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#### 1 Introduction

Welcome to "*Flashpoint Campaigns: What's New Compilation for 2.09"*! The unified source for all the information related to the numerous added features, tweaks and bug fixes for the "*Players Edition*" of the award winning, grand tactical warfare simulation "*Flashpoint Campaigns: Red Storm*" developed by On Target Simulations (OTS).

We will do our best to cover all of the changes, additions, fixes, and tweaks that have happened to Red Storm since the release of the game in this document.

#### 1.1 Compilation Layout

The best way I figured to lay this out is to have this intro chapter and then have each of the following chapters cover a release with the newest information at the top of the stack. This document will cover back to 2.04 that had the latest introduction of new features and tweaks that warranted documentation to show the in game changes. We will continue to add to this document no matter how larger or small an update.

#### 1.2 Continued Support

OTS will be continually supporting this game. Future enhancements will likely be limited to bug fixes and game play tweaks so that our attention can shift to the next iteration of the underlying game engine. If you find something buggy, you can reach us through the Flashpoint Red Storm Tech Support forum on Matrix Games at <a href="http://www.matrixgames.com/forums/tt.asp?forumid=1197">http://www.matrixgames.com/forums/tt.asp?forumid=1197</a>.



Splash Screen for the Player's Edition

### 2 What's New, Enhanced, or Fixed in 2.09

Here is a list of the items we worked on for this update with a brief summary of the changes. Please use the thread in the Matrix Tech Support Forum to report if there are still problems with any of the listed items below. Thanks and enjoy!

#### 2.1 New – Off-Map Artillery Losses to Counter Battery Fire

We took some time and added back in some missing code that calculates the chance of off-map artillery units taking fire and losses from enemy counter-battery fire. These engagements of off-map units are outside of your command and control and are handled directly by the game AI. If your off map unit suffers an attack and then losses you will get a message window popping up to tell you. If your side hit an off-map enemy, you will get a message popping up to tell you that an attack was made, but no detail on losses. Units hit off map will suffer both readiness and morale losses from a counter-battery attack and then can suffer subunit losses as well. You can order off map units to rest and recover if losses reduce readiness to low levels. Setting any of your artillery units to counter-battery will only engage enemy on-map units. They will not affect enemy off-map units at this time.

#### 2.2 New – Revised Orders Mechanics

We went back through the code and fixed the issue of "On Call" being an option for ground units. Yes, the original game manual is wrong about orders delay reduction. That code change was probably before release and was never caught in the documents. Units Ground units and helicopters should no longer allow an "On Call" order in the popup menu. The orders proper use is for setting air and artillery units into a state of readiness to be called by the FSCC or player. You can cancel an artillery unit's move by clicking "On Call" and then issue a bombard order.

Another clarification is for helicopters. They have only <u>one</u> possible movement end state. Screen. This is the standard function for recon and combat and reflects terrain masking and popups to conduct actions. The other option you can do is resupply if the helicopter unit is within 1500m of the HiHQ on the map. The supporting text info in the UDP has been updated to match these changes.

### 2.3 Enhanced – Added Overwatch Role to Scoot Adjustment

Added Overwatch role to scooting group modifiers similar to recon and support units to help AD and other soft units scoot better during game play.

## 2.4 Enhanced – Adjustments to ICM Mechanics

We made a few tweaks to the percentage chances of units being killed (versus falling out). There is now a slightly higher chance of permanent loss when hit.

## 2.5 Enhanced – Al Reinforcement Delays

Hopefully, we now have this fixed so units coming on the map for the AI as reinforcements do not suffer "command delay" for the first orders issued to them in the orders phase following their arrival.

#### 2.6 Enhanced – End Game Results

We added additional information about the scenario that was just played in the end game summary. In particular, noting if it was a user modified/created scenario.

#### 2.7 Enhanced – Scooting

We tweaked the numbers to increase the chance of soft units (Recon and support) to scoot when under fire. This should sit more in the middle of too fast or not fast enough to get out of trouble. Not a perfect solution, but we 2.1 will allow for user set SOPs to control this on a case-by-case basis. Along with those changes, we made some changes to standoff range logic and to response times for Recon units when the standoff range has been encroached on. We revised a number of the logic cases effecting standoff scooting to improve direction of retreat. Units should be much less prone to heading toward visible enemies (that the scooting unit sees) and HQs and Artillery units should be less prone to stacking with other units making inviting targets.

#### 2.8 Fixed- Allow Browsing of Spotted Enemy Units

If this game option was set on, you could see the movement path and destination of the enemy unit. This has been deemed as "too much" information and is now not visible.

#### 2.9 Fixed – ATGM Hint Spamming

I hope that this is finally fixed. There were still cases were the hint would popup when units were not firing or showing multiple times when units fired once.

#### 2.10 Fixed – Air Strike Combat Hints FoW

We made a few corrections to the various airstrike hints to have them show information relevant to the correct owning player. If the airstrike is yours, you will be given detailed information as to what it is doing throughout the attack. If you are the targeted player, you will only get information you would know (no more seeing the state of the aircraft after the attack for instance).

#### 2.11 Fixed – Artillery Unit Stuck in Barrage/Resupply Loop

A logic bug with arty units and resupply that could trap units into a non-resupply if barrage orders not fulfilled and ammo goes low. This was mainly seen with MLRS units that could exhaust lots of ammo in one shot.

#### 2.12 Fixed – Better Exit Hex Mechanics

We fixed a couple bugs with the way exit hexes should work. One bug had exit hexes incorrectly assessed by enemy forces as viable VP locations in certain cases. This caused the AI to send units to them and to other VP location in the area instead of dealing with high value VPs on the map. We also changed the way the AI views the exit hex. It now looks at it with an offensive mindset and not a defensive one. The defensive AI wanted to fan out and garrison the exit and the offensive AI wants to run it over and exit the game. Exited units should say "Exited" in the unit roster.

