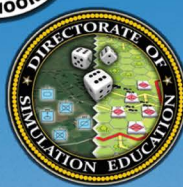


FORCE on *FORCE* -ARMOR COMPANY TEAM-

A Company-Level Wargame



This is version 7.3 of MCCC's Company phase adjudication wargame system named Force on Force. MCCC Team 1 developed this game to allow students to test the feasibility of their plan against a thinking enemy, played by another student, while accounting more realistically for the give and take and chaos of combat than static correlation of forces and means (COFM) calculators. The game is set to allow students to conduct hasty planning on a hexagonal map of a portion of the National Training Center (vicinity of the Central Corridor), urban terrain around the world, or other tactically significant hot spots and apply the instructional materials presented in the Company phase blocks of instruction A2 (Tank-Mech Infantry Co Team offense), A3 (Tank-Mech Infantry Company Team defense), and A4 (Stryker Rifle Company urban offense) to get a sense of execution, test tactics, and build intuition for maneuver warfare as they set conditions with IC, fires, and maneuver to a position of relative advantage against a determined opponent.

For questions or feedback about the game, contact MAJ Patrick O'Keefe, Tactics Team 1 Chief, at Patrick.k.Keefe.mil@army.mil and/or CPT Phil Knoetgen, MCCC Special Projects Officer at Philip.j.knoetgen.mil@army.mil.

For the Quick Start Instructional Video, print file downloads, group discussion, and more, visit: <https://www.milsuite.mil/book/groups/forceonforce>

**NOTE* This specific game package was designed for order/purchase from Print & Play Games (<https://www.printplaygames.com/>) by the Directorate of Simulation Education (DSE), Army University. Because the original game required vehicle miniatures and other custom components that could be difficult to acquire, DSE re-designed various parts of the game to facilitate easy purchase and use, and the rules have been edited to reflect these changes. For issues or concerns with these changes, please contact*

Dr. Mark Greenwald (stephen.m.greenwald2.civ@army.mil)

or

Dr. James Sterrett (james.j.sterrett.civ@mail.mil)



VICTORY

Attacker Victory

The attacking player wins if they mass one ground combat unit (of any strength) on a hex touching the purple decisive point star for one full turn. The attackers decisive point terrain cannot be seized if there is any armed opposition on top of or adjacent to the star's hex.



Defender Victory

The defender wins if the attacker can no longer continue in the attack due to any the following:

- 1. Breach assets. All breach assets destroyed before the attacker has breached required obstacles.*
- 2. Combat Ineffective. All of attacker's remaining ground combat units destroyed or withdrawn.*
- 3. Counterattack. Once the attacker begins direct fire suppression on the defender's primary battle positions, they have 8 turns to achieve their decisive point. If they fail to achieve their DP in 8 turns, the defender's counterattack arrives and destroys the attacker.*

INFORMATION COLLECTION (IC)/ FIRES

Information Collection (UAS) Rule.

The attacking player can launch a small UAS twice per game, each with a flight endurance of 3 turns. After the third turn it recovers and is spent. The gray UAS piece can be placed on any single hex on the map for the turn, replicating an NAI. If the defender has a concealed unit in that hex, they must reveal it and place it on the map at that time. UAS cannot fly more than 10 hexes beyond a friendly unit, in order to maintain link (any friendly unit). ADA does not affect the small UAS.

Battlefield Obscuration.

Players allocated 4x total obscuration missions per game. Smoke obscures LOS through the entire hex (effective target length: 1000m). Smoke is removed after 1 turn. Use the Smoke side of the Smoke/Suppressed chit to replicate obscuration.

Call for Fire.

Players are allocated 1x CFF each turn, direct LOS not required. See Game Procedure. Mark IDF suppression with the Suppressed side of the Smoke/Suppressed chit.

MOVEMENT AND MANEUVER

Movement Turns.

Players must conduct all movements for the entire turn during the movement phase. The attacker conducts movements first, immediately followed by the defender. Once the movement phase is over, no units can move until the next turn's movement phase.

SPEED.

Units may move a maximum number of hexes equal to the **SPEED** quantity on their card per movement phase, no minimum.

STRENGTH 4
PROFICIENCY 4
SPEED 4

Obstacles.

Mounted units cannot move thru Severely Restricted Terrain. No unit can move past obstacles, but occupying the hex is OK.

Dismount Options.

Dismounts may deploy before or after a transport moves, but only during movement phase.

Dispersion Rule.

No more than 1x unit at a time may occupy or move thru a hex (does not apply to units passing through Engineer units).

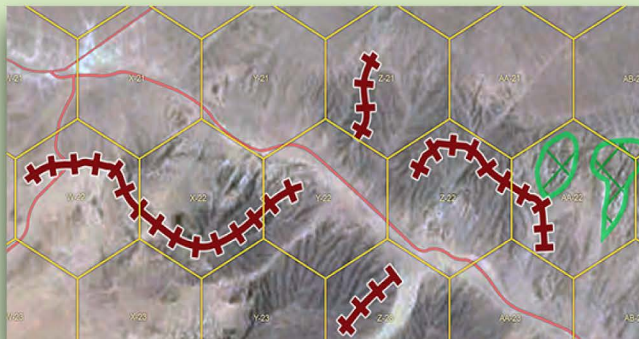
Restricted Terrain Rule.

Hexes marked with single yellow dotted line are passable, but restricted. Firepower and speed are halved.



Cover on Intervisibility (IV) Lines.

If a unit is on top of an IV line, they are "in cover". Qty of direct fire attack dice against them are halved.



