Operational-Level Urbanised Campaigning (OPUC)

Rules for Operational Level Campaigns over Urbanised Country in the Modern Era

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David Burden
david@burden.name

Contents

BASIC GAME RULES

Note: If there is any discrepancy between these rules and the QRS and/or PACs then QRS takes precedence, then PACs, then these rules.

Grey boxes show design notes

.

Yellow boxes show optional rules

.

Orange boxes show gotchas – things you can easily get wrong

1. THE BASICS

1.1 Introduction

OPUC is a set of rules designed for operational level campaigning within urbanised nations, typically at Army, Corps or possibly Division level. This is a game of fighting from urban area to urban area, rather than focussing in on single cities or towns. Of course, you can always try and avoid urban conflict altogether…

The game has a modern/ultra-modern setting, and includes UAVs but could be retrofitted to the post-War or even WW2 conflicts.

The game deliberately seeks to emphasise some of the often overlooked issues of operating in a modern, urbanised environment, such as the civilian population, civilian infrastructure displaced persons and logistics. The combat system is relatively simple in order that all these elements can be considered in a game which is still playable in 2-3 hours.

The game is designed to use real ORBATs, but you can flex these to experiment with different force mixes, and there are also Capability Cards (CCs) to represent organic and non-organic support elements.

The game is designed to be played by 2 players with no umpire, but playing with more players, with an umpire, and two-handed solo are all possibilities.

There is more information and designer's notes at: https://taunoyen.com/games/OPUC.

1.2 Level

These rules assume that each side has around a Corps sized force. Each block/counter (also called an element – abbreviated to elm.) represents a battalion, or a specialist company.

1.3 Dice

OPUC only uses 6-sided (D6). 2D6 means roll two D6 and add the result. There is sometimes reference to D3 which is a dice with equal chance of a 1,2 or 3 result – just roll a D6, divide by 2 and round up (i.e. 1,2=1; 3,4=2; 5,6=3). You may need up to half-a-dozen dice - most rolls only need 1 but ISR rolls need multiple dice – WHICH ARE NOT ADDED.

DM means "die modifier" and is a number that you add (or subtract if negative) from the dice roll before checking your roll against the target number. "Natural" means the result BEFORE any DMs.

1.4 Ground, Time and Unit Scale

The standard OPUC map uses a 15km hex grid. If using a different scale you may need to adjust the distances quoted in hexes below.

A turn represents 8hrs of elapsed time.

1.5 The Map

The map should cover the operational area of interest. The basic game uses a map of Estonia, covering roughly 250km x 250km.

1.6 Terrain

Given the scale of the game only major areas of terrain are represented. The types and their key effects are shown below.

Type		Effect
Clear		1MP
Woods	TO DO	2MP
Rough/Bog		3MP Wheeled 2MP Tracked

Water/Sea		
Major Road/MSR		+2 hex Wheeled +1 hex Tracked
Railway		Only for Logistics
Medium River (10m-49m)		BD (AVLB) or swim (+1MP)
Large River (50m-249m)		BD (Ferry) or swim (+2MP)
Major River (250m+)		BD (Ferry) or swim (+3MP)
Lake		BD (Ferry)(1 Turn)
Port		May be used for supply and landing
Airfield		May be used for landing
Border (beyond NATO)		
Border (within NATO)		

1.7 Urban Areas

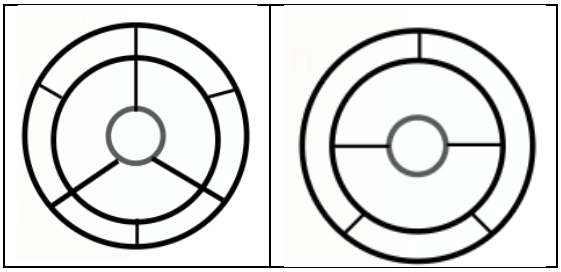
A key feature of the game is how it represents significant built-up area (BUA). These use a set of symbols based on the size of the area, and the same symbol is shown both on the map and on a Players Aide Chart (PAC).

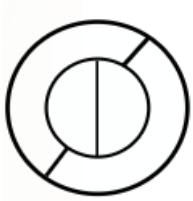
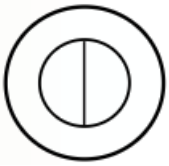
The symbol represents upto 3 concentric areas as shown below.

Outer	To isolate a BUA each segment must be occupied by at least a Brigade.
Middle	The main part of the settlement
Inner	An urban core, which typically has a higher PV.

Each area will have a PROTECTION VALUE (PV) indicated by number or colour. Note that some areas may be greyed or blued out if they are not accessible – e.g. coastal cities.

The following categories are typically used, but may vary from scenario to scenario. The DEMORALISATION (DMZ) and Displaced Person (DP) rolls for each are also shown.

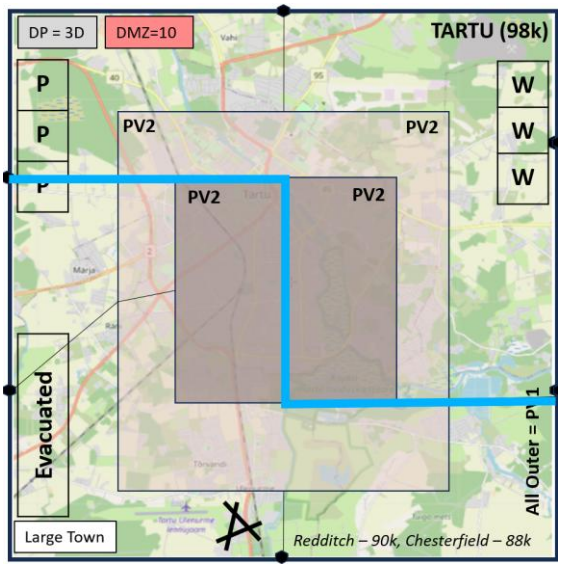


Small city, 100k-500k DP=5D, DMZ=50	Large Town, 50k-100k DP=3D, DMZ=10
	
Town, 15k-50k DP=2D, DMZ=5	Small Town, 5k-15k DP=1D, DMZ=2
	
Village, <5k No game effect	

The BUA PACs will have an area for each BUA that is important in the game.

Minor BUAs that have no effect on game play are shown by a black dot.

A BUA symbol occupies all of a single hex. Whenever a unit moves into a hex with a BUA marker if that hex also includes an Enemy control marker and enemy troops on the relevant PAC then move the new units onto the outer area of the BUA symbol in the most appropriate segment for their direction of approach. Note that the small black marks show where the vertices of the neighbouring hexes are as guidance.



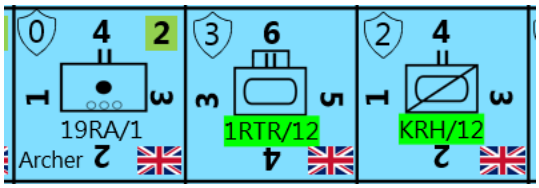
The information on each BUA is:

- Name
- Pre-war population

- Box for evacuation cubes
- Demoralisation (DMZ) value if lost/gained (double lost value and halve won value if not fought over)
- Number of dice for any Displaced Population (DP) rolls
- Box(es) for Power utility cubes
- Box(es) for Water/Sewerage cubes
- Schematic for the BUA zones, and the PV of each.
- The map of the real BUA
- Any port or airfield icons (in correct zone)

1.8 Unit Blocks

Unit blocks show the relevant NATO symbol, and unit ID typically in the format Bn/Bde (or Div)/Div (or Corps/Army).



Unit Combat Factors (CF) (same used for attack and defence) are shown around the outside of the block. The current value is that shown on the top of the block (if HIDDEN) or pointing North (if REVEALED). It is vital to keep correct orientation to show current Combat Factor when moving between these modes.

If more convenient, just play with flat counters and either turn them over if hidden, or keep then face up by indicate the unhidden state with a TARGETED (cross-hairs) marker.

The shield shows the Armour Class (AC) of the unit, which can be interpreted as follows:

- Blank or 0: Unarmoured
- 1: Light AFVs, e.g. BMP1/2/3
- 2: Medium AFVs: e.g. Ajax
- 3: Heavy AFVs: e.g. Challenger, T80 etc

The national flag is shown and is important in ensuring co-ordination between nations in attacks.

