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SHOCK FORCE 2

PLATOON ATTACK
TUTORIAL

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FIGHT CLUB COMBAT MISSION SHOCK FORCE 2 (CMSF2) – PLATOON ATTACK TUTORIAL

References:

A.   [Combat Mission Game Engine Manual version 4.00 2018](#)
B.   DCC Tactical Doctrine Vol 1. The Infantry Company Group. Pam3. Infantry Platoon Tactics 2009

CMSF2 Simulation Context

Everything left of war is simulation. The Army's training model lists three dimensions of simulation; Live, Virtual and Constructive:

Live – training in the live environment means **real people operating real equipment in a real environment** with either **real or simulated weapons effects - or both**.

Virtual – training in the virtual environment means **real people operating simulated equipment in a simulated environment with simulated effects**.

Constructive – training in the constructive environment means **real people controlling simulated personnel in a simulated environment with simulated equipment and effects**

Virtual and Constructive simulation systems used by the military are generally either built in house or provided by a commercial entity. In both cases the simulation has been specifically designed with the military user in mind.

Commercial off-the-shelf or commercially available off-the-shelf (COTS) simulations are those designed and released for the commercial marketplace, frequently entertainment, rather than explicit military use. These may be adapted or modified for military use at additional cost/effort.

CMSF2 is a Constructive COTS Simulation originally designed for commercial entertainment purposes, albeit with a high demand for military realism and tactical accuracy. It was not designed for educating or training military audiences. As a constructive simulation it allows commanders to operate a wider span of forces than they would traditionally have access to in virtual or live training. It is highly suitable for commanders wishing to develop tactical acumen and practice innovative TTPs against either an AI or human opponent.

CMSF2 has the following features:
▪ Tactical warfare at battalion and below scale in a true 3D environment
▪ Command individual vehicles, teams, and squads
▪ Expansive simulation of "soft factors" such as Morale, Experience, and Leadership
▪ Innovative systems portraying Fog of War, Spotting, Line of Sight, Command & Control, and Objectives
▪ Unmatched realistic physics, ballistics, and battlefield effects
▪ Fight in a wide range of weather and lighting conditions, all of which realistically impact fighting abilities
▪ Unique hybrid system for RealTime or WeGo (turn based) play
▪ Full featured Editor for maps, scenarios, and campaigns
▪ Quick Battle system sets up deliberate or randomized battles based on player specifications
▪ Single player and head to head play, including Play By Email (PBEM)

It should also be noted at this juncture that the depiction of Syrian state forces as the 'enemy' was a design choice by the Battlefront developers prior to the outbreak of the Syrian Civil War and in no way reflects the UK or MOD's official posture towards the Arab Republic of Syria.

1.   **Introduction**. This tutorial scenario was designed to introduce the key characteristics of CMSF2 to new players from a military background in order for them to gain familiarity with basic controls and commands. Experience shows that even astute tacticians will struggle to transfer their intentions into in-game commands. This leads to frustration and not everyone has the patience to devote hours to reading the manual and mastering the game controls. The tutorial scenario can easily be run within 60 minutes. *It is advised that players attempt the tutorial missions in either the CMSF2 Demo or CMSF2 base game before commencing directly with this tutorial*. The example scenario used in this tutorial is for visualisation only. A light role infantry platoon attack is familiar to all officers and soldiers from basic training but will not be suitable for all units in their day to day role. This scenario will showcase the major functions of the simulation in a manner familiar to a military audience and, in doing so, expose some of the nuances that are required to handle the simulation in a way that produces acceptable military results. The terrain map is entirely fictional and no prior OSW was used to create the scenario.

2.   **Key files.** The following are the required files to conduct the tutorial:

   a.   UK Fight Club Platoon Attack Tutorial v1.0.btt

   b.   Fight Club Platoon Attack Tutorial V1 Orders.txt

3.   **Installation**. Copy the above files into your "**C:\Users\Owner\Documents\Battlefront\Combat Mission\Shock Force 2\Game Files\Scenarios**" folder.

4.   **Suggested Mods**. The tutorial scenario was conducted using the following mods. These are not required to run the tutorial but are suggested for additional military value in future training events. All the mods below are available free of charge by the online gaming community.

   a.   [Lt. Smash's Floating Icons For Shock Force 2](#) replaces silhouette icons with NATO map symbols (useful for NCOs and Officers).

   b.   [HQS 3.3 CMBS CMSF CMSF2 CMA](#) provides more realistic battle sounds.

   c.   [Mord's CMSF2 Menu Mod](#) changes the base game menu.

5.   **Aids**. The following aids are contained in this tutorial document and should be referred to as required:

   a.   CMSF2 Keyboard Layout Quick Reference Sheet (Annex A).

   b.   CMSF2 Commands Aid Memoire (Annex B).

   c.   CMSF2 Game User Interface Aid (Annex C).

6.   **Running the game**. CMSF2 has a known issue when trying to switch (alt tab) between pages on desktop whilst at menu screens. Therefore, it is advised that you print out this document or have it visible on a separate device or avoid switching screens until running the in-game engine.