DIRECT FIRE ENGAGEMENTS

Direct Fire Mechanics.

Shooting players identify the shooting unit and weapon system, the target unit, and the range to the target in whole hexes. Lookup the value the Combat Results Table to find the minimum die roll required for a good hit. The shooter then rolls the number of dice equal to the current unit strength (aka the number of weapons available). Die that are equal to or greater than the table value are good hits that destroy a target vehicle. The reduction in unit strength is assessed only at the end of the phase.

Attack Aviation Direct Fire.

Follows all same rules, except each AH-64 can fire up to 16x AGM-114 Hellfire attack dice per aircraft, per game. Attack helicopters can fire out from restricted terrain and through ground IV lines, but their LOS is blocked by downrange hill masses.

Simultaneous Combat Rule.

All combat is assumed to be simultaneous. Direct fire damage is assessed after the completion of the Shooting Phase. Even if a unit has just been destroyed, it still gets a chance to fire one last volley before its destruction is assessed.

ATGMs.

Missiles or ADA cannot effectively engage dismounted infantry. All other weapons are anti-personnel capable.

Line of Sight Rule.

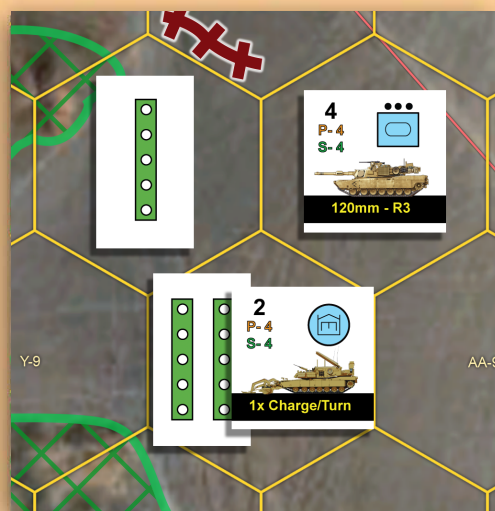
Units must have line of sight to engage with direct fire. To fire, there must be no obstructions along the straight line from shooter to target, measured from hex center to hex center. Obstructions are defined as restricted terrain, IV lines, smoke, or friendly units.

Cover & Concealment.

Defenders are allocated 1x dug in Battle Position (BP) per ground maneuver unit. Players must emplace BPs prior to the start of Turn 1. Units in BPs, on IV lines, or dismounts in restricted terrain are considered "in cover." Direct fire dice against them are halved.

Engineer Breaching.

Engineer vehicles that are not suppressed can reduce 1x obstacle strip per turn. Their range is 0 and must occupy the same hex as the reduction site. Friendly units may pass through engineer units unimpeded if a breach lane is opened.



SPECIAL RULES

Concealed Defender/ Hide Site Rule.

Before the beginning of Turn 1, the defender must select which hex(es) to conceal their units, then write down the name of the hex ID number on a note card face down. If the defender chooses to move or engage with the concealed unit, they must unmask them. If the attacker places a UAS to collect on a hex with a concealed unit during the IC/Fires phase, the defender must unmask it. Prior choosing to shoot or move, the defender must unmask: announce intention, display notecard, and place the unit on the map (the pre-written hex). Meeting engagement sub-rule: If the attacker attempts to move through a hex with a concealed unit, the defender must announce, unmask it, and the attacker falls back one space, then conduct shoot phase as normal. Only units may be concealed, this rule does not apply to BP icons.

Attachments.

Engineers and Air Defense are Attachments. They must always be attached to a maneuver unit and cannot move or be targeted independently. When targeting that maneuver unit with direct fires, hits cannot be allocated against engineers until the unit is destroyed.

REDFOR BN Offense- Depth Attack / Integrated Attack Rule.

If the BLUFOR defender leaves a 1 km gap in their obstacle effort, the REDFOR player must announce intentions during any time during Turn 1 movement phase, and identify the criteria, confirmed by second party. The REDFOR battalion now becomes a brigade, and all unit strengths increase by 4x. Rat-trails or bypasses outside the BLUFOR AO do not apply to this rule.

Attack Aviation.

Only available for one turn. Fires up to 16x HFs dice per aircraft per game. The attack aviation unit can fire its missiles at any combination of units. Can only launch during movement phase. Starts from a friendly controlled corner of the map. Movement unrestricted by terrain, but player must still show flight route. If unit enters enemy ADA WEZ at any time, unit is destroyed immediately. Unit egresses after 1 turn.

Air Defense.

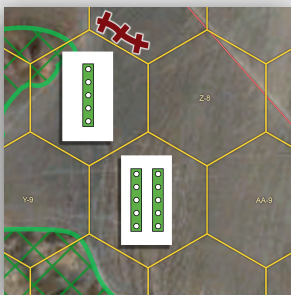
Due to their early warning radars, ADA units will engage and destroy any aircraft that enter their maximum range Weapons Engagement Zone (WEZ) instantaneously, even during the movement phase. This ability is negated if the ADA unit is suppressed.

Rounding Numbers.

Round up to the nearest whole number of dice. Multiple modifiers can stack at the same time. e.g. 50% X 50% = 25%

Obstacle Emplacement.

Defenders start with a pre-defined number of green pieces representing 1 km of linear effort (mines or AVD). Place anywhere. They effect the entire hex. Obstacles can be stacked in the same hex or use the double obstacle. Breach vehicles reduce 1 strip deep per turn during shoot phase.