Units with ranged fire (i.e. Artillery) show the range in a Green box in the initial top-right corner.

Divisional (and Brigade) Artillery Groups have a slightly different layout as detailed in Section 7.2.

Engineer units have a slightly different layout and this is detailed in Section 10.

1.9 Markers

OPUC uses a variety of on-map and on-PAC markers. The use of these is described in the relevant sections.

On-Map markers are:

NATO Controlled	
Russia Controlled	
Supply Depot	
Railhead	
DP Camp	
Blown/Destroyed	
Neutralised	
Interdicted	
Targeted (cross hairs)	If not HIDING
Fired	Not essential
Moved	Not essential
Low on Supply (LOS)	Not essential
Out of Supply (OOS)	Not essential
ED Red & Blue	Good as brown tiles
BD Red & Blue	Good as brown tiles
Strongpoint	Good as brown tiles
Dug In	Good as brown tiles
Minefield	Good as brown tiles
Engrs Dummy Red & Blue	Good as brown tiles
Displaced Persons	Good as meeple
LOG (pre-position)	Good as brown cube
Evacuation	Good as white cube
Civil Effects Check (CEC)	Good as yellow cube
Rubble	Good as grey cube

On-PAC markers are:

Turn Marker	
Phase Marker	
Air/Land/Flank markers	
Air Markers	For Dashboards
Weather markers	
-1 ISR Temp	
-1 ISR Perm	
-1 CP	
-1 Deep Fires	
-1 Tactical EW/Jammer	
-1 Strategic EW/Jammer	
-1 Log	
AO (Red and Blue)	
DMZ (Red and Blue)	
AO End (Red and Blue)	
DMZ End (Red and Blue)	
CP & CP Alloc	

LOG & LOG Alloc	
Deep Fires & DF Alloc	
GA & GA Alloc	

Suitable counters/cards are provided for each of these, but you may prefer to use small coloured cubes or similar to reduce clutter and improve readability of the situation. Recommendations are shown in the tables above.

CP Cards to be used later in turn/start of next turn are:

- ISR Reroll
- Bde/Corps Co-ord
- Allied/Corps Co-ord
- Plan
- Strategic EW

Rather than use the list of actions on the PAC you can use CP cards for every action. This can also help hide when a player chooses a next turn action, but in my experience players can take longer when choosing from cards rather than a list.

1.10 Player Aide Cards (PAC)

Apart from the BUA PACs, the following Player Aide Cards are used:

- Generic Track, used for:
  - Turn count
  - Red and Blue Adverse Opinion
  - Red and Blue Demoralisation
- Game Dashboard, including:
  - Turn Sequence
  - Air Situation
  - Maritime Situation
  - Weather
- Player/Side Dashboard, including:
  - Possible CP Actions
  - Generation instructions for CPs, LOG, Deep-ISR
  - Track for CP, LOG and ISR
- Fires Dashboard (per side), including:
  - Generation of GA Sorties
  - Generation of Fire Missions
  - Deep Fires options and resolution
  - Local Fire Missions
  - Track for Fires
- Engineering Dashboard
  - Rules for engineering tasks
  - Space for Engineering Detachment (ED & BD) tracking.

1.11 Deployment

The scenario will define the starting locations or options for each unit in a players ORBAT.

Some scenarios may encourage that deployment first be plotted on a hidden map before being transferred to the main map.

OPUC is designed for use with tiles rather than counters, so that the details side can face the owning player and the opponent only sees a blank tile – they know something is there but not what.

Most scenarios will also give each side a number of Dummy blocks, which they can place in order to try and deceive the enemy. They should be moved in play as though they were ordinary units.

The Section 5 on ISR defines both how dummies are revealed, and how a player can reveal the detail side of an opponent tile.

There is an Introductory Scenario for OPUC which uses the SE corner of the main Tooru's Fire map. A dedicated map for this is available with physically bigger hexes and which integrates the BUA boards.

2. GAME AND TURN OVERVIEW

2.1 Initiative

The Attacker normally has initiative for Turn 1. Thereafter both sides roll dice, and may be able to add or subtract a DM from CP Actions in the previous turn, and the winner has initiative. In the event of a draw there is no change.

The player with initiative can decide who goes first in each phase.

2.2 Turn Sequence

The full turn sequence is:

- Decide Initiative
- Update Environment
  - Weather
  - Air/Sea/Flanks Situation
- Generate Assets (A=B)
  - Command Points (CP)
  - Log Points (LP)
  - Deep ISR
  - Deep Fires
  - Local Fire Missions
- CP Actions (ABA)
- ISR (AB)
- Engineers (Start & Complete) (A=B)
- Deep Fires (ABA)
- Movement, Close-ISR & Combat (AB*)
- Civil Effects Check & Movement
- End of Turn Actions (see ??)

Note:

- AB means one player does whole sub-phase, then second, not simultaneous
- AB* means use AB by default, but if willing to track which units have been activated you could use ABA by mutual consent.
- A=B means actions can be done simultaneously. If in doubt treat as AB.
- ABA means one player does one action (e.g. spend CP, do a Fire Mission), the other player, then first player and so on.

2.3 Air, Naval and Flank Situation

These rolls reflect the environment within which the Corps Commander is operating but which they are unable to directly effect.

At the start of each turn roll for the Air, Naval and Flank Situation. Roll a D6 for each and:

- On 1 or 2 move towards Blue
- On 3 or 4 no change
- On 5 or 6 move towards Red.

The scenario may define DMs for first or other turns. Once a situation reaches the extreme left or right box then (i.e. full Supremacy) it remains at that level for the rest of the game and there is no need to roll the dice anymore for that domain.

The situation levels are: (for all domains)

NATO Supremacy
NATO Superiority
Contested/Equality
Russia Superiority
Russia Supremacy

Air levels will mainly affect Ground Attack sorties and ISR. Naval levels will mainly affect the ability to use ports at Supply Points (SPs) and for reinforcement/amphibious operations. Flank levels will mainly affect supply and reinforcements.

Not all scenarios will use all three environments.

2.4 Weather

The scenario will define the month or season in which the action takes place. If not defined I the scenario throw a D6 for the initial weather and place the appropriate counter on the Game Dashboard, as this may have an effect on ISR. Each turn roll in the same way as for the other environment variables to see if the weather moves up or down the chart, and update the counter.

If it snows place the Snow marker on the #1 spot. For each successive Snow move up to 2 then 3. Once at 3 snow is assumed deep enough to effect operations and so all units can only move 1 hex. Any rain resets the Snow track to zero. The scenario may also define a point at which rivers and even lakes ice over.

Optional: Weather forecasting is pretty good now so you could give the players pre-rolled weather for up to, say, 3 days out (or even longer). Optionally you could then roll each turn just to see if there is a variation against each turn's expected value.

2.5 Player Objectives and Victory Conditions

OPUC is a scenario based game, and so Player Objectives and Victory Conditions will be defined by the scenario.

Victory is usually achieved by one or more of:

- Occupying certain BUAs within a certain amount of time;
- Destroying a certain percentage of the enemy force;
- Inflicting sufficient demoralisation that the enemy stops fighting; or
- Have the enemy suffer so much adverse opinion that they stop fighting.

2.6 End of Turn Actions

At the end of each turn do the following:

- Remove the following counters from the map: NEUTRALISATION, TAC EW, CEC, INTERDICTED;
- Remove ED/BD counters that aren't marked BUSY or BRIDGE/FERRY.
- Remove the LOG/CP/ISR/Fires counters from their tracks.

3. COMMAND AND CONTROL

3.1 Command Points (CP)

Command Points (CP) represent a Divisional or Corps commander attention and ability to get things done, backed up by (or limited by) the ability of their staff.

It is assumed that the basic planning and execution loop of their HQ operates without needing any specific intervention to control most of the fight, and the Bde and Bn HQs below them. CPs only reflect activities above and beyond the normal.

CPs are used for a variety of tasks shown on the player Dashboards, such as:

- Co-ordinating attacks between Bdes and with allies.
- Planning operations above Brigade
- Enhancing ISR activity
- Assisting with LOG issues
- Using EW
- Evacuating civilians
- Controlling civilian movement

3.2 CP Generation

The scenario will define how many Command Points (CP) each side gets each turn. This will have a random element and may be affected by enemy action.