7.   **Warning**. The tutorial may play out differently to the way it is described in this document. The AI will not do the same thing every time. You may find that the enemy does not conform to the examples provided in the following paragraphs. If you feel you are no longer learning then quit by pressing '**Alt+Q' t**ogether and restart the tutorial from the beginning.

8.   **Scenario Victory Conditions**. The scenario has pre-determined victory conditions that will both end the mission if certain criteria are met and also provide a 'score' based on the achievement of those and other criteria. The mission will end for the following reasons:

a.   30 minutes of game/mission time elapses. If the friendly forces have not achieved victory by this point this should be considered a 'win' for the enemy.

b.   The enemy defending force is killed/wounded/driven from the field – this is considered a 'win' for the friendly forces.

c.   Friendly forces take an unacceptably high level of casualties – this is set to 50% and will result in an enemy 'win'.

9.   **Limitations**. There are, however some limitations which must be understood:

a.   CMSF2 has a complex underlying game engine which is difficult to understand and a user interface that is complex and unintuitive – hence the attached aids.

b.   The UK forces represented in this version of the game are from the HERRICK era, wearing desert camouflage, organised in ORBATs and equipment tables that are now defunct.

c.   The higher-level AI used in the game has its limitations and requires careful scripting in the design phase if it is to conduct anything other than static defence.

d.   The lower level AI is better but players will still need to conduct detailed siting of elements and weapons regularly to ensure they are behaving as intended.

Figure 1: CMSF2's representation of a UK Rifle Section circa 2008. Note the weapon systems, camouflage, body armour etc. The individual troops in the section move in two sub teams each occupying a single terrain tile.

Figure 2: CMSF2's representation of a UK Rifle Platoon HQ circa 2008. Note the 51mm mortar with only 4x smoke grenades (the most prized capability of the weapon). The Pl HQ cannot be split meaning the Pl Sgt and Pl Comd are always in the same place.

Figure 3: In game representation of an uninjured soldier (green outline); injured soldier (yellow outline); a wounded soldier (red cross); and a dead soldier (brown skull and crossbones). Wounded troops who do not receive 'battle buddy aid' are more likely to die between this mission and the next in a campaign series.

Figure 4: The internal modelling of structures is limited in CMSF2. A lack of internal rooms and furniture means that in house urban fighting is severely abstracted.

10.   **Key terminology.**

    a.   **Game User Interface**. The control bar at the bottom of the in-game screen which holds information about selected elements, commands and other game controls.

    b.   **Element** – a group of soldiers represented under a single point of command (an icon) in the game. This can be from a single soldier/vehicle to a fire team to a whole section. The game manual refers to this as a "unit" but since unit confers a separate meaning in military terminology the term element is more appropriate.

    c.   **Terrain Tile** = 8x8m 2D plane that has a texture (grass etc), elevation, object (wall etc) and or foliage (bushes/trees). All orders and game activity occurs in relation to game tiles.

    d.   **Game Turn button**. The big red button that stops the game running but allows you to give orders and move the camera.

    e.   **Command**. An in-game order from the player to the AI element drawn from a pre-determined list of available commands based on the element type and condition.

    f.   **Pause Command**. This will issue a delay of 5 second increments to the affected element.

    g.   **Halt Command**. This will halt the selected element but retain all of its previously issued orders. Clicking Halt Command again releases the element to act.

    h.   **Game Time.** The time remaining in the Game User Interface. This counts down to zero when the game will end.

    i.   **Mission Time**. The time displayed at the top right of the field of view based on the scenario in 24 hrs format.

11.   **Format**. For familiarity with a military audience the tutorial will be conducted in the format laid down in chapter 1 of Reference B:

    a.   Planning and Preparation.

    b.   Suppressing the Enemy.

    c.   The Assault.

    d.   The Fight Through.

    e.   Exploitation.

    f.   Reorganisation.

12.   **Tutorial Initiation Procedure.** Start *CMSF2* and select '**Battle**' from the main menu (fig 5). Scroll through the list of available scenarios until you see '**UK Fight Club Platoon Attack Tutorial v1**'. Select '**Fight**" and then select '**Blue Force Attacker'** (fig 6). Choose '**1 Player – Real Time**' and '**Iron**' settings then click '**OK**' (fig 7) you should then see a loading screen before starting the in game activity.

Figure 5: Main Menu (with modified background).