GAME PROCEDURE

IC / Fires Phase (Attacker then Defender)

Cleanup: Remove smoke from previous turn. All suppressed units recover.

IC (UAS): Attacker can launch UAS twice per game, endurance of 3 turns each. Fly UAS on top of one hex (NAI) per turn, ID'ing any concealed defender in the hex. 10km range limit from friendlies.

Obscuration: Fire up to 1 out of 4 smoke missions per game, no roll. Place Smoke chit on hex.



Call for Fire: Identify target and roll 1 die (representing bracketing difficulty). If the unit is in cover, add +1 to the difficulty roll. If the roll is less than or equal to the observing unit's score, the fire mission is a good IDF hit, mark with Suppressed chit. All IDF hit units are suppressed: they cannot move, direct fire dice are halved. Suppressed engineer units cannot breach; suppressed ADA cannot engage. IDF hits do not destroy armored vehicles. Hit dismounts are reduced by -1 STRENGTH in cover or -2 strength in the open. Up to 1 CFF per turn. Use the red numbered chits to signify the number of hits and place them on the unit card.

Next Player – Defender conducts steps 1 – 4.

S

Movement Phase

Break IDF Contact Check: Roll 1 die (representing break contact difficulty) for each suppressed unit. If the roll is less than or equal to the suppressed unit's PROFICIENCY score, the unit is no longer suppressed. If not, the unit remains suppressed until the next IC/Fires Phase.

Conduct all movements: Units may move hexes up to a maximum of their SPEED value.

Dismounts: Dismount/ remount squads.

Aviation: Launch decision, only once per game. Conduct aviation movements.

Next Player – Defender conducts steps 1 – 4.



GAME PROCEDURE (CONT.)

Direct Fire Phase

(All Attacker Engagements then all Defender Engagements)

Identify shooting unit, weapon sys, target, and range.

Check LOS. Units shoot once per turn.

4ea M2A3 Bradley IFVs

25mm Chain Gun - Range = 2

TOW II ATGM - Range = 4





3ea Infantry Squads

Small Arms - Range = 1

Javelin ATGM - Range = 4

Combat Results Table Lookup.

Find minimum value for a good hit in the Combat Results Table.

SHOOTER	MUNITION	TARGET	RANGE TO TARGET					
→	→	→	1 km	2 km	3 km	4 km	5 km	6-8 km
M1A2C ABRAMS 	120mm Sabot	ZTZ-99	3	4	5			
		ZBD-04A	3	3	3			
	120mm MPAT	Infantry	2	2	2			
		ZTZ-99	2	2	2	2		
M2A3 BRADLEY 	TOW-2B	ZBD-04	2	2	2	2		
		ZTZ-99	2	2	2	2		
	25mm	ZBD-04	4	5				
		Infantry	2	2				
AH-64E 	AGM-114 HF	ZTZ-99		3	3	3	3	3
		ZBD-04		2	2	2	2	2
		ZTZ-99		2	2	2	2	
		Infantry	3					
U.S. Infantry 	FGM-148 Javelin w/ UCU30	ZTZ-99	2	2	2	2		
		ZBD-04	2	2	2	2		
	Small Arms	Infantry	3					

High Probability of Kill
Medium Probability of Kill
Low Probability of Kill
Very Low Probability of Kill

* NOTE: Data in this chart is roughly based on open source unclassified PK data. It is adjusted to account for gaps in the different PK categories, PK accounts for the probabilities of detection, hit, destruction (if applicable) and lethality (if applicable).
† Target in Cover: Have the physical quality of dice available against targets in cover. For example, massed of knowns that are in cover are treated in cover, they only lose dice. The results table shows weapons destroyed.
** ADA: No hit required for ADA engagements. Its immortality doctrine. Its immortality doctrine.

Roll.

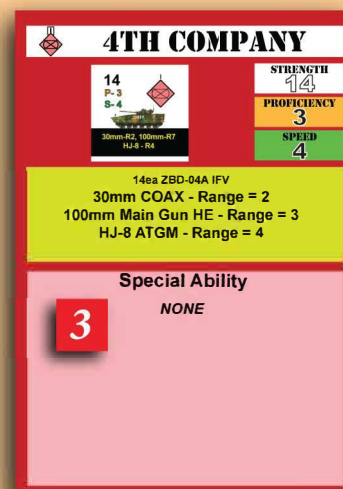
Roll dice equal to number of firing weapons (unit strength, represents a volley). Die rolls that are equal to or greater than the table value are good hits and destroy 1 target vehicle each. Halve the physical quantity of dice if the target is in cover, or if firing unit is suppressed (e.g. 2 dice instead of 4). Wait till end of the phase to simultaneously apply damage to both players.

Next Player.











Once attacker completes all engagements, Defender conducts steps 1 - 3.

Assess battle damage.

Reduce strength of each unit by the number of hits against it by placing the appropriate number chit on the unit card. Hit shits are double-sided chits numbered 1-2, 3-4, and 5-10.