**NOTE:** This is far from perfect or what we really wanted, but it can work. The exit hexes are seen by the AI as having a 2000 VP value to help it decide to move towards the exit hex. The side exiting only receives VP for the value of the units that actually exits through that hex. As long as any nearby VPs (in range of your force) are less than that in value units will move toward the exit. If you are making a Bypass scenario, I would strongly suggest a few low value breadcrumb VPs for the AI to follow and a few exits to draw the force off the map. Some trial and error will be needed to get a decent result. This one area will be better handled in Southern Storm with a number of the new features we are planning.

## 2.13 Fixed – Custom Map Dived by Zero Error

We corrected calculations that allowed for some custom maps, when loading, to generate a divide by zero error.

#### 2.14 Fixed – Enemy Announcements at Game End

In certain Sudden Death game endings, the player would receive enemy radio messages generated at the end of the turn. These messages are no longer displayed and the game goes into the End Game screens as intended.

#### 2.15 Fixed – Errors in VCR replay.

The following VCR related items are fixed:

- Pressing Fast-Forward multiple times could cause replay and game corruption.
- Replay shows enemy unit counters arriving on the map when they should be hidden.
- Hints for enemy reinforcements are showing as they arrive.
- Turning on "Show all friendly movement paths" would show enemy pathing.
- Unit spotting in replay improved to better show visibility as it occurred in resolution phase.

#### 2.16 Fixed - Game Timing Glitch

We found and fixed a bug where extra messages introduced into the games timing chain caused orders and the turn cycle to corrupt in certain cases. This would lead to Zero minute or in odd cases negative minute turn cycles. This bug is also thought to be the cause of lost/skipped orders (unit fails to resupply or move and the time to act has passed on the game clock).

#### 2.17 Fixed – Minor Data Edits

A handful of minor data edits from various sources. This includes a bad sensor callout for UK Warriors, removing some errant commas in UK sensor data (should not have had any game effect, but needed to get out just in case), removed claymore from M113 ACAV (does not belong there), and corrections to Soviet Arty Max ranges on a few systems.

#### 2.18 Fixed – OOB Tree Crash

In certain cases, it was possible to have the game crash/lock up if a certain type of resubordination attempt was made in the OOB tree. Internally the game made a change to part of the structure even though the structure was not changed change in the tree. This led to a crash when other operations were attempted.

#### 2.19 Fixed – PBEM Items

The following PBEM/PBEM++ related items are fixed:

- Logging into Steam PBEM++ account generated an error. We made more changes and hope this is fixed. If not, we will continue to track this down and issue a hotfix.
- Corrupted game file prevented reload of turn from server.
- The wrong side could see air strike cancellation messages.
- Password query window could get "lost" behind other windows on the screen.
- Pressing the Cancel button during the sending of a PBEM++ turn stops the complete transmission of data.
- Incorrect game options text shown in game setup summary. Removed "Show Movement" option was still showing and new options were missing in the text. Did not affect game play selections.

#### 2.20 Fixed – Sudden Death and End of Game VP Calculations

The code has been corrected to deal with the following:

- The VP scoring routine is now properly run if the game ends on time limit.
- Helicopters no longer affect the influence scoring to flip VPs at game end.
- On map VP markers should flip to awarded side when end game scoring dialog is closed and VP tab should also update to show correct awards.
- Exiting units properly scored in Sudden Death/End Game calculations.

#### 2.21 Fixed – Update Notes in Staff Diary Revamped

All of the update information in this tab was replaced with a reference to this Compilation document. There is a good chance this tab will be deleted in the future.

#### 2.22 Fixed – Waypoint Editor Bugs

There were a number of odd bugs plaguing the waypoint editor for both single units and unit groups. We believe we have fixed all of these issues in this release. Adding delay should work, the times should sync up in the UDP for your unit(s) based on the delays, and additional delays above the standard "command delay" should no longer be tacking on. If you see anything strange with respect to waypoint editing, please let us know on the Matrix Tech Support forum. The code in this area is tricky and having it work for groups just compounds the level of potential failure points.



The West Germans run into persistent chemicals.

### 3 What's New, Enhanced, or Fixed in 2.08

Here is a list of the items we worked on for this update with a brief summary of the problem(s). Please use the thread in the Tech Support Forum to report if there are still problems with any of the listed items below. Thanks and away we go...

# 3.1 New – Indicator for Limited Staff Allowance [LSA: x]

We added the maximum number of orders used if Limited Staff Allowance option were set. This value is on Player tab of the Commander's Notebook as seen right.

# 3.2 Enhanced – Correction to Low End Artillery Damage

We fixed an error that was causing low-end artillery fire to have too high a value versus armored targets.

## 3.3 Enhanced – Improved Infantry Cover in Cities

We made minor adjustments to improve the cover of infantry in cities.

#### 3.4 Enhanced – Recon Unit Scooting Threshold Reduced

Recon units were sitting too long getting attacked and taking losses before scooting. The threshold value has been reduced some to improve their desire to scoot sooner.

### 3.5 Fixed – False ATGM Hint Being Shown

We fixed a bug responsible for showing errant "ATGM Launch" messages from certain units when no launch was actually made.

#### 3.6 Fixed – Tube Launched ATGMs on Soviet Tanks

We fixed a bug affecting certain Soviet tanks with tube launched ATGMs that could in rare cases keep the unit from firing the main gun. This could stop both AP and ATGM fire.

### 3.7 Fixed – Two Bugs in Scooting Logic

Certain units, HQs and self-propelled artillery, had a habit of scooting to on top of each other when making an involuntary scoot move. Units also still had too high a chance of scooting toward an enemy hex. Both issues have been corrected and scooting should be more logical now.

#### 3.8 Fixed – Data Errors in West German Data Files

Corrected a bug that would crash the ScenEdit if a Division Recon Unit were selected. Also corrected a Recon APC type to the correct version.



#### 3.9 Fixed – Steam PBEM++ Login Bug

Fixed login problem with Steam PBEM++ games introduced in 2.07.

#### 3.10 Fixed – NATO FSCC Not Firing Smoke Missions.

The NATO Fire Support Control Center (FSCC - the staff artillery command) never fired smoke. This has been relaxed and it will fire smoke about 25% of the time against eligible targets.

### 3.11 Fixed – Spotting Dots Not Updating

In some cases, the unit counter "spotting dots" in the lower right corner were not turning off when the unit was no longer spotted. This is now fixed.