The default allocation of CPs is shown below.

Blue	Red
Count 1 per Bde in force Subtract 3 Adjust for en action	Count 1 per Bde in force Subtract 6 Adjust for en action

CP can be reduced to zero by enemy action, but otherwise has a minimum of 1.

CPs *cannot* be saved and carried across between turns.

CPs can either be tracked using a counter on the generic tracker, or using suitable chits or blocks. Having a number of chits/blocks equal to your CP which you can then place on the CP actions you want works well.

CP base value is not recalculated during the game as it is designed to reflect the size of the Corps HQ.

> **Design Note:** In earlier versions of the game there was also a D6 roll added to the (adjusted) base CP number, but since most CP uses already have a random success element this was thought to be double counting, and players found it a fiddly action!

3.3 CP Usage

The ways in which CPs can be used are shown on the player Dashboard. Note that these are not necessarily symmetrical.

Most actions happen immediately, but some may happen later in the turn (e.g. ISR reroll), or

even at the start of next turn (e.g. +1 INIT). For these delayed actions take the relevant cards and put them on your dashboard ready for later use. Where cards to be played next turn have a roll for success or impact this roll should be made *when the card is played next turn*, not when the card is bought or placed.

Unless explicitly stated otherwise, counters and cards are lost if not spent in the turn..

You cannot carry CPs over between turns.

Optional: Rather than use the action list you can use a deck of Action Cards if players prefer that model. I find it can slow selection with some players.

The Action List is shaded to show which actions are available in all scenarios (unshaded) and which are not available in the Introductory Scenario (shaded). Scenario rules may add further filters. Action cards also show whether an action is available in the Introductory Scenario.

3.4 Division/Corps Planning

Design Note: Ultimately I'd like to find a way to incorporate planning times for Div/Corps operations into the rules but finding hard current data is hard, and would that translate to battle conditions any way. Splitting between Hasty and Deliberate attack is a first step, and allow PLAN modifiers further emphasises that Corps need to plan operations, and that doing other activities during that may be less feasible.

This section can be ignored for any Introductory Scenarios. Do not apply any penalties for mixed Bde/Regt/Div combats.

CP may be spent at the start of a turn to buy PLAN cards, which may then be used as +1DM in Deliberate Attacks later in the turn. The following apply to their use:

- The cards must be bought at the start of the turn.
- The attack must involve more that one brigade, and at least two bn from each brigade.
- All target hexes must be within 4 hex of each other.
- Each card provides a +1DM in a target hex.
- Brigade/Allied co-operation cards must also be bought to avoid the –'ve DM if using a mixed force (one CP paid for each unit beyond one).
- Cards may NOT be carried over to the next turn.

3.5 Activation

In the main Movement and Combat Phase the player with Initiative decides who will be the First player, and who will be the Second Player. The First Player then activates all their units, then the Second Player activates all theirs, although this may be varied by the scenario. A unit may only activate once and must complete all its actions (except where involving attacks) before another unit activates. Units stacked may activate together, and may drop off units but not acquire units.

It is recommended that units are activated North to South unless a player has a specific reason to do otherwise.

Unit activation (i.e. its ability to move, fight etc) is automatic.

4. LOGISTICS

4.1 Logistics points (LOG)

A key part of the battle at Division/Corps level is the logistical battle. Bdes and Bns can be largely trusted to get on with the fight, but they need to be supplied. Whilst logistics is a key part of OPUC it is *not* a logistics wargame, and some quite a bit of abstraction has been used in order to make it playable. The units of

logistics (1 LOG) is roughly equivalent to 100 NATO pallets (or 20x 8t trucks).

LOGs are consumed by units in combat, and a few other situations as detailed below. Note that units may start the game with their own LP allocation to represent organic supplies. These cannot to moved to another unit.

Logistics is handled differently for artillery where other factors come into play, see below, so LOG effectively represents infantry and armour Combat Supplies (CSUPs) only.

Logistics are *not* played for Day 1, partly to reflect organic stocks and partly so that players can get to grips with core mechanics before also addressing logistics.

Design Note: This is unrealistic for units which don't engage until later turns, but otherwise you'd need a unit rosta and track the first day of each unit in combat. Feel free to do that if you want to!

It is suggested that Logistics is played from Turn 1 in the Introductory Scenarios in order to make players familiar with the mechanic.

4.2 Log Point (LOG) Generation

The scenario will define how many Log Points (LP) each side gets each turn. This will have a random element and may be affected by Capability Cards (CCs).

The default is calculated by (CSUPS only):

- Sum Tank Bn x 1 + Other Bn x 0.4
- Subtract 3
- Add D6 each turn

Note that the base value is calculated at the start of the game and does not reduce as casualties are taken.

Enemy Fires and CPs may also have an adverse effect on LOG available.

LOG base value should be recalculated at the start of every night turn to reflect changes in deployed (and destroyed) troops.

Design Note: The random element has been kept here as there are no further random factors in LOG use.

4.3 Lines of Supply & Supply Dumps (SDs)

The scenario will define where the lines of supply enter the board for each side. These should be marked by a Supply Dump (SD) counter. This SD is always in supply unless otherwise stated in the scenario (e.g. as a result of Flank or Sea action).

Any unit (or SD) that is within 2 hex of an MSR or SD, which connects to an in-supply SD via a sensible (i.e. not circuitous) and unblocked MSR route is deemed to be IN SUPPLY. An MSR can be blocked by:

- Being in an enemy ZOC.
- Having an INTERDICTION counter placed on it.
- Having 2 or more DPs on a single segment – a segment being from BUA to BUA (including villages).

For operations beyond the MSRs, a player may build new SDs at the cost shown on the PAC/QRS. The SD must be placed within 2 hex of an MSR or other SD.

Rail and ports are not used in the Introductory Scenario.

4.4 Rail Supply

The rail network may be used by either side to augment the supply network, but may only be accessed through Railheads (Rhds). Railheads are assumed to exist in every BUA that the railway passes through. Additional Railheads may be built.

A side may only use the railway for supply if it connects to one of their own SDs from a railhead by the normal criteria.

The railway may be Interdicted as for an MSR, but the Interdiction is permanent until fixed.

4.5 Port Supply

Ports may only be used as SDs by the side which has Maritime Supremacy. The Port must also be behind their FLOT. A port is in permanent supply whilst these criteria are met.

Ports may be interdicted, and like Railways the interdiction is permanent until fixed.

4.6 LOG Costs

LOG costs are shown below.

LOGS	Rural Def	Urban Def	Rural Att.	Urban Att.	Tracked Mov>2
ArmdRecce	0	1	1	2	
Armd Regt	1	2	1	3	1
ArmdInf	1	3	1	3	
MechInf	1	2	1	2	
Inf	0	1	1	2	

Modified by:

- +1LOG if 2-5 hex beyond an MSR or Railhead
- Any unit beyond 5 hex of an MSR or Railhead is Out of Supply, unless otherwise specified in the scenario.

Note that:

- For wheeled units movement is always free;
- Tracked units only pay cost when moving more than 2 hexes in a turn;
- Battlegroups with a mix of troops types always pay the highest cost;
- MechInf is Armoured & Wheeled;

4.7 Sub-units

Units which have been broken down into subunits pay any LOG cost once when a sub-unit incurs cost. It only pays again (the difference) if a higher cost is then incurred.

4.8 Dumping Stocks

Each turn a player may place upto 4 LOG (total) in BUA hexes or SDs to prepare for future operations through a Command Action. If the zone/SD is taken by the enemy then the stocks are lost, and cannot be used by the enemy. CP actions will define how many dumping actions a player may take each turn.

5. ISR ACTIVITIES

5.1 Unit States

A unit in OPUC has one of two states:

- HIDDEN – its details side faces the owner;
- REVEALED – it is placed face up, so both sides can see the detail; and

When revealing or hiding units make sure you keep the orientation correct so that the current strength/Combat Factor is either at the top of the block (HIDDEN) or on the North side of the block (REVEALED).

An element automatically REVEALS when it assaults. It is also revealed when it is assaulted, but gets the HIDDEN DM in the initial round of combat.

When Artillery fires it also automatically REVEALS.

