remember if they have under 50 morale they may shatter or take very heavy losses) In particular, remember that low morale units can lose a lot of their apparent CV during a battle making them more vulnerable than they appear.

However, both the cavalry and the tank or mechanized divisions have the advantage of high MP values. These can be invaluable for raids into the Axis rear area and to disrupt their supply network.

Remember that tank brigades are off-map support units but can be effective either held at an army HQ or allocated to a combat unit. Rifle brigades are often at their

most useful directly assigned to combat units, they can be used to create near impregnable defences in key hexes.

From December 1941 you can build two Guards Rifle Corps and a number of Cavalry Corps. You will also receive the first of a number of bonus administrative points to help with this and a manpower boost. By the end of the year you will have two NKPS formations that can help either with rail repair or the effectiveness of your depots.

In the main in 1941 don't build new units. The game system will generate shells for many Support Units and you lack both manpower and equipment to fill out all the formations that are in your national reserve.

Generally it is better to send weak units back to the reserve but you may need to keep some on the map to assist with setting up fall back fortification lines. The combat engine is unforgiving for units that are low on TOE, morale or experience.

In some sectors (1941 along the Volkhov, 1942 in the Caucasus) you will really struggle to replace losses in your combat formations. Be prepared to either cycle weakened units back to the National Reserve (so keep a reasonable reserve of combat ready formations there) or to merge your rifle brigades into weakened rifle divisions. By mid-1942 you should have enough AP to do this and to replace the brigade in the reserve to train up again.

30.10.2. MANAGING THE RED ARMY – 1942

By mid-1942 you should have cleared the backlog of rifle divisions needing to be refitted and other support units. Early in 1942, build some motorized brigades as you will need these for your tank corps and they are very useful as attached Support Units to give a better infantry/tank balance to the Tank Corps TOE. Beyond this keep a close eye on your equipment pools as some units will take many turns to come up to strength. You will have a near permanent shortage of heavy artillery into 1944 so be careful about creating units that need a lot of this, for the most part concentrate on artillery SU that will draw on the 76mm guns. Equally mortars are an acceptable compromise as these become readily available.

When merging units to form Corps remember (unless you are playing with full Theatre Box control) that those due to withdraw at any stage cannot be combined to make up Corps. On-map you are limited to just merging conventional Rifle Divisions, in the reserve you can merge both militia and mountain divisions into Rifle Corps (these will then be redesignated as conventional rifle divisions).

You will encounter a few issues as your TOE changes from late 1942. In particular, the 'Corps' artillery SU completely changes its equipment and will be sent to the national reserve to refit as a result. To make this worse, you will then find it hard to refit them due to a shortage of heavy artillery (and this will last into 1944).

At the end of 1942, you will notice the build options shift substantially. In particular, it is no longer possible to raise fresh rifle divisions or brigades, so make sure you have as many of these as you think you will need. You can still raise fresh infantry formations but in the form of Rifle Corps.

30.10.3. MANAGING THE RED ARMY –1943 AND ONWARDS.

The TOE for the 1944 changes, especially the Corps will provide you with very powerful units. A stack of Guards Rifle Corps, with appropriate attached Support Units can break down all but the most powerful defensive line. The problem is they will steadily weaken as they advance and gain fatigue and lose their CPP. Equally the 1944 armoured TOEs finally provide your Tank Corps with a degree of defensive resilience.

Operationally, there are a few aspects. First, well rested, a stack of Rifle Corps can break almost any front line. At best aim to make your basic offensive tool a 3 hex wide gap in the German lines so your mobile assets can exploit. Second, really until mid-1944, your Tank Corps are not very good defensively, adding motorized or mechanised brigades as SU will help, but your Cavalry Corps can often be better for actually holding ground if you fear a counter-attack.

Finally, you need to use all the tools in the logistics system, especially the deployment of the NKPS. Done well this can even supply your army in Hungary so that you retain reasonable levels of mobility.

If you do this well, you can supply a large army in Poland and Eastern Germany. Even so, be prepared to accept regular pauses to rebuild your CPP and adjust your depot networks.

As a general piece of advice, the two late war campaign starts (Stalingrad-Berlin and Vistula-Berlin) are excellent to explore this evolution of your offensive capacity. Having some idea what works best once you have the initiative may improve your approach to rebuilding your army from mid-1942. Furthermore, Vistula-Berlin is an excellent chance to explore how to build a logistics network that can sustain a large mobile army backed by a substantial air force. Add to this, both are intriguing games in their own right.

30.10.4. MANAGING THE RED ARMY – USING THE NATIONAL RESERVE

The National Reserve is of more importance to the Soviet than the Axis player. Partly as you will build far more formations but it is also a useful place to send weakened units (especially from supply poor regions) to refit. A reserve of the equivalent of one or two Combined Arms armies can be useful to allocate to a sector in the face of a sudden emergency.

In terms of the reserve, remember that units on refit will have an absolute priority for replacement equipment. So be careful not to starve your on map units and equally not too spread your use of the refit status too widely. Usually setting a few units of the key types to refit each turn will see them recover their TOE in a turn or so and thus be ready for deployment to the map.