#### 3.12 Fixed - Crash If Scenario Could Not Find Game Map

If a map file is entirely missing for a scenario then the game will say so and revert to the game setup screen.

#### 3.13 Fixed – Helicopters Stopping Short of the High HQ to Resupply

A problem with helicopter units not returning all the way to the High HQ to resupply has been fixed.



Soviets and Americans square off in Ears, Eyes, and Teeth.

### 4 What's New, Enhanced, or Fixed in 2.07

Here is a list of the items we worked on for this hotfix with a brief summary of the problem(s). Please use the thread in the Tech Support Forum to report if there are still problems with any of the listed items below. Thanks and away we go...

#### 4.1 Fixed - Steam PBEM++ Login Failed

Games bought through Steam could not log in to Slitherine / Matrix PBEM++ for online play. The serial number kept coming back as blank. This is now fixed.

#### 4.2 Fixed - PBEM++ Integer Conversion Error

PBEM++ would sometimes throw an integer conversion error on part of a date. This was a localization issue and has been fixed.

### 4.3 Fixed - Missing SAM Launch Hint

When a unit fires a Surface to Air Missile (SAM) that unit will now pop up a combat hint above the unit to show that it fired that type of weapon. This should help in seeing when those attacks happen, as the sound effect is sometimes lost in heavy fighting.



The British make the Soviets pay for each kilometer in Hell's Crossroads.

### 5 What's New, Enhanced, or Fixed in 2.06

Here is a list of the majority of items we worked on for this update with a brief summary of the problem(s).

#### 5.1 New - OTS Standard Maps by William!

Not only is William going to do the maps for Southern Storm, he has put time into giving us new OTS based maps for Red Storm. These new maps are now the games standard maps. You can still place custom maps in the custom folder to replace these if you wish. We are also including a folder called OTS Maps Classic that contains the original game maps if you wish to copy them into the custom folder and use them.

### 5.2 New - Sudden Death Multiplayer Setting

We totally forgot to add this in 2.04/2.05. You should be able to setup a multiplayer game and specify if the game will end using Sudden Death to end the game. If not selected you should be able to play until the time limit.

#### 5.3 New - Added ATGM Launch Hint

When a unit fires an Anti-Tank Guided Missile (ATGM) that unit will now pop up a combat hint above the unit to show that it fired that type of weapon. This should help in seeing when those attacks happen, as the sound effect is sometimes lost in heavy fighting.

#### 5.4 Enhanced - Revised Falling Out versus Destroyed Subunit

Code that determines whether a unit falls out or is destroyed was revised to better take into account the lethality of the attack. This also flows down to carried passengers. The Subunits view at the bottom of the screen and the Force Roster now shows hard kills with the subunit name in red.



## 5.5 Enhanced - Expanded ScenEdit Date Selection

You are now able to set the scenario date to any date between 1/1/1946 and 1/1/2020 for making custom scenarios.

## 5.6 Enhanced - Artillery Fire not Getting Kills

Changes in the code for combat broke artillery fire in the 2.06 builds early on. The artillery routines were adjusted to compensate and are getting kills again. The number will vary with target, cover, and attacking gun size (SA value basically).

#### 5.7 Enhanced - Label Changes for Better Information

A number of information labels in the UDP and other places did not convey the proper state of a unit. In particular, dedicated Leg units show as "Insufficient Transport" instead of "Moving on foot". Landed helicopters now show "Landed" instead of "NOE Flight".

Units with low ammo, readiness, or morale now say "Low X" instead of a number. Units in this state can still shoot at reduced effectiveness and will trickle resupply in place if engaged with an enemy at very close range.

Right: Some of the improved labels in the UDP



# 5.8 Enhanced - Helos Sit Still and Take Fire/Losses

We added new logic to helo units to have them displace if the hex they are hovering in (screen/hold) comes under fire from an unknown source. In the past helos would just sit and take a beating instead of moving. Moving reduces the chance of being hit and the unit may move out of range or closer allowing the enemy to be spotted and attacked.

#### 5.9 Enhanced - Scooting/Standoff Range/Resupply Al Logic

This area of the AI has been the most difficult and frustrating part to get to behave in a logical manor in all cases. We did a number of adjustments and recodes under the hood to improve some of the standoff/scoot behaviors and to work the resupply better and scooting around if low on ammo. Units should be more prone to holding their ground unless losses for a morale scoot kick in.

As noted above, units in close contact with the enemy and low on ammo will now hold their ground and deal in a trickle resupply (about 10% or so).

Enemy units in standoff range to a unit must now pose a threat for units to scoot away. Should be no more tanks running from jeeps. This will not totally solve the issue for some players. We plan to address this more with some high level SOP functionality in 2.1 to allow players to set the "tone" in these situations.

## 5.10 Enhanced - ATGM Fire at Infantry Squads

In testing, we saw a few cases of ATGMs from APCs firing at pure foot infantry squads. We revised the code to allow ATGM weapons to shoot at leg units only if they are in fortifications or high cover (Urban).

## **5.11 Enhanced – Show Type of Saved Game**

When selecting a saved game, the information text box now tells you if the game is in Extended play (past Sudden Death) or not.

#### 5.12 Fixed - Last Campaign Game does not Load/Play Correctly

As of 2.04/2.05, there was a bug where the last scenario of a campaign did not load, loaded with errors, or loaded with leftovers of the previous scenario. This is fixed and should be working as designed. You should be able to pick up your game from the end of the last scenario and finish the campaign.

### 5.13 Fixed - Game Freeze/SUI Window Trapping

A few people were having game freezes and we were able to freeze up the game as well and traced it back to the Sub-Unit Inspector (SUI) dialog being hung up in the background of the main screen. This would cause the SUI not to show up and created an unresponsive dead zone on the map. We have made corrections, they appear to be working well, and the SUI is functioning as intended.

#### 5.14 Fixed - Counter Battery (CB) Fire not Working

Changes to data and some code in 2.04 caused Counter Battery Missions to stop being generated and acted on except in extremely rare cases. Both the code and data were revised to make CB missions functional again. If you have a unit on the map and in CB mode, it should be able at times to detect and fire on other on-map artillery units. This is not a 100% thing and the odds drop rapidly if the EW state is medium or high. Currently off-map arty is not targetable (planned on adding/expanding in 2.1).