Artillery and Engineers HIDE when they move and are not within an enemy ZOC.

Option: By mutual agreement all units can HIDE when moved and not in an enemy ZOC.

5.2 Dummys

The scenario will define how many DUMMYS each side gets to help deceive the other side. By default the allocation is:

- Attacker – 1:4 of combat elements (1:6 for quicker game);
- Defender – 1:3 of combat elements (1:4 for quicker game).

5.3 Deep ISR (D-ISR) (ABA)

Deep ISR points (D-ISR) reflects the ability of a commander to look beyond the Forward Line of Enemy Troops (FLET). The default allocation is shown below, but may be varied by scenario. Note that although measured per Bde these are assumed to be Div/Corps assets.

Dice Rolled: Deep-ISR
1 per Bde (c.3bn) (inc arty), + 1 per dedicated Recce Bn -25% if overcast -50% if rain/snow/fog -25% if night -25% if NOT air supr/supm

Note:
1. Bde must have at least 1 elm on the main map.
2.Sum percentages and then apply to the number of dice (MAX 75%). Round up.

D-ISR can be used against anything (including reinforcement tracks).

Roll the relevant number of dice and then apply them to any enemy units, detecting according to the detection table in Section 5.5 *after rolling*.

Any roll of 1 results in a *permanent* loss of a D-ISR point.

ISR base value should be recalculated at the start of every night turn to reflect changes in deployed (and destroyed) troops.

If you have the ISR Re-Roll Command Action card this is cannot be played on a dice which rolled 1, and for best effect should be played *after* any other rerolls.

Design Note: The random element has been removed here, as with CPs, as each ISR dice has its own random roll.

Optional Rule: Although it will slow play, instead of rolling all the ISR dice and then assigning to targets you can instead assign dice to targets and then roll them. Assigning more than one dice to a target is allowed, but you can't start moving dice around as earlier rolls fail or succeed. This is more realistic but slower.

5.4 Close ISR (C-ISR)

Close ISR (C-ISR) is the ability for troops on the ground at Bn level and below to detect what is in front of them, using organic assets such as OPs, patrols, electro-optics, radar and UxVs.

During the ISR Phase any enemy unit adjacent to one of your units (including dummys) is UNHIDDEN. In BUAs the unit must be in an adjacent zone unless in the outer zone of the BUA in which case it can be detected from a neighbouring hex (check the hex node dot on the edge of the BUA tile).

Optional Rule: Rather than auto-detecting you can agree to make a standard D-ISR roll to detect neighbouring units.

During the Movement and Combat phase, as soon as any HIDDEN block becomes adjacent to an enemy block both sides roll for detection using the standard ISR table – and again rerolling for 3/4/5. Any roll of 1 means that the unit cannot do another ISR task into another neighbouring hex. Note that you roll from hex to hex, not unit to unit or unit to hex.

Looking into a BUA only the outer zones can be examined, and within a BUA only adjacent zones. However, from inside a BUA a unit can detect out to any adjacent hexes as long as there are not any intervening enemy units.

Dice are rolled once for each target hex/zone. If detection is successful all blocks in a hex/zone are UNHIDDEN.

DUMMY blocks are automatically revealed as otherwise trying to hide their nature is too hard (e.g. making a fake roll and failing it!).

The number of dice rolled is:

Dice Rolled: Close-ISR
1 per block -25% if rain/snow/fog -25% if night

Note: Sum percentages and then apply to the number of dice. Round up.

A failed Close-ISR check can be repeated the following turn if still adjacent.

5.5 Detection Table

For each ISR dice rolled you can then UNHIDE all units in a hex/zone as follows:

For Close ISR only, the following DMs apply:

- Night: -1 DM;
- Dedicated Recce Unit: +1 DM.

Result	D6
Lose 1 permanent ISR if Deep Stop detect for unit if Close.	1
No detection	2
No detection	3r
UNHIDE if non-wood or PV0	4r
UNHIDE if wood or PV1.	5r
UNHIDE if PV2+	6

For results marked "r" you may reroll the dice if applying against a hex/zone with more than one unit. You may reroll it once for each unit beyond 1 in the hex/zone.

All blocks in hex are revealed if successful.

Design Note: In v0.2 there was a DM for number of units in a hex/zone, but this was too complicated. Can now reroll a dice (not 1s) if applying it to an area with >1 blocks, rerolling once per additional block. This means players may game the system a bit and that most 2s and 3s get rerolled, but it's a lot simpler.

6. ENGINEERS (Start & Complete) (A=B)

See Section 10 for detail on engineering tasks.

7. FIRES

There are two types of Fires, Deep and Local although they share some of the same mechanisms.

Note that where artillery assets are integral to, or are assigned to a combat battalion (e.g. with most Russian units) then they have been included within the unit's Combat Factor.

Most Deep Fires assets are not represented on the map as they are assumed to be well behind operational area. Local Fires are represented on the map as blocks unless using the Abstracted model (see below). Local Fires are range restricted, whereas Deep Fires typically aren't.

7.1 Deep Fires (ABA)

7.1.1 Allocation

Deep Fires come from four different sources, but are treated as a single number/type within OPUC for simplicity:

Ground Attack	Powerful, but availability variable
I/SRBMs	Relatively few in number
MLRS	May be range limited
Large UAVs	Most liable to intercept

The scenario will define how many Deep Fires missions are available to each side, with Air Strikes initially differentiated as they have different factors covering their availability.

7.1.2 Ground Attack

The scenario sets a base for the number of Ground Attack sorties available each turn, but this will then be modified by weather and the air superiority situation.

Designer's Note: There may be a case for separating Ground Attack out from other fires so as to better model Air Defence and impact etc, but keeping things simple for now.

Also Air Defence in general, including anti-missile is not explicitly modelled so as to keep things simple and keep all Fires the same, but could be abstracted by giving the side facing the better AD a lower number of GA sorties.

7.1.3 Assignment

All Deep Fires missions, including air strikes, are of the same type, so just total the number of missions you have, adjust the track, and then distribute them against targets.

7.1.4 Fire Missions

The Fires PAC shows the different type of Deep Fires missions and rolls required to hit (plus any additional DMs) and their effect.

Any strikes against a BUA PV2+ zone should also place a Civil Effects Check (CEC) marker on the zone for later resolution.

Note that fire against units on the map is achieved through the Bombardment mission.

Fire against enemy DAGs (or BAGs/RAGs) is achieved through the Counter Battery mission. There are also separate Counter Fires and Counter Air missions to attack the enemy's Deep Fires capability.

As with Command Actions I usually find that Deep Fire Mission selection is faster is using a list, but for those who prefer cards a set of cards is also available.

7.1.5 Deep Fires Restrictions

Unless otherwise specified by a scenario, Deep Fires cannot be conducted against a hex of BUA that is contested (ie. has forces from both sides present).

7.2 Local Fires (AB or ABA)

Local Fires can be implemented in 3 different ways, depending on the granularity you want:

- As an Abstracted Artillery Group (e.g. Division Artillery Group – DAG, or Brigade/Regiment Artillery Group - BAG/RAG).
- As an on-map DAG, RAG or BAG,
- As on map artillery Regiments.

Note that for the rest of the rules where DAG is used it also refers to RAG/BAG – exact nature will depend on the scenario orbat.

7.2.1 Abstracted Artillery Group

Place each artillery unit block in the scenario orbat into a single DAG box (treat all 3 sections of the box as part of the same one if required). The block shows round the edge how many Fire Missions it generates per turn.

> **Designer's Note:** In reality losses would probably mean the same number of fire missions but at lower weight, but easier to keep weight consistent and change number given the way I've written the rules!

These Fire Missions are used to support combats only – in attack or defence. Every Fire Mission costs 1 LOG. A maximum of 3 Fire Missions may be used per friendly unit involved in a combat. Place a Fire Mission counter(s) on the supported combat.

Each Fire Mission gives +1 to the combat. Place a CEC for each Fire Mission used in a PV2+ BUA zone.

Successful enemy Counter-Battery fire DEGRADES 1 block – the choice of which is immaterial given the abstraction.