Be aware that freshly raised units may quickly fill out their TOE but will have low experience for a number of turns. Unless you have a pressing need, these are probably best left in the reserve till they are ready.

30.10.5. HQS

From T6, the at-start rifle and mechanized corps HQs start to either disband or convert to army level HQs. The cavalry corps HQs remain available till the end of 1941 and can be useful for extending command ranges or simply improving the capacity of rear area depots.

Remember you do not pay administrative points for changing the command structure of HQs so keep your armies and fronts logically ordered. Equally, if you are used to WiTE1 be aware at the start a lot of Soviet HQs start with a very low TOE and it takes quite a while to come up to 100%. So your commanders will be less effective and its worth retaining the handful of pre-war mobilised HQs for your best commanders and most critical sectors.

In early 1942, you will gain a number of Reserve HQs. Most of these will later on become normal Combined or Tank Armies so do not disband them. Even if you assign no units to them they can be very useful placed on depots to increase the logistics capacity.

30.10.6. AIR WAR

In 1941, the VVS cannot fight the Luftwaffe directly. Having said this, you will need to contest their operations if only to inflict attrition or to protect key sectors. More generally, low level interdiction can be very effective as it can be applied where the Luftwaffe is weak and it denies the Axis side administrative movement.

In terms of ground support, remember that simply committing bombers will inflict some disruption beyond that caused by actually hitting ground targets.

Retraining a number of fighter-bomber formations as bombers can be effective as the rocket load out can help with generating interdiction. Later on these can convert to the very useful Yak-9T.

Be prepared to leave a lot of the VVS in the national reserve and rotate formations. Bringing too much to the map will worsen your supply situation. Also remember that low experience units in the reserve will fly training missions. Once these reach an acceptable level you can scrap them (thus placing the pilots in the appropriate pool) or bring them to the map.

As you retreat in 1941 you will steadily run out of airbases. Start the construction of level 1 airbases behind the Volkhov, at Moscow and along the Don very early on. You may want to manually assign construction units to speed this up. Expanding some to level 2 will help with the deployment of your level bombers. If the chosen hex is close to an NSS, you will find the airbase completes quickly. Do not try to expand level 2 airbases in a sector that has poor supply.

One challenge with the VVS is the shifts in the air command system over the game.

Some of this is related to the regular shifts in Air Unit size from the at-start 60 to 20 and then the increase that happens in late 1942. The latter may bring in a lot of inexperienced pilots unless you have carefully built up a reserve of trained pilots. The best solution is then to transfer the affected formations to the National Reserve so they can train.

The other issue is that some AOGs will disband during the game. This happens substantively when the 1941 SADs are removed in early 1942. At that stage the attached air units will default to being under the direct command of the relevant Air Command. If you are using the AI-assistance, these will be automatically assigned to appropriate AOGs (but there are gaps, especially for ground attack formations). If you controlling the air war manually you will need to find the relevant air units (easiest done using the Commanders Report) and manually link them to new AOGs.

By 1943, a combination of much better planes and the weakening of the Luftwaffe, should see the initiative in the air shift. If the Luftwaffe heavily concentrates on a sector you will still lose most battles but then you have a free hand elsewhere. In the main, a mixture of ground support, reconnaissance and interdiction bombing are the

most useful missions. In addition, bombing railyards will hinder Axis logistics. It will probably not be until mid/late 1944 that you will overwhelm the Luftwaffe, up to then you have to accept an unfavourable loss ratio on key sections.

It should be stressed, bringing in substantial GS in the form of well escorted Il-2s is critical to your offensive power. Such an attack can badly weaken even a strong German position before your infantry are committed to combat.

The other switch in early 1943 is that your air groups will mostly expand from around 20 to 32 planes each. This might cause problems with your aircraft pools and it maybe an idea to swap some less common plane types for those that are more readily available. In addition, the demand for extra pilots will lower the average experience of many formations (if they are left to normal replacements). Be prepared to swap such air groups back to the reserve to train and regain their experience.

Your reconnaissance planes need careful management. In 1941 these can seem to be limitless but you do not receive many replacements so that initial stock needs to be carefully managed. To minimise losses, it is usually sufficient to know the rough layout of Axis forces behind the lines so a low intensity, 2 day a week, broad sweep should be sufficient.

As with the German player in 1941, be careful not to move too much of the air force too close to the front lines if you are on the offensive. This might mean you rely more on your level bombers and the few longer ranged fighters (mostly lend-lease) till your depots catch up.

30.10.7. THE AXIS AI

The comments in 30.7, especially 30.7.3 apply here. Once you feel comfortable with basic game play, the AI really needs to be set at 110 for morale and preferably at 120 if it is to sustain an offensive.

It will seek to make pockets but its main tool is the ability to inflict heavy losses on weak units. So you can expect to see entire armies collapse in a particular turn in the summer of 1941 and again in 1942.