COMBAT RESULTS TABLE

SHOOTER 	MUNITION 	TARGET	 Range to Target					
			1 km	2 km	3 km	4 km	5 km	6-8 km
M1A2C Abrams w/Trophy System 	120mm Sabot	ZTZ-99A2	3	4	5			
	120mm MPAT	ZBD-04A	3	3	3			
		Infantry	2	2	2			
M2A3 Bradley 	TOW IIB ATGM	ZTZ-99A2	2	2	2	2		
		ZBD-04A	2	2	2	2		
	25mm Chain Gun	ZTZ-99A2						
		ZBD-04A	4	5				
		Infantry	2	2				
AH-64E Apache 	AGM-114 HF	ZTZ-99A2		3	3	3	3	3
		ZBD-04A		2	2	2	2	2
US Infantry 	FGM-148 Javelin w/ LWCLU	ZTZ-99A2	2	2	2	2		
		ZBD-04A	2	2	2	2		
	Small Arms	Infantry	3					
ZTZ-99A2 	125mm SABOT	M1 or ABV	3	4	5			
	AT-11 Sniper ATGM <small>*Slower fire rate:half dice#</small>		5	5	5	5	5	
	M2	3	3	3	4	4		
		125mm HEAT	3	3	3			
	Infantry	2	2	2				
ZBD-04A 	HJ-8 ATGM	M1 or ABV	5	5	5	5		
		M2	3	3	3	4		
	30mm COAX		4	5				
		Infantry	2	2				
	100mm HE	Infantry	2	2	2	2	2	
PLA Infantry 	PF-98 ATRL	M1 or ABV	6					
		M2	4					
	Small Arms	Infantry	3					

HIGH PROBABILITY OF KILL

MEDIUM PROBABILITY OF KILL

LOW PROBABILITY OF KILL

VERY LOW PROBABILITY OF KILL

NOTE:**Data in this chart is roughly based on open-source unclassified pK data. it is adjusted to account for rate-of-fire differences and simplicity, pK accounts for the probabilities of detection, hit, destruction if hit, as well as reliabilities of the weapon & targeting systems.Target In Cover:** Halve the number of dice available against targets in cover. For example, instead of throwing four dice against a target in cover, throw only two. The CRT result remains unchanged.***ADA:** No roll is required for ADA engagements. they immediately destroy 100% of aircraft that enter its Weapon Engagement Zone (WEZ) unless it is suppressed or otherwise unable to fire.

Armor Company Team w/Engineers



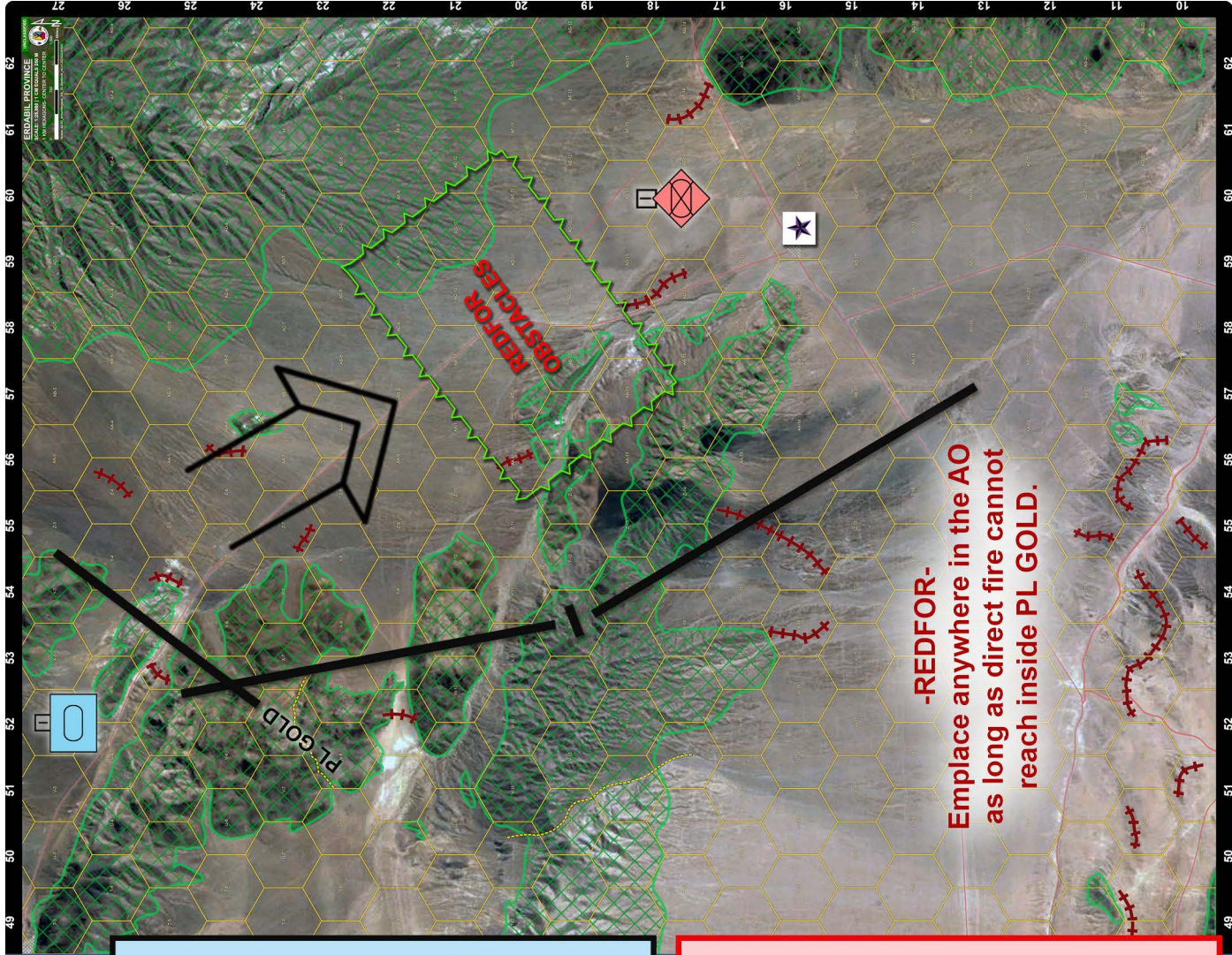
P: Pass follow-on forces

Frontier Defense Group



P: Prevent penetration

3ea Battle Positions (BP)