7.2.2 On-Map Artillery Group

This is the same as for Abstracted Artillery Group with the following changes:

- The DAG is represented by an on-map block. Each DAG will typically have 2 DAG dummys (see scenario).
- More than 1 DAG may be present on the map – as defined by the scenario.
- Each Artillery unit block is placed in a specific DAG and may not move from that DAG.
- All Fire Missions must be within the hex range stated on the DAG block.
- DAGs move as normal units.
- The enemy can specify the area of any Counter Battery fire, and the player must DEGRADE units in the closest DAG.
- If a DAG is assaulted and fails to evade it is lost, along with all its constituent units.

7.2.3 On Map Artillery Regiments

Each Artillery Regiment is shown as a block on the map, and is moved and HIDDEN/UNHIDDEN as with any other unit. Each block shows in a green shaded number the range in hexes of the unit.

Local Fires are Fires conducted by on-map artillery units against other on-map units or infrastructure. Either Player A can do all theirs, then Player B, or players can alternate one block at a time. Local Fires should be done after all Deep Fires have been completed.

The firing unit must be in range of the target hex, whether a unit or infrastructure.

> By default the player with initiative goes first on Fires, fires all theirs, and then the other player fires theirs.
>
> **Optional Rule:** You could alternate by firing unit/fire mission. FIRED counters are provided to keep track of this. Again Initiative Player starts and then players alternate fire mission by fire mission.
>
> You could allow the player with initiative to choose who goes first, as there may be some benefit to making the other player first each time and then hitting them with counter-battery.

7.2.3.1 Moving and Firing

An artillery unit may either:

- Fire during the Local Fires phase, and then move (or not) during the Fire & Manoeuvre Phase; or
- Move then Fire during the Fire & Manoeuvre Phase.

For avoidance of doubt you can mark all fired units as FIRED – units can only fire once per turn.

Artillery UNHIDES when it Fires, but at the end of the Local Fires phase REHIDE all artillery s it is assumed that it has shooted and scooted.

7.2.3.2 Local Fires vs Units

A Fires unit must in IN SUPPLY and you must spend 1LOG each time a Fires unit fires.

Does this mean need separate arty blocks for DAG units and on map units as one uses edge numbers for Fire Missions, the other for CF? or combine on one block?

Roll CF+D6+DMs per unit.

Situation	DM	Situation	DM
Hidden	-1	AC1	-1
Neutralised	-1	PV2/Dug In/AC2	-2
		PV3/AC3	-3
		Per Strongpoint	-1
		Unprotected	+2
		Small unit tgt	-2

Nat1=Miss, Nat6=min NEUTRALISE+DEGRADE, else:

- NEUTRALISE on 8+
- DEGRADE on 10-13
- 2xDEGRADE 14+

You can't remove the last step on a unit by Fires.

Optional Rule: To better reflect some of the very long drawn out urban battles we are seeing in the Ukraine, when in PV2+ a defender can save each DEGRADE by rolling <= PV (or another agreed value).

Place Civil Effects Check (CEC) markers (x2 for devasting wpns) if vs BUA and resolve in the Civilian phase.

For each DP present roll D6 for *each* Fire Mission (twice for GA) and on 6+ civilian casualties caused, 5AO to both sides, and DP remains as group is larger than the casualties.

Design Note: A certain amount of trust/amnesia is needed when firing at HIDDEN units as the firer won't know their AC or size, so should apply DMs as best they can and leave the block owner to then tell them the net result, but *not* the final adjusted die roll.

7.2.3.3 Local Fires vs Infrastructure

Use the same table as for Deep Fires, but only those in italics may be targeted, and must be within range.

8. FIRE AND MOVEMENT (AB)

During the Fire and Movement Phase the player with initiative decides who goes first and who goes second. The first player then activates all their units then the second activates all theirs (although this may be varied by scenario). It is recommended to work from North to South unless there is a specific reason not to.

When activated a unit may Assault and/or Move in any order (but all movement must be taken in one go). Artillery units which did not fire during the Local Fires phase may also Fire, and any Artillery unit may Move, including as part of a stack.

Remember that whenever two units from opposing sides, one of which is HIDDEN, become adjacent both sides should immediately make Close ISR checks as appropriate.

8.1 Hex Movement

Each unit has a Movement Allowance (MA), based on whether it is predominantly Wheeled or Tracked. Each hex then has a cost to enter it. A unit must be able to pay the full cost to enter, but may always move one hex.

	MA	Clear/ UrbZone	Wood	Roug`h	HastyAtk	MSR*
Whd	6	1	2	3	1	+2hex
Trk	4	1	2	2	1	+1hex

*The MSR bonus is only if the whole move is on an MSR. There must also be no enemy unit within 2 hexes of the MSR, except at the end of the move. The bonus is not available if there are 2 or more DPs on an MSR segment (between BUAs/villages).

Note also the movement penalties when crossing rivers shown on the main map. These apply whether crossing by bridge, ferry or swimming.

A NEUTRALISED unit must pay 2MP before making any move, and may not move towards an enemy unit.

Apart from BUAs, a unit may only enter a hex occupied by an enemy unit through combat.

The MP cost for a Hasty Attack (i.e. the unit has moved before making the attack) is fixed, regardless of the nature of the terrain it is attacking. A Deliberate Attack has no MP cost as it must be the first action that the unit takes in a turn, and any subsequent movement is dictated by the follow-up test.

8.2 LOG and Movement

Generally there is no LOG cost to movement, and POL amounts are considerably less than ammunition amounts.

The exceptions to this are:

- Tracked units which wish to spend more that 2MP in a turn must pay 1LOG for the turn's move (*not* per hex or per MP).

8.3 BUA Movement

A BUA unoccupied by the enemy is just treated as a clear hex. If stopping in the BUA the unit need not decide which zone it is in until it becomes significant.

When entering an occupied BUA a unit may move directly to a zone adjacent to an enemy unit and make a Hasty Attack regardless of any movement points left, or a Deliberate Attack if it is moving from an adjacent hex.

Each turn (*not* turn just arrived) a unit may move from one BUA zone to another and no more. This move may be lateral around the centre, or radial to/from the centre. A unit may only enter a zone occupied by an enemy unit through combat.

A unit in the outer ring may spend 1 MP to move from the outer ring and onto a hex adjacent to the BUA and then move as normal.

8.4 Zone of Control

All units exert a Zone of Control (ZOC) into neighbouring hexes, except where blocked by an impassable (to them) hex side. ZOC do not extend into a BUA, or from BUA to BUA zones, but do extend from a unit in a BUA to the surrounding hexes.

Once a ZOC is entered the unit must either attack or end its turn. In the next turn it has the following options:

- Directly exit the ZOC away from the enemy;

- Attack the enemy;
- Move a hex within the ZOC.
- Exit the ZOC other than back along its LOC if it has a CF at least *twice* that of the enemy unit(s).

8.5 Rivers

The map only shows rivers which are a barrier to military vehicles. River classifications are based on their ability to be crossed by AVLBs/assault bridging, pontoon bridges or ferries. Section 10 describes the detail of river crossing, but assuming that suitable engineering tasks have been completed rivers affect movement as follows:

Medium River (10m – 49m)	+1MP by bridge +1MP swim
Large River (50m – 249m)	+2MP by pontoon +2MP swim
Major River (250m+)	+3MP by ferry +3MP swim
Lake	1 unit per turn

8.6 Break-Down & Reform

Scenarios may allow certain elements (e.g. Recce Bns) to break down into sub-units (e.g. Recce Coys). This has zero cost but the element may not be in contact (i.e. just had combat or about to) with the enemy. The same rule applies to reforming, no sub-unit must be in contact. For instance, an Ajax 4-3-2-1 Recce Regt can break down into three 2-1-0-0 Recce Sqns. Scenario will define the maximum separation allowed between sub-units (2 hex by default – i.e. 1 empty hex between). If any sub-unit is non-adjacent then any LOG costs for the unit are increased, see Section 4.7.

9. ASSAULTS

Assaults take place from one hex/BUA zone into an adjacent one. Attacks are of two types:

- **Hasty:** The unit has moved before the attack; and
- **Deliberate:** The whole of the unit's turn is dedicated to the attack.

There is no need to pay the cost to move into the target hex, but a Hasty Attack pays 1MP (or as noted in scenario), regardless of the terrain to reflect the time taken to organise the attack.