The AI will make a general decision in April 1942 to attack in the south or towards Moscow.

Once you regain the initiative, many of the comments in section 30.9.6 apply in reverse. Remember that in its own terrain the AI can rebalance its front line each turn so expect to find a breakthrough fairly quickly screened. It will also make a number of strategic withdrawals when it feels it is in danger of being cut off.

31. APPENDIX B – DEVELOPER NOTES

In tracing the lineage of War in the East 2, you have to go back to SSI's June 1984 release of War in Russia. That was the first time that Gary designed a game covering the entire Great Patriotic War, as Russians came to call it. As a fan of SPI's War in the East boardgame, circa 1974, I considered myself lucky to be able to work with Gary on War in Russia. Two more Gary games would follow covering the war, Second Front (1990) and War in Russia (1993). All of these games had both players plot their moves and then resolved them simultaneously.

Fast forward to 2000 when Gary, Keith Brors and I formed 2by3 Games. At that time we wanted to shift gears and make a sequential turn based Eastern Front game, and do it on a grand scale with divisions and 10 mile hexes. The enormous scale of the war cried out for a game of similar scope. We also wanted it to be enjoyable for players that just wanted to push pieces around. Gary's interest in logistics made him want to have the computer track the number of tons of supplies and troops moving down rail lines. He felt this would be necessary to provide the realism needed to simulate the difficulties the Germans had supplying their armies in the Soviet Union. As initial work began on the map, Keith and Gary set to work writing the code that would track the movement of supplies. Within a few months it became apparent that this was not going to be possible without slowing the game down to a crawl. At that point the project was shelved and we decided to move on to Uncommon Valor and War in the Pacific. Games that didn't deal with rail lines, but had their own issues of massive scale.

Eventually the desire to work on an Eastern Front game got the better of us and in 2008 a decision was made to restart work on War in the East with some simplification of freight movement down rails. It was a compromise,

but one we were willing to make. The 2010 release of WitE was successful and we immediately started work on War in the West. An early decision was to switch to a tile based map, and to create a map covering all of Europe and North Africa. We knew eventually we wanted to continue the series beyond Western Europe, and by going to a tile based system it would be much easier for us to continue to improve the map with additional layers of data and corrections to existing data. It was this early decision that made WitE2 possible.

It was with WitW that Gary's idea of tracking freight in tons was made a reality. Although covering a large area, it was smaller in scope than WitE and most of the logistics issues were focused on getting freight onto the continent via ports. Having researched the logistical issues of the Allied Armies in Western Europe, Gary designed a system for depots and freight shipments. During that time Pavel focused on improving the simplistic air system in WitE, something essential to simulate the Allied strategic bombing campaign, ground interdiction, and importance of air forces for sea control.

With the release of WitW in late 2014, we felt it was time to bring these concepts to the Eastern Front. We were also very happy to benefit from Pavel's enhanced WitW weather system that was brought over and adapted to WitE2. Given the tiled map, we were better able to display the weather, and we were also able to relatively easily add double rails and road quality at the individual hex level. This led to a more complex matrix of MP costs by terrain and road quality, and eventually led us to add administrative movement. Wanting to open up the game, and better produce the offensive tempo of the war, Gary added the combat preparation system. Pavel, building on Gary's East Front box in WitW built out a complete system of Theater Boxes for the "off-map" areas, as well as an event system for tracking and influencing these other areas. He also added the AOG system as a way to make the large Soviet air force more manageable for players to control.

It's hard to believe that the first basic alpha test games of WitE2 were played in 2016. Over the past four years, in addition to the new game systems created, an enormous effort by many went into building an ever more authentic and detailed database of the weapons, units and events of the war (and yes into trying to document all of this work). While that effort was ongoing, Gary continuously tweaked and improved the AI's ability to play the game, and keep it challenging for players of all skill levels. In the past year the AI was extended to provide air and depot management assistance to players if desired.

Yes, this game is huge, but if you take it one small scenario at a time, and use the AI's help while learning the game systems, one day you'll find yourself playing the largest land campaign in history, and worrying about whether your depots are bringing in the freight needed for victory. Whether you see this game as the culmination of 6, 10, 20 or 37 years of development, all of us who have worked on this project hope you enjoy it.

32. APPENDIX C – THE EVOLUTION OF ARMOUR DURING THE WAR

The launching of Operation Barbarossa on June 22, 1941 triggered an arms race between Germany and the Soviet Union that would not only shape the course of armored warfare in World War II but the post-war development of armored vehicles as well. By the end of the War the outlines of what would define the modern main battle tank were beginning to emerge from the maelstrom of armored combat that emphasized a balance of firepower, protection, and mobility. Although a wide variety of armored vehicles would be developed, often to fit specialized roles, this triumvirate of firepower, protection, and mobility would characterize the most successful designs.

The purpose of this article is to examine the various armored fighting vehicles that fought on the Eastern Front so players of WAR IN THE EAST II will have a better understanding of not only the vehicles themselves but also the role they played in armored vehicle development. For the sake of brevity and relevance to the theme of this article