#### 5.15 Fixed - Direct Support (DS) not Working

Somewhere after 2.03, the ability to have artillery units on Direct Support missions stopped functioning correctly. A number of code changes have been made, one crash bug fixed, and direct support is working as intended now. Supported units will generally not call in fires on targets within 500m of themselves when in direct support.

#### 5.16 Fixed - Data Errors

A number of types and other errors in the data tables have been identified by players and posted on the Tech Support forum. We verified and fixed a good number of these. They center on messed up values for a number of recoilless rifles and weapon teams. We corrected type accuracies to their intended values for all weapons.

**NOTE:** The game has two sections per weapon team shown in the data.

There are still a few duplicate weapon entries. These do not hurt anything and the data system will get another once over to clean that type of issue up as we work on 2.1.

### 5.17 Fixed - SAM and Other Light Units Killing Tanks

There was still a certain case in the code were low AP type units/SAMs were getting kills on tanks. This was a problem with the code and some bad round offs in certain routines allowing for a bad value to leak through the combat routine. Rewrote routines and added better rejection logic for cases that should not happen (SAM versus tank for one). If a low AP weapon is within range, it is still possible, but unlikely for a low AP unit to soft kill a tank. A unit that falls out on a soft kill has suffered some failure from enemy fire that renders it combat ineffective for the remainder of the fight.

### 5.18 Fixed - Excessive Weather/Visibility/Time of Day Dialogs

The variable range from 2.04 was causing a spamming of weather change dialogs. This has been fixed in 2.06. The game will only drop a notice every 5 minutes if the time of day changes (example - dawn to day) or if the weather changes (example - clear to rain). These happen at a lesser rate during play. Range variations are checked every 20 minutes now and will only pop the dialog if the actual range changes. This should greatly curtail the events popping up on screen. There was also a bug that caused a repeat of weather messages in certain cases. This has been fixed as well.

#### 5.19 Fixed - Fulda Scenario (Large Scenario) Lockups

Some players experienced a lockup of the game when playing the very large Fulda Scenario. This was traced back to a depletion of resources for the graphics. We did a number of optimizations to improve the resource management (stop resource leaking). The scenario should now play through if it did not in the past.

#### 5.20 Fixed - Sudden Death Calculation Errors

During low ammo/scoot testing, we found out that the Sudden Death calculation could breakdown and zero out unit influence if the game was close to time limit and unit readiness was low. This is fixed now and SD should score correctly in all cases now.

**NOTE**: If the game runs to completion you have to own the VP marker or at least be within 500m of it to get the points (own it) or be part of the end game calculation for ownership of the location. If you leave your army parked 1km away from an enemy controlled/owned VP, it is not going to change over.

#### 5.21 Fixed - Ctrl-G Functions Showing Expired/Hidden Markers

Code fixed to remove expired or dead map markers from the list used to generate the markers on map. Function no longer shows hidden makers not seen by player.

#### 5.22 Fixed – Tactical Operations Center (TOC) Diary

TOC Diary should have been opening to make the last most recent actions visible. It does now.

#### 5.23 Fixed – Unit Right Click in Scenario Editor

When working in the scenario editor, right clicking on a unit in the Subunits display popped up both a menu (intended) and the Sub Unit Inspector (SUI, not intended). Now it only pops the menu. The SUI can be opened by double clicking the subunit icon like in-game use.

## 5.24 Fixed - Game Crash Loading Map/Art (OS Localization)

We fixed a bug that could cause a game crash loading maps and other art if the player was running a Chinese or Japanese localized OS (possibly other languages as well). We rewrote code in a graphics module to open these files in a manner not affected by localization and then passed to the game engine.

## 5.25 Fixed – Odd Sized Maps would not Scroll to Edge

Maps of a certain layout (taller than wide) would not scroll/jump to edge properly and not show location in jump map properly as well. This is fixed and maps of any aspect ratio should function properly now.

## 5.26 Fixed - Map Editor Road Detection

We opened the range for detecting the OTS road color. It should now be showing up in auto detection runs.

## 5.27 Fixed – End Game Music Quits Early

The end game theme should now be playing through and not stopping after 2 seconds.

### 5.28 Fixed - Map Data Errors

We fixed incorrect values on the following maps: Red Storm 4, Red Storm 10, Red Storm 11, and CS 4 Red Storm.

#### 5.29 Fixed – Passenger Disembark Dialog

This dialog box is no longer resizable.

#### 5.30 Fixed – Final Orders Dialog

We fixed a bug that allowed the box to be trapped off screen crashing the game. The box now pops up in the screen center at all times.

#### 5.31 Fixed – Music FX Setting

We removed it from the FX tab for now. It was not working right and really had no function at that location.

#### **5.32 Fixed – Help Menu Documents**

We fixed the entry to default to the correct latest version of the "What's New" document. Players should look for and read any others to be fully caught up (such as "What's New in 2.04").

#### 5.33 Fixed – Total Destruction Crash

We fixed a crash of the game when one side is totally destroyed. The game will now go to the final Sudden Death dialog and then to the end game post mortem. There is no option to play on.

#### 5.34 Fixed - Helicopter Movement

We fixed a bug that forced helicopters to drop to screen if they could not move through another group of helicopters. The unit will now try to plan a new move or will wait until it can clear the obstruction and move on. Not a perfect fix but better than it was.

### 6 What's New, Enhanced, or Fixed in 2.05

Here is a list of the majority of items we worked on for this update with a brief summary of the problem(s).

#### 6.1 New – User Selected Screen Shot Folder

When taking a screen shot of the game (Ctrl-Z) the user can change the default folder. The newly selected folder now becomes the default.

#### 6.2 Enhanced – Reduced Readiness Drop in Combat

Adjusted the readiness drops associated with combat. A very small change to get things back to a better balance with ammo use and shots taken.

#### 6.3 Enhanced – Unit Resupply Based More on National Values

Added adjustments to units to hold off on resupply based on national risk profile and stance (on hold).