9.1 Evasion

A unit may try and evade an attack. Evasion is automatic if the attacker is less than battalion strength. Otherwise roll greater than 1+ Number of Edges being attacked over. Artillery and Engineer units with no supporting combat troops must roll 2+#Edges.

Evasion is D3 hexes, and the attacker may occupy the original hex but not follow up.

Evasion is not possible in a BUA zone.

9.2 Combat

Combat is simultaneous. Aggregate the CFs for all units on each side. Where DMs differ attackers takes worst, defender takes best.

Roll CF+D6+DMs (+1D = roll extra dice, etc).

Maximum of 2 Bn across BUA zone bdry, 3 Bn per hex edge.

Attacker	DM	Defender	DM	Both	DM
Hasty Attack	-2	Neutralised	-1	LowSup	-1
vs Rural	0	In Rural	+1D	OOS	-3
vs Woods/Rh	-1	In Wood	+2D!	vs AC1*	-1
vs PV1	-1	In PV1	+2D!	vs AC2*	-2
vs PV2/Dug-In	-2	In PV2	+3D!	vs AC3	-3
vs PV3	-3	In PV3	+3D!	Vs Tac EW	-1
vs Rubble	-1				
Vs ea. s/point	-1				
vs Small Unit	+2			>1 Fmn!!	-1
Pincer bonus	+1			>1 Nation!!	-2
En Hidden	-1			ea. Plan	+1
vs mines, no ED	-3	Mines, no EP	+3		
vs mines,, ED	-1	Mines, en EP	+1		
Swim Asslt	-3	Swim Asslt	+3		
Bridge Asslt	-2	Bridge Asslt	+2		

!! Fmn=Bde for NATO. Regt/Bde for RUS. Cancelled by 1 or 2 CPs.

Nat1=Miss, Nat6=min DEGRADE, else:

DEGRADE on 6+, 2xDEGRADE on 10+.

Add CEC marker per 4 units involved, resolve at end of turn.

The following table explains the more obtuse DMs:

Strongpoints (SP)	There can be upto BUA Size/DP in each PV2+ zone. Count -1DM per strongpoint (note this is different from Fires when DM is for any strongpoint).
Pincer bonus	Gained if have at least 1 empty hex/zone separating two attacking units. Gained by both.
Vs Mines, no ED (and Mines, no ED)	If target hex/zone has a Mines counter, but no Engineering Detachment (ED) has been assigned to attacking troops in (in their zone/hex) to clear them.
Vs Mines, ED (and Mines, en ED)	If target hex/zone has a Mines counter, and Engineering Detachment has been assigned to attacking troops in (in their zone/hex) to clear them.
Swim Assault	Assault being led by swimming AFVs
Bridge Assault	Assault being made over bridge (civil or military)
Low Supply	Some LOG assigned but not to full cost
Out of Supply (OOS)	No LOG assigned, or unit is >5 hex from MSR or SD.
AC1/AC2*	May not be claimed if in PV2+ BUA
Small Unit (!)	Unit of Coy/Sqn strength. May have a maximum of +1D in defence.
vs Tac EW	If within range and arc of a tactical jammer then apply a -1 DM (max) per unit
>1 Formation (Fmn)!!	More than one Formation (Bde or Regt) involved in the combat. May offset by a Co-ord card bought by CP.
>1 Nation!!	More than one Nation involved in the combat.
Ea. Plan	Upto 2x +1 PLAN cards bought with CPs can be assigned to *all* units in a divisional combat if a) it is a deliberate attack, b) any co-ord cost has been paid, c) it involves units from more than 1 bde, and d) there is no more than 2 hex separation (i.e. one empty hex) between units involved.

9.3 Retreat

Retreat test is made immediately after an attack if a unit has suffered 2 or more DEGRADE.

Roll D6. DM+3 in PV2+.

Leg Inf max 1 hex retreat.

1	3 hex retreat	2	2 hex retreat	3	1 hex retreat
4	1 hex & f/up	5	Stand	6	Stand

If in BUA count zones as hexes whilst retreating in BUA.

9.4 Follow-Up

Attacking units *may* move into enemy vacated hex for free.

If defender destroyed or retreated then attacker can follow-up.

Roll D6-Step Loss. If > 4 can follow-up. Can move upto 2 hex, or 1 hex plus Hasty Attack regardless of MA left.

Any artillery which supported the attack through Local Fires can have the free move to occupy the vacated hex, but cannot follow-up further.

9.5 DP Deaths

If any combat is from or into a hex containing Displaced Persons then roll a D6 for each DP and on a 6+ civilian deaths have been cause which add 5AO *to both sides*. Note that the DP marker stays in place as the deaths would likely be a small proportion of the DP group.

9.6 Multiple Unit Assaults

Manage assaults target hex by target hex.

Attacker can attack with as many units as allowed - maximum of 2 Bn across BUA zone bdry, 3 Bn per hex edge. Defender must defend with all units in hex.

If an attacker is planning to only attack one hex and not attack enemy in an adjacent hex then….

9.7 Minefields

Minefield markers are usually placed in the same hex as the defending unit(s). If the attacker does not have an ED counter (one per assault, not per attaching unit) then there is a DM-2 on attacker and DM+2 on the defender. If the attacker does have an ED counter there is a DM-1 on attacker and DM+1 on defender.

Design Note: This is intended to represent the bunching in lanes making the attacker an easier target for the defender, and the attacker not being able to bring the same combat mass to bear on the enemy.

9.8 Contested River Crossings

9.8.1 Assault Crossings

If attacking across an unbridged river hex edge into an enemy occupied hex then the following apply:

- **Swim Assault:** Easy target and harder to attack, so -2 DM to attacker and +2DM to defender. Not allowed in BUA as banks assumed too high.
- And that's it?

If attacking across a bridged river hex (or in a BUA where it is assumed bridges exist unless explicitly blown using an Engineer action) then:

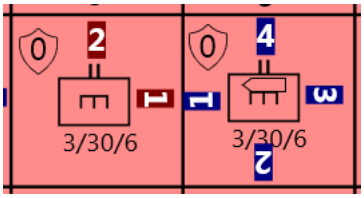
- **Swim Assault**: As above for rural, but not allowed in BUA.
- **Bridge Assault**: Just DM+1 to defender as easier to hit concentrated target, but attacker can still wield all firepower.

And vary by river width?

10. ENGINEERING TASKS

10.1 Engineering Units

For simplicity OPUC defines two types of engineering resource, the Combat Engineer Detachment (ED) (for most engineering tasks and equating to roughly a company/squadron) and Bridging Detachments (BD) (for bridging tasks, equating to roughly 8 vehicles/ferries or 50m of bridging). These are "hosted" by an on-table block which uses the numbers around the block to indicate how many EDs/BDs it can support (separate blocks for EDs and BDs). As a unit degrades it is rotated in the normal way – but the impact is a reduction in EDs/BDs.



10.2 Engineering Activity

To conduct an Engineering Activity during the Engineering Phase place a ED/BD marker (as appropriate):

- Within 2 hex of its parent block;
- If being placed in an enemy ZOC you must have a friendly unit in the same hex/zone.

A parent block cannot deploy more ED/BD than it can currently support. EDs/BDs are generic and not named to a unit so you need to keep a mental note of which its parent is (or mark with your own code/colouring).

Designer's Note: Note that the placement of Engineering Task/ ED/BD counters is very visible, but this is probably acceptable given level of generic ISR, the open nature of most engineering operations and the high priority of engineering kit.

Engineering activities take one of three periods, as defined and marked below:

Instant/ In Turn	The engineering activity takes minutes or a	Place ED/BD in Engineering phase. No Busy marker. Action is

	couple of hours as part of combat operations	complete that turn for use by others in that turn. Remove at end of turn.
1 Turn	The activity takes a whole turn.	Place ED/BD in Engineering phase. Add Busy marker. Remove Busy marker and ED/BD marker in next Engineering Phase, and action is now complete and ready for use.
>1 Turn	The activity takes more than 1 turn.	Place ED/BD in Engineering phase. Add Busy marker, and another one each Engrs Phase til #Busy counters = duration at the start of an Engrs Phase. Remove Busy markers and ED/BD marker and action is now complete and ready for use.