SCENARIO A2-3: ARROWHEAD

Armor Company Team w/Engineers



T: Seize

P: Pass follow-on forces

RED PLATOON

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
NONE

WHITE PLATOON

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
"14150 AWP"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

BLUE PLATOON

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

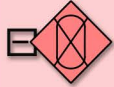
Special Ability
"Diamond Square"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

ENGINEERS

2x4 M100 APC
20mm ATGM - Range = 4

Special Ability
"Engineers"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

Frontier Defense Group



T: Destroy or Fix BLUFOR

P: Prevent penetration

COVER GROUP

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
"Cover Group"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

1ST PLATOON

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
"Cover Group"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

2ND PLATOON

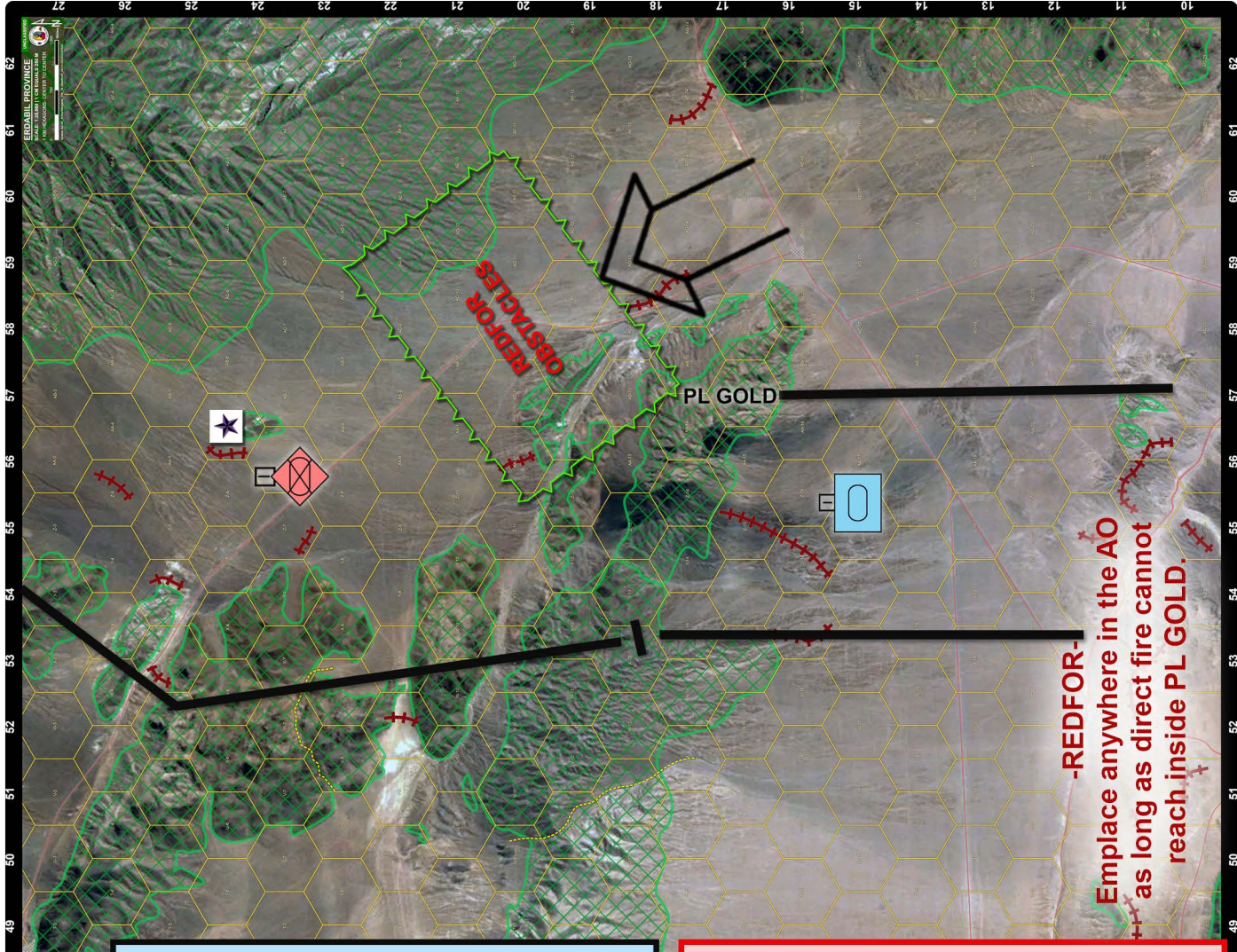
4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
"Cover Group"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.

3RD PLATOON

4x4 M1A2 Abrams MBT
120mm Main Gun - Range = 3

Special Ability
"Cover Group"
- First 14150 AWP unit during the Direct Fire Phase.
- Second 14150 AWP unit during the Indirect Fire Phase.
- Cannot be destroyed by direct fire.
- Cannot be destroyed by indirect fire.
- Cannot be destroyed by air support.
- Cannot be destroyed by armor.



-REDFOR-
Emplace anywhere in the AO
as long as direct fire cannot
reach inside PL GOLD.