### 6.4 Enhancement – Better Infantry Defense in Built Up Areas

Slight tweaks to the effective cover of units in urban areas and also a bit of a tweak for infantry in general. The grunts should be less of a speed bump now.

#### 6.5 Fixed – Scenario Corrections

Updated "NL\_AS Defense of the Weser Crossing" for timings of units and reinforcements. Updated CS1 "Red Hammer" for with a wrong unit IDs.

### 6.6 Fixed – Obstacle Delays

Minefield and engineered obstacle delays. These were being miscalculated in some cases and the unit(s) could spend up to twice the intended time stuck in the obstructed hex.

## 6.7 Fixed – Fast Bridging

Bridge building was too quick. It shrank down the 15 plus minutes and we have put it back up to 25-30 minutes.

#### 6.8 Fixed – Control + G Crash

Using the menu to remove "all map markers" from the map could cause a crash. This has now been fixed. The new function keeps crosses, craters, and VPs on the map. Use Ctrl+G to toggle.

#### 6.9 Fixed – Intermediate HQ AI

'Intermediate' HQs – not the highest and not the lowest – could sometimes be treated as an independent overwatch group and be given their own objectives to secure. This was not intended and could cause odd results. Fixed now.

## 6.10 Fixed - Artillery TRP Timings

The artillery target reference point (TRP) editor was not working to adjust the timings of the various impacts any more. This has been fixed.

#### 6.11 Fixed – End Game Music Stopping

The end of game music was stopping after two seconds. We think this is now fixed.

#### **6.12 Fixed – Wrong Equipment Date Showing in ScenEdit**

Scenario Editor. When reloading a scenario set in 1981, it showed the equipment lists labelled "1989" even though the 1981 equipment was listed. Label fixed.

#### 6.13 Fixed – Could not Review Both Sides in Al vs Al Game

When AI vs AI game finished both sides can be examined. Was only allowing side 1 to be reviewed at end game.

#### 6.14 Fixed – Unit not Shooting if SAM sub-unit Present

Fixed a bug where units with MANPADs (SAMs) would not shoot at ground targets.

#### 6.15 Fixed – West German Campaign Scenarios

Replaced CWG5 Teutonic Knights with CWG5 Wolf Trap as it should have been.

#### 6.16 Fixed – MTLBU graphic

Removed white background.

### 7 What's New, Enhanced, or Fixed in 2.04

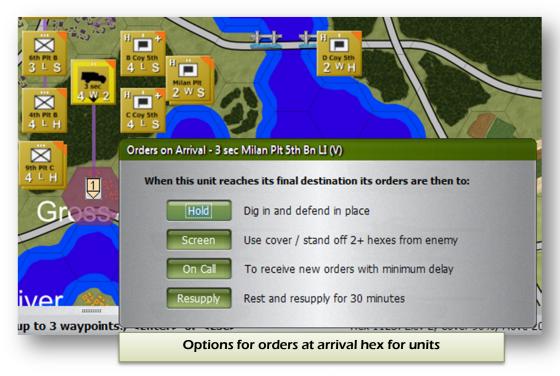
So what are you getting for two month's waiting? Fair question. A number of things both visible in the game and invisible under the hood have been done in that time frame. In this section we will summarize those visible elements. Most of what is here are new features or enhancements to the game. Many of them suggested by you the player. Away we go...

#### 7.1 Issuing Movement Orders

Movement orders and the request for more control have been on the wish list from before day one. While this is not a full blown per waypoint system with overarching SOPs (that has to wait for the 2.1 game engine), we have added new features to the system and made some enhancements along the way to boot.

#### 7.1.1 New – Movement Orders End State Setting

This is probably **THE** new feature for 2.04. Once you finish issuing a movement order and in some cases a dismount distance (see 7.1.2), you are shown the dialog below. Here you can select the end state order of the move. You have four choices.

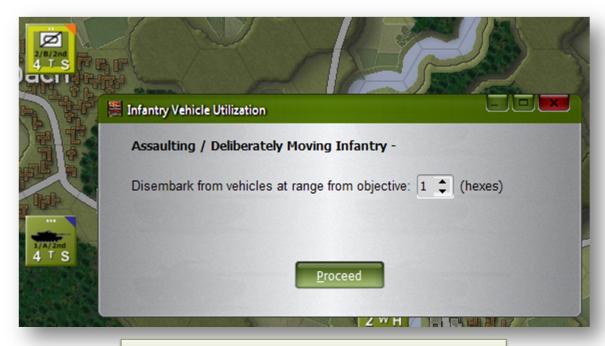


- Hold This keeps the unit fixed in place and it is much less likely to back out under fire.
- Screen The unit use cover, but if the enemy gets too close it will move out to open the distance. The range of this standoff varies by unit type.
- On Call Useful for HQ and Arty units that need to be ready to do other things when they get where they are going.
- Resupply Really does not need an explanation. The units will rest and restock.

And before you go running off to the forums to ask, no, we did not include engineering functions at this time. We will be working on those a bit more in 2.1 and making decisions on adding those end states then. Sorry.

#### 7.1.2 Enhanced - Dismount Dialog

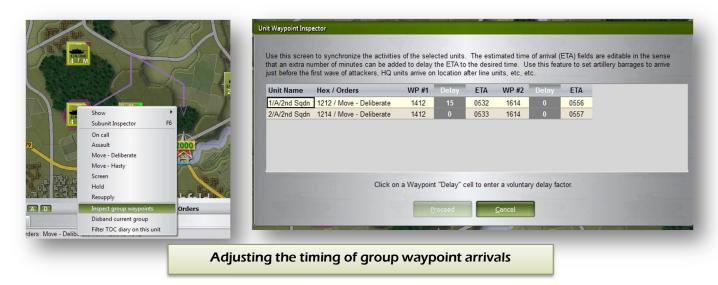
The dismount dialog has been in the game awhile now. If the unit is carrying infantry or scouts, you will have the option to have them dismount and move to the final objective on foot with the transports supporting the move. The unit will adopt the order state given in the new Orders on Arrival dialog shown above.