Note that if NEUTRALISED one Busy Marker is removed. For in-turn tasks NEUTRALISED means that the task isn't accomplished that turn.

EDs/BDs count as normal sized units for Fires purposes.

If an ED/BD is assaulted on its own in a hex/zone then it is immediately lost and the parent block DEGRADED.

If an ED/BD is assaulted in a hex/zone with other friendly units then it shared any evasion, retreat or other impact (it may also evade on its own). If any friendly unit is DEGRADED the ED/BD is lost and the parent block DEGRADED.

10.3 Defence Works/Protection

Scenarios will define how many Strongpoints (SP) are available to be deployed pre-game. Strongpoints only apply in BUA zones of PV2+. You may have as many SPs as the DP value (i.e. size) on the BUA. Each SP can provide a +1 DM to one defending inf bn or non-tank only battlegroup, assigned at each combat, to a maximum of +2DM per bn.

Troops can dig-in and build strongpoints by themselves without Engineering support, but mark with Busy in the same way. Troops can only dig in in rural/rough/wooded terrain and the PV1 areas of BUAs.

For in-game tasks:

Build Strongpoint	1ED takes 1 Turn
Build Strongpoint	Bn takes 2 Turns
Dig In	Bn takes 1 Turn

Tank and arty positions currently ignored.

10.4 Counter-Mobility

10.4.1 Route Blocking

Route-blocking tasks are shown below:

Destroy River Bridge	1ED takes 1 Turn

In a BUA this would include all bridges over a river between zones.

10.4.2 Mine-Laying

Laying times for minefields per EP per hex (assuming mechanical support) are:

Lay minefield	2 Turns

Multiple EPs can be used to reduce times.

For each real minefield laid you can lay one dummy minefield – where/how?

Design Note: In UK Doctrine minefields are defined as Light (3 row), Medium (5 row) and Heavy (7 row). All typically have a depth of 800-1000m, and certainly more than 300m to make breaching difficult. For simplicity OPUC just has a single type, roughly in line with a Medium minefield.

10.4.3 Mine Field Effects

Any unit entering a minefield without engineering support takes CF6 Local Fires hit, with only Armour DMs applied.

10.5 Mobility

10.5.1 Rubble Clearance

Rubble can block MSRs so there is an incentive to clear it.

Clear D3 Rubble	1EP takes 1 Turn

10.5.2 Mine Reconnaissance

Since field engineering markers may be dummies engineering reconnaissance can be very valuable. Engineering works can be detected by normal ISR procedures, but dummy minefields can only be told from real minefields by Close ISR.

10.5.3 Mine Breaching

Within the context of LSCO mine breaching is only likely to be done by mechanical explosive means. The clearance would only be of ~8m wide lanes, with perhaps 4 breaches attempted to gain 2 usable lanes.

The actual clearance process itself is a matter of minutes, and requires 1ED, regardless of density.

Breach 1 hex minefield	1ED Instant

If out of contact or adjacent to an enemy unit treat as an in-turn action (although at risk of Fires).

If breaching a minefield in the same hex as an enemy unit (which is the required configuration for a unit to be properly protected by a minefield and to cover it with fire) the whole operation is:

- Assign ED to the assault (max 1) in the Engineering Phase
- DM-1 on attacker (to reflect difficulty in concentrating force despite lanes)
- DM+1 for defender (to reflect concentrated target)
- If enemy destroyed remove ED and minefield
- If enemy in place, roll D6 and on 4+ leave ED in place for next assault, else remove ED and degrade parent unit by 1.
- If forced to retreat remove ED and roll D6 and roll 5+ to avoid degrading parent unit by 1.

If assaulting a unit protected by a minefield without engineering support then apply DMs as shown in the QRS, namely:

- DM-2 on attacker (to reflect difficulty in concentrating force)
- DM+2 on defender (to reflect casualties from mines and covering fire)

10.6 Wet Gap Crossing

10.6.1 Water Features

Water features are defined as follows, based on typical AVLB and pontoon bridge spans. Small rivers are typically <10m and readily fordable by any tracked or cross-country vehicle.

Medium River	10-50m	Can cross with AVLB (incl combination) or MGB or swim (+1MP).
Large River	50m – 250m	Can cross with pontoons or swim (+2MP).
Major River/ Lake	250m+	Can only cross with ferries. (+3MP for Large River, 1 bn per turn for for Lake)

The crossing of each is as follows:

Medium River	In Turn action by an ED. Place ED and Bridge marker, and remove ED at end of turn.
Large River	In turn action by BD. Place BD and Bridge marker, and leave til recovered (instantaneous in Engineering Phase, but can't redeploy same turn).*
Major River/ Lake	In turn action by BD. Place BD and Ferry marker, and leave til recovered (instantaneous in

	Engineering Phase, but can't redeploy same turn). Maximum of 3xbn per turn river crossing. Maximum of 1 bn per turn for lake.

*Not worrying about actual river size and number of BPs that would really be needed.

The Bridges Deep Fire action (also possibly by local fires) can be used to destroy a bridge, pontoon or ferry site in which case a BD is lost, regardless of whether the BD is still there (reflecting loss of assets).

10.6.2 Swimming

Units capable of swimming (i.e. most Russian units), just pay extra MP to cross rivers as detailed in the table above.

Lakes.....

10.6.3 Assault Crossings

See Section 9.8 for contested river crossings.

10.7 BUAs

All Wet Gap crossing rules apply to crossing rivers in BUAs between BUA zones.

10.8 Targeting Engineers

10.8.1 Unit Blocks

Unit blocks can be targeted by Fires. If DEGRADED it reduces their ability to deploy EDs/BDs by 1 – but does not effect any currently deployed. If NEUTRALISED then all deployed EDs/BDs are also neutralised.

Engineer blocks may evade as for Arty (i.e. 2+ number of edges).

If an Engineer block is destroyed (i.e. down to 0 on its ED count) then it is removed and *all* of its EDs/BDs, with tasks left unfinished.

If an Engineer Block has to defend in combat it is treated as a CF2 unit.

10.8.2 EDs and BDs

EDs and BDs can be targeted by Fires. They count as Small Units. Any DEGRADE eliminates the ED/BD and DEGRADES the parent Engineer block. If NEUTRALISED then remove 1 BUSY marker and abandon any in-turn action.

Engineer ED/BDs may evade as for Arty (i.e. 2+ number of edges). If they evade they are just removed from the board s they are assumed to have recovered back to their parent unit. If they fail to evade they are destroyed and the parent Engineer block is DEGRADED by 1.

An ED/BD has no impact on combat, but if all friendly units in the hex are destroyed it is also destroyed and the parent unit DEGRADED. If a friendly unit withdraws the ED/BD is recovered to its parent unit.

A player may at any time in the Engineering Phase abandon an engineering task and recover a BD/ED back to its parents. EDs/BDs may not be placed or moved on the board independent of an engineering task.

11. CIVILIANS AND CIVIL EFFECTS

A key part of OPUC is that the campaign is being waged in and amongst a population. The scenario will define the extent to which urban evacuation has already begun before the actual wargame starts. Some generic values are given for guidance below.

11.1 Infrastructure

Each BUA has two infrastructure service measures – the availability of power, and the availability of water/sewerage management. Depending on the size of the BUA it may have 1, 2 or more boxes for each of these.

Utilities are typically lost from Fires or Combat, but can also be lost through CP actions, such as through sabotage and cyberattack.

Place an OFF or DESTROYED marker on each box as it is lost as detailed below. Once all of a utility is out it increases the chances of DPs, and also adds to AO.

CP actions can also be used to restore services.

11.2 Refugee Creation

Refugees arise either as a result of warfighting within their BUA, or as a result of warfighting in a neighbouring BUA (on the basis that they might be next), or from the loss of utilities. All assessment take place during the Civilian Response phase.

11.2.1 Starting Populations

Rather than have to populate each BUA with cubes representing the remaining civilian population that then become Displaced Persons (DP), which soon becomes quite unmanageable with the varied size of BUAs represented, each BUA is assigned a propensity to generate DPs based on the number of dice rolled for it. This may reduce as the battle wears on.

These base numbers reflect both the size of the pre-war population and depending on the road-to-war scenario and the location of the BUA relative to the potential front-line how many people may have already left the BUA. Scenarios may have more specific information.