About Vassal

Vassal is a free, open-source two-dimensional (2D) game engine that allows the play of traditional board games on a computer and multiple players to play against each other in real time. Vassal works on both Windows and MAC OS, and can be found at:

<https://vassalengine.org/>

About Force on Force in Vassal

Playing Force on Force in Vassal requires a specific “module”. The current Force on Force module can be downloaded directly from the Vassal Module Repository at:

<https://vassalengine.org/wiki/Category:Modules>

Enter “DSE” in the search bar and select “DSE - Force on Force. There are other “DSE” game modules available, feel free to check those out as well. You can also download it directly at:

<https://drive.google.com/file/d/1Fs4BRwGGaBmwqCIRNX7l8XdhWoPqslHA/view?usp=sharing>

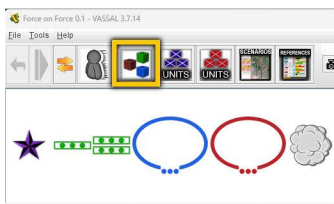
Please send comments/suggestions on the Vassal module to Curt Pangracs at cpangracs@att.net

The following pages provides specific instructions for playing Force on Force in Vassal, focusing on the specific differences between the physical game and playing on a computer.

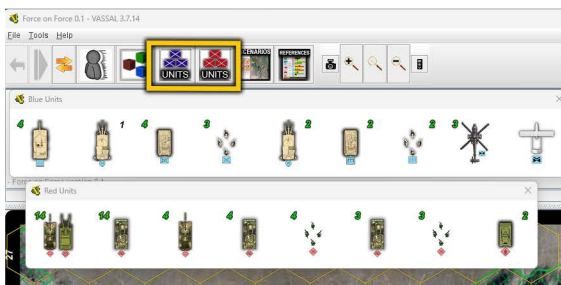
The full rules can be found by clicking on “Help”



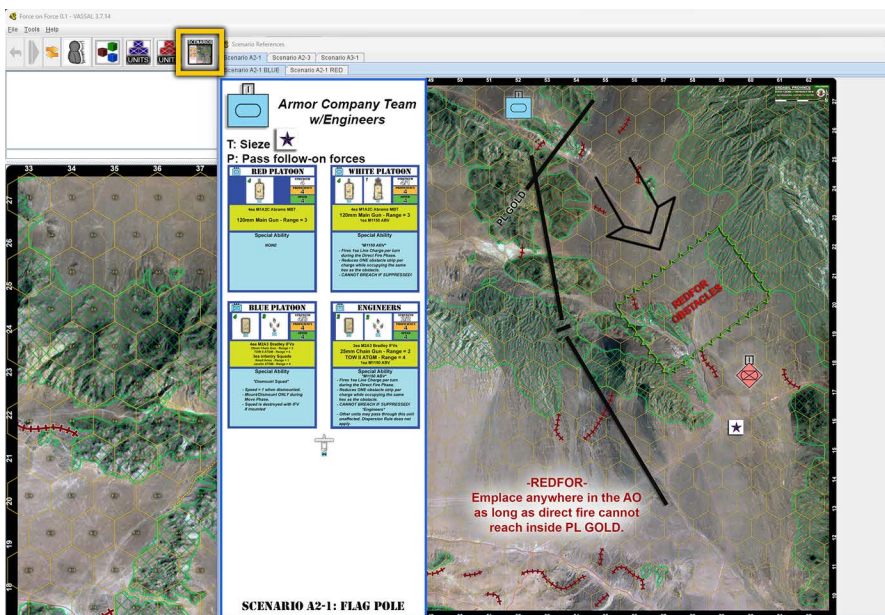
Clicking on the button with the colored cubes will bring-up the Pieces Palette. These pieces are infinite, meaning there are an unlimited number of each.



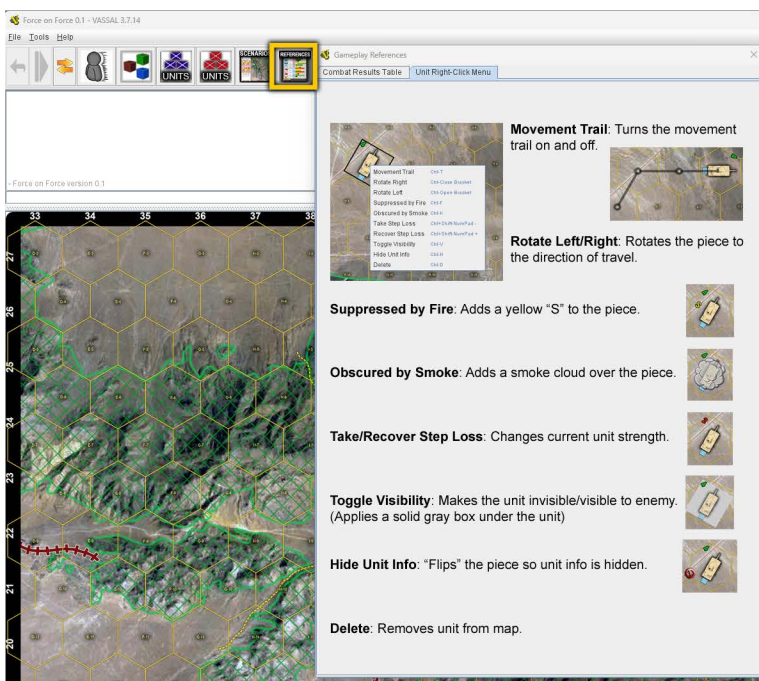
Depending on which side you are playing, you'll see a “Units” button. This will bring up your Units Palette. These pieces are also infinite. The Umpire can access all units and can see and manipulate all pieces.