Setting the dismount distance from the final objective

#### 7.1.3 Bug Fixes – Waypoints/Waypoint Editor

A number of bugs were both created and fixed with the addition of the end state order. Most of these occurred when a group was selected. As you can see below there is an option to inspect group waypoints and also set delays to coordinate arrivals better.

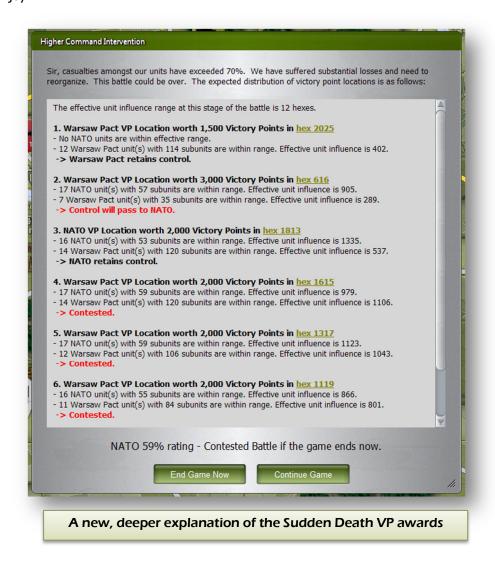


#### 7.2 Sudden Death

If there was one game mechanic that folks loved because of what it did in the game or despised because of what it did, it was "Sudden Death". We have done a couple things we said we would do.

First, the calculation of awarding victory locations (VPs) has been extensively overhauled. The results of those calculations are displayed when Sudden Death is triggered in the game. We are now taking into account the readiness of the forces, time remaining in the battle, distances to VP locations and the strength of the units. Infantry in city terrain gets a bonus too to the calculation. Depending on this Influence rating, a VP may stay yours, be contested and split between both sides or flipped to the enemy. It is spelled out in the dialog as seen below.

Secondly, there are three items at the bottom of the dialog. You are given the overall score and result if the game is ended at this point of Sudden Death. Hitting the End Game Now button will send you to the game's post mortem screens as it did in the past. As players, many of you wanted to fight to the last man standing. A tad bit OCD but we as gamers get that. For those time you need to see things to the utter end, you can now hit the continue button and play until the time limit or until you decide to end the game via the menu with File – End Game Now. Enjoy!



From the Sudden Death dialog above, here is the map at that point with the VPs (using The Plodder's awesome VP markers and map in this case, read on about custom folders later in this addendum) showing as awarded or contested in some cases. The Sudden Death calculation is more detailed internally then before, but we will be looking to add some more detail down the road.



Viewing the map after Sudden Death

## 7.3 Fog of War

Fog of War or FoW for short, was another area that people took exception to the way information was displayed in certain areas and dialogs. In 2.04 we have cleaned up the way information on the enemy is displayed in hints, diary logs, on counters and in the UDP. If you have "full" FoW going, view enemy counters is off and browse enemy is off, the information you get will be based on one of the three spotting states used by the game.

- Undetected No unit shows on the map. You do not have eyes, ears, or any other contact with the unit.
- Identified The class of the unit is known like Tank, APC, etc., but exact type is not. Numbers are generally not know and show up as a "\*" on the counter.
- Acquired Now you know the exact type like a T-80BV, but numbers are still fuzzy.

Therefore, as information on a unit improves you will get hints and log entries with better details. We plan to continue to add more FoW elements in 2.1.

#### 7.4 Scooting and Standoff Range

Both of these AI related functions were torn down and recoded for this update. Although not perfect and quite frankly there is no way to really make it that way, we did work a through a number of iterations to have both decent standoff range based on unit type and orders and then worked to make the type of scooting involved more timely and intelligent. One item we ditched was the max standoff range in the UDP. It wasn't really doing anything other than confuse folks. The big number if the minimum standoff range. This is the point a unit will back out if pressed by an enemy. There is no simple table of ranges, but here are some general guidelines of how numbers will be calculated.

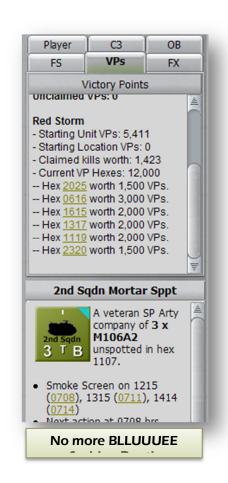
- Line units like tanks and mechanized forces will have lower ranges.
- HQs and support units like SAMs and Arty will have larger ranges.
- Recon units will have longer ranges.
- Being in a Hold order will reduce most range to near zero or zero. These units will scoot only when losses force them to move.
- Being in a Screen order is a neutral adjustment.
- On Call and Resupply with have increased ranges.

When scooting, most units in most situations will back out in a few minutes using a deliberate move order. This move assumes the unit is making a more ordered and cover based fallback. In some cases a unit may be surprised or set upon and need to bail quickly. In this case, a hasty move in a few minutes will be used. A trade of speed for defense will be made here.

#### 7.5 UI Tweaking and Improvements

We did a good deal of UI cleanup and tweaks and also peppered in a few new item into the UI. As you could see from the first screen shot we did change some UI colors and toned down some of the effects on the silver panels. We have also made changes to the Sub–Unit Inspector too (See section 7.6.2). Here is a breakdown of the various improvements and fixes.

- Fixed a bad TOC report where Smoke was stated in place of ICM in MLRS missions.
- Remove the Promo score code for good.
- Unit parameters will now go to 100% for Readiness, Ammo and Morale in the Scenario editor and in the UDP display.
- Max standoff range in the UDP was dropped.
- Game shows hints if the FSCC is setting missions for on map artillery units.
- Units wiped out in battle now show back up in the TOC's Force Roster.
- Hyperlinks in all area should now be Olive and not BLLLUUUEEE.
   Wow it hurt my eyes. (See image, right)
- Enemy bridges should only show if spotted now.



- Changed the wording in the SUI for the protection value(s) of aircraft, helos, and unarmored/soft units. The "Front/Flank Protection" will only show if the unit has armor. Aircraft and Helos will say "Protection" and Soft units will state "Unarmored Unit".
- Control-U will now also hide key map markers.
- Selecting a unit or HQ by holding the "CTRL" key and click will now highlight the HQ and subordinates of said HQ. You cannot issue orders from this selection in any game orders mode. See image below.