Design Note: Populations have to be managed in a very abstract way in OPUC, so it's hard to say that 1 civilian cube = 500 to 1000 people, but for the more average towns that could be a good assumption.

11.2.2 Civil Effects Check

Civil Effects Check (CEC) markers are placed during the combat phases in response to the actions of both sides. At the end of the turn these are all then resolved as below.

11.2.3 Local Warfighting

Roll D6 per CEC marker to see if Rubble and/or DPs have been created.

DMs: BUA size DM, +1 per full utility loss. DPs stay in BUA until next turn. Place first in the zone under attack, then neighbouring zones clockwise, then outwards.

1-4	No effect Rubble in PV1+	2 5	No effect Rubble in PV2+	3 6+	Utility* Refugees

* Power first, then water, alternate. Once out then treat as Refugees.

If there is any Double then an Atrocity has occurred, add 5AO to the side which caused the damage – or assign randomly if a combat. Two atrocities are generated on a Triple etc.

Optional: To speed resolution of CECs you could pre-roll/generate a list of results and just work through them to resolve each of the CECs.

Optional Rule: Each *turn* that a DP is created in a BUA add a marker to the Evacuated box and reduce the number of dice rolled in future for DPs by 1, to a minimum of 1.

11.2.4 Neighbouring Warfighting

For each BUA adjacent and within 4 hex of any BUA under attack:

Roll the number of dice for BUA size, with DM+1 per utility out and DM+1 per rubble. DPs stay in BUA until next turn. Placement as before if important.

3-	Stay	4+	Leave

11.2.5 Infrastructure Attacks

Roll D6 for BUA size for any other BUA not yet checked which have completely lost at least 1 utility service. DM+1 per utility out and DM+1 per rubble.

5-	Stay	6+	Leave

11.3 DP Movement

Move each active DP block 2 hex on MSR, 1 hex off, generally towards the nearest MSR not towards the enemy, and then towards a regional capital, the capital or a friendly border (or as otherwise specified in the scenario). The DP is removed from play once one of these is reached. The scenario may have more explicit rules, particularly for DP who may be more likely to head towards RED not BLUE.

Once there are 2DP on an MSR segment (including villages) then:

- the MSR is not functional until the DP are removed or have moved on.
- The MSR ceases to provide a movement bonus.

11.4 DP and Fires

For each Fire Mission on a hex containing a DP roll D6 per Fire Mission, per DP, and on a 6+ the DP suffers casualties and causes a 5AO atrocity to both sides.

11.5 DPs and Combat

If there are 1 or more DP cubes in a non-BUA hex which is also subject to a combat then, according to the scenario, each side involved will do one of the following:

- Fight, but reduce CF by 25%.
- Fight at full strength, but take D3 AO for civilian casualties
- Fight at full strength ignoring any AO effects

(Needs to go on QRS and in Combat above)

11.6 DP Evacuation, Control and Camps

You can use CP actions to:

- Help evacuate a BUA. Place a cube/marker in the Evacuation box on the BUA and reduce any DP dice rolled by 1 per cube/marker, to a minimum of 1D. Note this could also be used maliciously by the enemy.
- Build a DP Camp. Place the DP Camp on an MSR no closer than 4 hex from the enemy.
- Move DPs into or towards a DP Camp (which removes them from the board). The DP is moved either into a camp if within 4 hexes, or 4 hexes along MSRs (2 if off MSR) towards the nearest camp.

For each DP Camp established you must pay 1 LOG to sustain it at the start of the turn. If not sustained take 5AO hits and roll on the Neighbouring Warfighting to table to see if any DP decide to go back on the road again.

11.7 BUA Sentiment

-> uprisings – not yet done

11.8 Rubble

Although only 1 rubble is required to impact combat DMs, and more than 1 has no further effect, cumulative rubble should be tracked for any victory conditions and post-game/USECT analysis.

If Rubble = DP Dice number then any MSR blocked and must be cleared through a CP and/or Engr action (see Section 10.5.1).

12. REINFORCEMENTS AND RECONSTITUTION

12.1 Reinforcements

The scenario will define, where, when and how any reinforcements arrive. On the turn they arrive they are placed on the map in the appropriate hex, and then activate and move/fight just like any other units that turn.

Note that loss of Superiority/Supremacy in Air, Sea and Flanks may limit or completely remove reinforcements as they have increasing problems in getting into theatre.

12.2 Reconstitution

To do

Affected by infra loss?

13. OTHER RULES

13.1 Rail, Ports and Airports

13.1.1 Rail

A railhead can be destroyed in the same way as a Supply Dump by a Deep Fire Mission.

A railway in a hex can also be destroyed by a Deep Fire Mission, which renders any downline railheads inoperative.

13.1.2 Ports

Ports are indicated by an anchor symbol. They can be used as a SUPPLY BASE only by the side which has Naval Supremacy.

Scenario rules may allow for naval/amphibious landings to be made at an enemy or disputed port, and for forces to be landed at a friendly port.

Ports can be destroyed in the same way as a Supply Dump in a Deep Fire Mission. Within the duration of most scenarios they cannot be repaired or rebuilt.

13.1.3 Airports/Airfields

Airports/airfield are indicated by a runway symbol. Normally they are too small and too little lift capacity is available to operate them as a SUPPLY BASE, but this may be varied in the scenario rules.

Scenario rules may allow for air landings to be made at an enemy or disputed airport, and for reinforcements to be landed at a friendly airport, but dependent on the air supremacy situation.

Fires may be used to render an airport inoperable, but it may then be repaired by an engineering task.

ANNEX A

OPEN DESIGN

As discussed in my research Note on Combat Factor (see wiki), trying to derive accurate combat factors, even homogenous ones, for modern combat when you have no access to classified information is problematic. The best approach appears to be to create an internally consistent model, publish it (so that others can change value if they have different opinions/better data) and check against some established relative combat factor norms and combat outcomes.

So this is the model I've used in OPUC.

14. Combat Factors

Units in OPUC only have a single combat value, regardless of whether in attack or defence, or against particular sorts of targets. It is a heterogenous value as it typically represents a mix of combat equipments.

Units are typically battalion sized.

Note that since OPUC is essentially a D6 based system 1 point of combat factor (or DM) equates to a 16.67% change in performance.

14.1 Base Value

The base value (i.e. full strength, average training/motivation) is given by:

- Count 1 per company
- +1 (total) if a support company (or companies have support platoons instead)
- +1 (total) if >2 coy equipped with 30mm+ IFVs, or tanks
- +2 if inf coy as part of a tk BG, or tk coy as part of a inf BG. BG must have 3+ coy.

14.2 Training/Equipment/Motivation

Base value can then be modified as follows:

- -1 if inferior training or morale or both
- +1 if superior training or morale or both
- -1 if inferior equipment
- +1 if superior equipment

14.3 Combat Steps

Units suffer degrades from combats or attacks. A battalion strength unit has 4 steps, a company strength unit may have 2-4 steps.

Step degradation is based on UK Staff Officer Handbook degradation levels as follows:

State	% Strength	Adjustment
Fresh	100%	100%
Fully Operational	85%-99%	92%
Substantially (& 2 step)	70%-84%	77%
Marginally Operational	50%-69%	60%
Not Operational	<50%	

Source: MIL STD 2525D referring to ADRP1-02.

For 4 step units the adjustment is applied to the base value to give the Combat Factor at each level. Always round up. So, for instance, a typical battalion with a base Combat Factor of 6 will have steps of:

- Full strength: 6
- 1 Degrade 6
- 2 Degrades 5
- 3 Degrades 4

Strength Ready Reckoner:

Step	Str	8	7	6	5	4	3	2	1
0	100%	8	7	6	5	4	3	2	1
1	97%	8	7	6	5	4	3	2	1
2	77%	7	6	5	4	4	3	1	0
3	60%	5	5	4	3	3	2	1	0

Note that values for step loss 2/3 and full strength 1 and 2 have been adjusted to round down.

14.4 Fires Units

Fires units have a base value defined as follows:

- Counter 1 per 6 guns/launchers (round up)
- +1 per 12 MRLs (not fully double as rarely used in full bn salvoes)
- -1 (total) if < 150mm

The same modifiers for training, equipment and motivation apply.

The same steps/degrades apply.