The “SCENARIOS” button brings up a tabbed panel with scenario instructions for each side. Use these to set-up your units and pieces before game start.



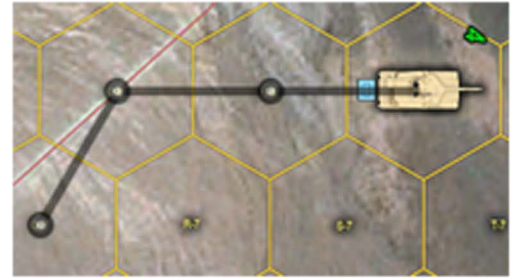
The “REFERENCES” button opens a window with the Combat Results Table and a Right-Click Menu reference.



Unit Right-Click Menu



Movement Trail: Turns the movement trail on and off.



Rotate Left/Right: Rotates the piece to the direction of travel.

Suppressed by Fire: Adds a yellow "S" to the piece.



Obscured by Smoke: Adds a smoke cloud over the piece.



Take/Recover Step Loss: Changes current unit strength.



Toggle Visibility: Makes the unit invisible/visible to enemy.
(Applies a solid gray box under the unit)



Hide Unit Info: "Flips" the piece so unit info is hidden.



Delete: Removes unit from map.

VICTORY

Attacker Victory

The attacking player wins if they mass one ground combat unit (of any strength) on a hex touching the purple decisive point star for one full turn. The attackers decisive point terrain cannot be seized if there is any armed opposition on top of or adjacent to the star's hex.



Defender Victory

The defender wins if the attacker can no longer continue in the attack due to any the following:

- 1. Breach assets. All breach assets destroyed before the attacker has breached required obstacles.*
- 2. Combat Ineffective. All of attacker's remaining ground combat units destroyed or withdrawn.*
- 3. Counterattack. Once the attacker begins direct fire suppression on the defender's primary battle positions, they have 8 turns to achieve their decisive point. If they fail to achieve their DP in 8 turns, the defender's counterattack arrives and destroys the attacker.*

INFORMATION COLLECTION (IC)/ FIRES

Information Collection (UAS) Rule.

The attacking player can launch a small UAS twice per game, each with a flight endurance of 3 turns. After the third turn it recovers and is spent. The gray UAS piece can be placed on any single hex on the map for the turn, replicating an NAI. If the defender has a concealed unit in that hex, they must reveal it and place it on the map at that time. UAS cannot fly more than 10 hexes beyond a friendly unit, in order to maintain link (any friendly unit). ADA does not affect the small UAS.



Battlefield Obscuration.

Players allocated 4x total obscuration missions per game. Smoke obscures LOS through the entire hex (effective target length: 1000m). Smoke is removed after 1 turn.



Call for Fire.

Players are allocated 1x CFF each turn, direct LOS not required. See Game Procedure.



GAME PROCEDURE

IC / Fires Phase (Attacker then Defender)

Cleanup: Remove smoke from previous turn. All suppressed units recover.

IC (UAS): Attacker can launch UAS twice per game, endurance of 3 turns each. Fly UAS on top of one hex (NAI) per turn, ID'ing any concealed defender in the hex. 10km range limit from friendlies.

Obscuration: Fire up to 1 out of 4 smoke missions per game, no roll.



Call for Fire: Identify target and roll 1 die (representing bracketing difficulty). If the unit is in cover, add +1 to the difficulty roll. If the roll is less than or equal to the observing unit's score, the fire mission is a good IDF hit, mark with Suppressed. All IDF hit units are suppressed: they cannot move, direct fire dice are halved. Suppressed engineer units cannot breach; suppressed ADA cannot engage. IDF hits do not destroy armored vehicles. Hit dismounts are reduced by -1 STRENGTH in cover or -2 strength in the open. Up to 1 CFF per turn.

Next Player – Defender conducts steps 1 – 4.

Movement Phase

Break IDF Contact Check: Roll 1 die (representing break contact difficulty) for each suppressed unit. If the roll is less than or equal to the suppressed unit's PROFICIENCY score, the unit is no longer suppressed. If not, the unit remains suppressed until the next IC/Fires Phase.

Conduct all movements: Units may move hexes up to a maximum of their SPEED value.

Dismounts: Dismount/ remount squads.

Aviation: Launch decision, only once per game. Conduct aviation movements.

Next Player – Defender conducts steps 1 – 4.

STRENGTH
4
PROFICIENCY
4
SPEED
4

GAME PROCEDURE(CONT.)

Direct Fire Phase

(All Attacker Engagements then all Defender Engagements)





Identify shooting unit, weapon sys, target, and range.

Check LOS. Units shoot once per turn.

4ea M2A3 Bradley IFVs
25mm Chain Gun - Range = 2
TOW II ATGM - Range = 4
3ea Infantry Squads
Small Arms - Range = 1
Javelin ATGM - Range = 4

Combat Results Table Lookup.

Find minimum value for a good hit in the Combat Results Table.