A quick way to see whose part of a formation

#### 7.5.1 New Quick Function Buttons

At the bottom of the map in the status bar right next to the zoom buttons are three new buttons adding more functionality with less mouse clicks. In this case the three buttons do the following:

- L Toggles the Lin of Sight (LOS) display on and off for the selected unit. Once selected you can shift click an empty hex for its LOS as normal too.
- A Toggles on and off all of the Friendly Movement Paths. Pretty self-explanatory.
- D- Toggle on and off the Command Radius of the selected HQ or unit. Non HQs have a radius but it does not affect play (for now).



Why only three buttons? Because we have limited space in the status bar at minimum resolution and we want to test these out. If folks like them, we are talking about making them on their own bar and also making them customizable so you can set it up with your most used functions (Ctrl click keys and such). So speak up if you find them helpful.

#### 7.5.2 New FX Tab Layout

The FX tab has been redone into a single scrolling list (at least on the non-jumbotron screens like mine it needs the scroll bar). The new layout has all of the options in a larger font making them easier to read. This also provides us with room to expand in the future if new options become available.



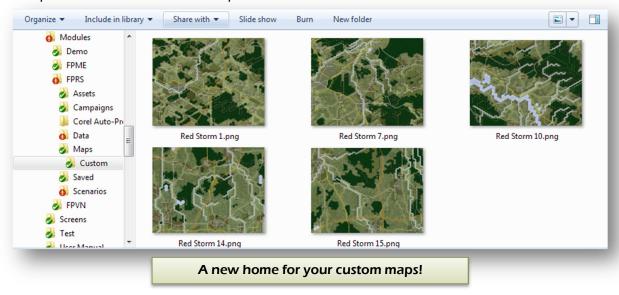
**Expanded and more readable options** 

#### 7.6 Editors and Modding Improvement and Fixes

In 2.04 there are numerous fixes, tweaks and additions to both use and display modding content.

#### 7.6.1 Custom Folders for Maps and Markers

The biggest improvement we did was to add a "Custom" subfolder in both the Maps and Map Markers folders. The game will now look for maps (art and FP9, FP9 is not required unless you have a custom version of your own) and markers of the same name in these folders first. The same name is the key. Putting a new map in the game should be done by placing it in the proper Maps folder. There is no method for adding new a new type of map marker. You can only make new images for the existing ones and place those with the same name in the Custom folder. This change will keep us from overwriting any custom content you place in the game. These custom maps and markers will also show up in the Scenario Editor too.



#### 7.6.2 Sub-Unit Inspector Enhancements

Another area of change was in the Sub-Unit Inspector (SUI). We made the image and SUI larger and added the ability of adding a new image (BMP) for a given platform by adding a "-S" to the name. Let's say you wanted to put a cool color picture of a T-80U in the SUI all you would need to do is have a BMP image 256 x 128 pixels (or larger, but in the same proportions, the game will scale down a bigger image) and save it in the Data folder as T80U-S.bmp. It has to be the same image name used by the game as seen in the data files or in the Common folder silhouette images. The image as seen in the picture can be color. You can give it a 3d look or add a drop shadow to style it (in your paint program). If there is now "-S" image the game will use the unit silhouettes instead. The "-S" images will NOT be flipped for player two. This will keep any image you use the way you have it. Not flipped text or numbers if they are in the image.



#### 7.6.3 Bug Fixes for the Scenario and Map Editors

A number of bugs and little tweaks were done to both the Scenario and Map editor. The major items are as follows:

- In the scenario editor if you replace a larger map with a smaller one with units on the map, the editor will now move those units that are "off map"
  - back onto the smaller map for setup.
- Scenario Editor now uses any custom maps and markers found in the new Custom folders.
- Tweaks for improved Scenario Editor screen refreshing.
- The Dawn and Dusk times in the Scenario Editor are now clearly spelled out and shown for the time they are in effect. (See picture)



#### 7.6.4 Data and Assets Enhancement and Fixes

We had a few areas in the data that needing updating and we did a few other things for modding assets too.

- Data for each country was revised and cleaned up for a number of parsing errors when selecting formations.
- Added in missing US OH-58C and D scout helicopters. Sorry about that.

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- Revised the loadouts and equipment on the US AH-1s. They were overloaded with weapons and missing some equipment in a couple of cases.
- Removed guns from the command versions of the Soviet BMPs and BRMs. The guns have been replaced by a radio mast.
- US F-117s no longer carry nukes. There was a bad weapon pointer to a missing weapon. Fixed now. Surprised nobody saw that.
- The counter images (sils, as we call them) that are currently set to 128 x 64 can now be bigger. The trick is to keep the 2 to 1 proportions. The game will scale them down on the counters and other forms. This will allow for more detailed unit silhouettes (not the "-S" images from above). These sils in the SUI (now with a bigger image) will look better not getting scaled up. Best size would be 265 x 128 pixels now. We will do a full sils overhaul for 2.1.

### 7.7 Game Play Changes

Pretty much every update we do for the game has a good number of additions, tweaks and bug fixes under the hood that people don't see directly. The gameplay does change, hopefully for the better and more realistic, every time we touch the code. The next sections are a brief summary of the big changes done to the various areas of the code.

#### 7.7.1 Al Enhancements and Corrections

Pretty much any change made in the game that is not a cosmetic UI tweak or addition touches on the games extensive and elaborate AI code. A lot of the delay in this update was working carefully in this code minefield. One small tweak can upset the AI applecart and make a mess of the game and the mechanics very quickly. We try to test every change as thoroughly as we can, but there aren't enough days in a year to see every situation and combination of events. So if you see odd behavior, let us know. With that being said, or more to the point written, let's talk about some of the changes in the AI area.