SHOOTER	MUNITION	TARGET	RANGE TO TARGET					
			1 km	2 km	3 km	4 km	5 km	6-8 km
 M1A2C ABRAMS	120mm Sabot	ZTZ-99	3	4	5			
		ZBD-04A	3	3	3			
	120mm MPAT	Infantry	2	2	2			
 M2A3 BRADLEY	TOW-2B	ZTZ-99	2	2	2	2		
		ZBD-04	2	2	2	2		
		ZTZ-99						
	25mm	ZBD-04	4	5				
		Infantry	2	2				
 AH-64E	AGM-114 HF	ZTZ-99		3	3	3	3	3
		ZBD-04		2	2	2	2	2
 U.S. Infantry	FGM-148 Javelin	ZTZ-99	2	2	2	2		
		ZBD-04	2	2	2	2		
	Small Arms	Infantry	3					
High Probability of Kill			* NOTE: Data in this chart is roughly based on open source unclassified PK data. It is adjusted to account for rate of fire differences and simplicity. PK accounts for the probabilities of detection, hit, destruction if hit, and reliabilities of the weapon and targeting systems.					
Medium Probability of Kill			* Target in Cover: Have the physical quantity of dice available against targets in cover. For example, instead of throwing four dice against a target in cover, throw only two dice. The results table value remains unchanged.					
Low Probability of Kill			* ADA: No roll required for ADA engagements. They immediately destroy 100% of US aircraft that enter into their Weapons Engagement Zone (WEZ), unless suppressed/neutralized.					
Very Low Probability of Kill								

Roll.


Roll dice equal to number of firing weapons (unit strength, represents a volley). Die rolls that are equal to or greater than the table value are good hits and destroy 1 target vehicle each. Halve the physical quantity of dice if the target is in cover, or if firing unit is suppressed (e.g. 2 dice instead of 4). Wait till end of the phase to simultaneously apply damage to both players.

Next Player.

Once attacker completes all engagements, Defender conducts steps 1 - 3.

Assess battle damage.

Reduce strength of each unit by the number of hits against it by placing the appropriate number chit on the unit card.



4TH COMPANY

14

STRENGTH 14

PROFICIENCY 3

SPEED 4

14ea ZBD-04A IFV
30mm COAX - Range = 2
100mm Main Gun HE - Range = 3
HJ-8 ATGM - Range = 4

Special Ability
NONE

MOVEMENT AND MANEUVER

Movement Turns.

Players must conduct all movements for the entire turn during the movement phase. The attacker conducts movements first, immediately followed by the defender. Once the movement phase is over, no units can move until the next turn's movement phase.

SPEED.

Units may move a maximum number of hexes equal to the SPEED quantity on their card per movement phase, no minimum.

STRENGTH
4
PROFICIENCY
4
SPEED
4

Obstacles.

Mounted units cannot move thru Severely Restricted Terrain. No unit can move past obstacles, but occupying the hex is OK.

Dismount Options.

Dismounts may deploy before or after a transport moves, but only during movement phase.

Dispersion Rule.

No more than 1x unit at a time may occupy or move thru a hex (does not apply to units passing through Engineer units).

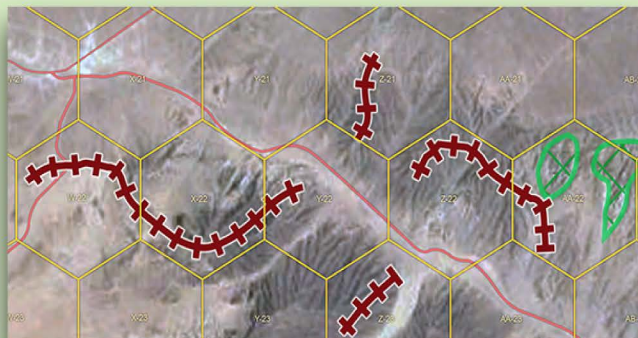
Restricted Terrain Rule.

Hexes marked with single yellow dotted line are passable, but restricted. Firepower and speed are halved.



Cover on Intervisibility (IV) Lines.

If a unit is on top of an IV line, they are "in cover". Qty of direct fire attack dice against them are halved.



DIRECT FIRE ENGAGEMENTS

Direct Fire Mechanics.

Shooting players identify the shooting unit and weapon system, the target unit, and the range to the target in whole hexes. Lookup the value the Combat Results Table to find the minimum die roll required for a good hit. The shooter then rolls the number of dice equal to the current unit strength (aka the number of weapons available). Die that are equal to or greater than the table value are good hits that destroy a target vehicle. The reduction in unit strength is assessed only at the end of the phase.

Attack Aviation Direct Fire.

Follows all same rules, except each AH-64 can fire up to 16x AGM-114 Hellfire attack dice per aircraft, per game. Attack helicopters can fire out from restricted terrain and through ground IV lines, but their LOS is blocked by downrange hill masses.

Simultaneous Combat Rule.

All combat is assumed to be simultaneous. Direct fire damage is assessed after the completion of the Shooting Phase. Even if a unit has just been destroyed, it still gets a chance to fire one last volley before its destruction is assessed.

ATGMs.

Missiles or ADA cannot effectively engage dismounted infantry. All other weapons are anti-personnel capable.

Line of Sight Rule.

Units must have line of sight to engage with direct fire. To fire, there must be no obstructions along the straight line from shooter to target, measured from hex center to hex center. Obstructions are defined as restricted terrain, IV lines, smoke, or friendly units.

Cover & Concealment.

Defenders are allocated 1x dug in Battle Position (BP) per ground maneuver unit. Players must emplace BPs prior to the start of Turn 1. Units in BPs, on IV lines, or dismounts in restricted terrain are considered "in cover." Direct fire dice against them are halved.



Engineer Breaching.

Engineer vehicles that are not suppressed can reduce 1x obstacle strip per turn. Their range is 0 and must occupy the same hex as the reduction site. Friendly units may pass through engineer units unimpeded if a breach lane is opened.