- Tweaks made to the when and how of resupply again. Units should try to disengage from enemies and then go into resupply.
- Helicopter resupply logic was tweaked again to make sure low ammo attack helicopters go back and resupply instead of sitting around as flying targets.
- Improvements in the scooting logic to seek out better cover and to get away from the enemy. This also includes improved logic by Artillery units to not move into other artillery or HQ unit hexes and more resistance to jumping into trees.
- Fixed an issue where certain enemy AI mortar units would move around but not deploy and fire.
- Orders delays in certain cases were too long and those have been fixed. This also fixes a slow start problem with the enemy AI that crept back in somewhere in 2.03. Plan accordingly.

#### 7.7.2 Combat Model Updates

The Combat Engine we use is very detailed internally and takes a lot of parameters into account for every little situation that is important to blowing stuff up. The key elements are spotting and shooting. All of the various systems have certain methods to find targets and we have to make sure they work in a bunch of different environmental conditions. Some of the bugs we have squashed where weird corner cases or deeply hidden in various routines. Thanks to your bug reports and the work of our testers we nailed a bunch of them. Shooting had its fair share of issues too and we took down some deeply hidden bugs. We also added to the model too in response to your inputs. The combat engine is always on our list to continually improve and expand. That philosophy will continue as we head down the road to 2.1. Here is a summary of the work done on the combat model.

- Improved the placement of airstrike counters on the map. In some cases there would not show up. It is better now.
- Fixed a bug were certain AD units would engage and kill hard targets like tanks with weapons like SAMs.
- To improve turn resolution the flashing of the helicopter's hex when detecting ADA radar has been removed. Only the ADA unit flashes on the map if detected. The helicopter will still show a white spotted dot if detected by radar.
- Fixed a very rare and weird case where an unarmed unit could get an attack and kill hard targets.
- Fixed a bug were thermal sights on units would not work if certain passengers were loaded.
- Revised the artillery routines to have more weight on shell size and removed an accuracy penalty that
  was affecting mortars and a few field guns. The end result is bigger guns have an improved chance of
  scoring kills and mortars are effective again.
- Added a number of more informative combat hints during airstrikes.
- Revised the airstrike routine to include attackers being driven off by heavy AD fire from enemy units.
- Fixed a bug causing some weapons on aircraft not to be fire/used during attacks.
- Fixed a bug where smoke could obscure aircraft from certain AD units.

#### 7.8 General Gameplay Enhancements and Fixes

Welcome to the garbage can of tweaks and fixes. If it wasn't captured in an earlier section because it did not fit in, it is here. The following is a small list of the miscellaneous updates made to the game.

- A real big change is the **unlocking** of the OTS scenarios. You can now load them up and make changes
  and post them on the forums. Just be cool about crediting the originator of the scenario. Rob did a few
  adjustments to better show the scenario creator and OTS scenarios will still show as official and any 3<sup>rd</sup>
  party scenarios will show up as User Generated. This includes derivatives of OTS originals.
- Fixed an issue where resting and refitting in campaigns was not working for all units.
- Fixed a potential crash on game exit bug. A long standing hard to find bug that did not show up for most players.
- HO units will now show proper mode of transport. In certain cases they always showed as Leg (L) type.
- A handful of new combat hints telling of scooting and other actions to better inform the player.

#### 7.8.1 Improvements in the Play of Sound Effects (SFXs)

Right at the end of the 2.04 update with some extra time with the trip to Origins blocking any release attempt, we were able to spend some time in the audio code in an attempt to address some issues in the manner the game was playing sounds. Mainly movement sounds and the loss of some combat sounds when interrupted by movement.

- Remastered a number of the combat sounds to be shorter to help in getting played during combat. While still not a perfect solution, it is the best we can do without a major rewrite of the audio code sections. This is something we can look at again in 2.1 to improve, but it is a low priority item.
- The game will now play movement sounds for your units and any spotted enemies. Combat sounds were moved to another routine to help queue up sounds and also stop movement sounds if combat sounds need to be played. Bottom line is there are more sounds and it flows better in this update. Enjoy!

#### 7.8.2 Changes to Map Scrolling Parameters

A few players had commented on the "sluggish nature" of map scrolling. We took a look and made a few changes to the low limits of the map scrolling options to "speed up" the scrolling response. It will vary based on your hardware and due to the nature of the 2D graphics engine currently used not a smooth flowing action. That is something we can look to address in the future. Below is a summary of the changes.

- Polling Interval Minimum value reduced from 50 to 10 and steps from 50 down to 10. Lowering this
  should result in a faster scroll.
- Initial Delay Factor Not Changed. Delay time before scrolling starts if cursor in the detection zone.
- Scroll Increment Minimum value reduced from 64 to 8 and steps from 64 down to 8. Lowering this will move a smaller amount of map pixels with each polling interval. If you go low the scroll will be smoother but slower since less pixel movement is done each step.



#### 7.9 PBEM Fixes

A couple of issues still persist in the PBEM area and a few have been fixed with this update. We would love to have them all dealt with but time and repeatable cases of errors are limited and we wanted to get this out. We will continue to pursue PBEM issues as we shift into 2.1 mode.

- Fixed an odd reload error when the PBEM file encountered a changed name to the expected file.
- Fixed an error where air units would not go back and resupply when reaching 0% ammo.

### 8 **CREDITS**

#### 8.1 On Target Simulations Design Team

Lead Programmer and Head Honcho: Robert "Ironman" Crandall

Data, Programming, Graphics, and Sound: Jim "Cap'n Darwin" Snyder

Scenarios, Campaigns and Map Designer: Steve "Mad Russian" Overton

Quality Czar and Testing Lead: Charles "Hawkeye" Belva

Map Graphics Master and More: William van der Sterren

Facebook Site Design/Maintenance: Rebecca "Beck" Snyder

#### 8.2 What's New Compilation

Author and Graphics: Jim "Cap'n Darwin" Snyder and Robert "Ironman" Crandall

Editing and Review: Jim "Cap'n Darwin" Snyder, William van der Sterren, Charles "Hawkeye"

Belva

#### **OTS on the Web**

OTS Website: <a href="http://www.ontargetsimulations.com/">http://www.ontargetsimulations.com/</a>

OTS Facebook Page: https://www.facebook.com/ontargetsimulations

Matrix Games Forum: http://www.matrixgames.com/forums/tt.asp?forumid=1197

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