Figure 6: Combat Force Selection Menu. Only Two sides are available.
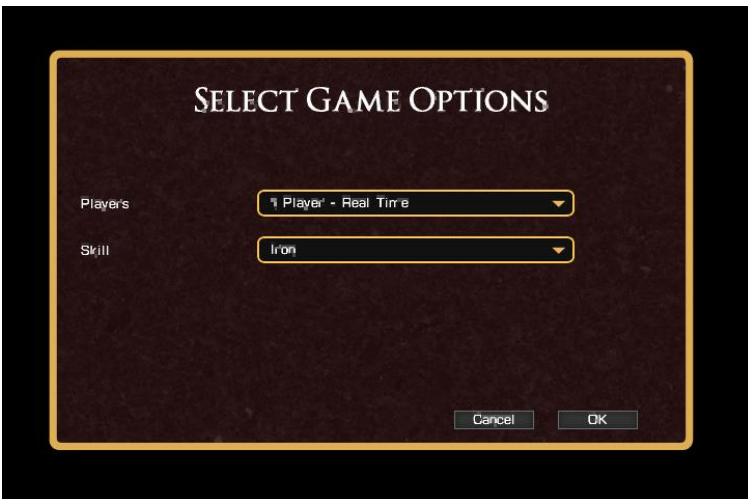

Figure 7: Game Options Menu detailing number of players and the mode of play (real or turn based) and the skill level (more appropriately referred to as realism) Iron is the realistic setting and should be used as standard.
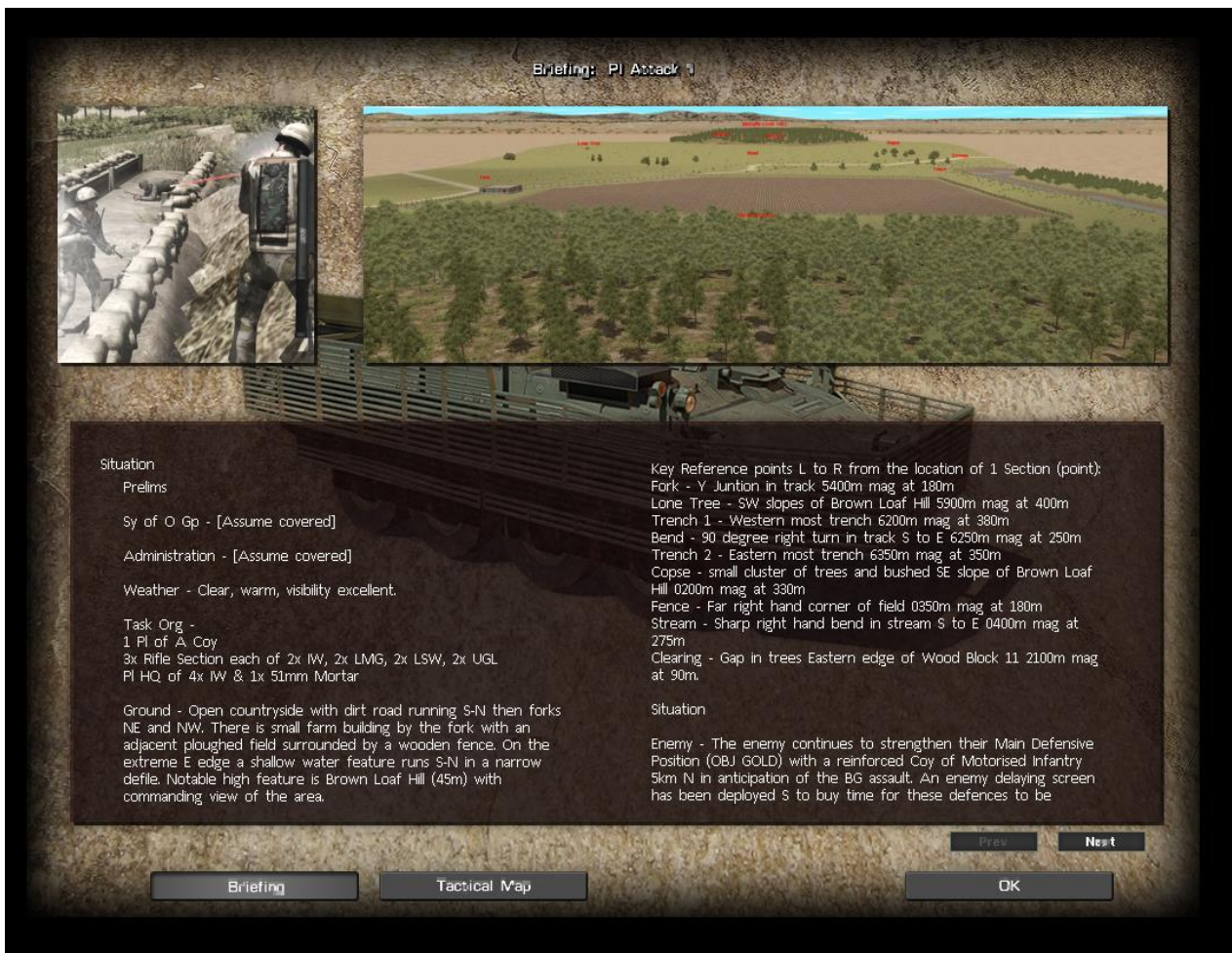
Figure 8: The briefing screen(s) containing an image, map and the orders for the mission. These may be over multiple pages. This is the last screen before entering the game engine itself.

13.   **Planning and Preparation.** In this phase we will review the orders as given by the OC (these have been extracted down to Platoon level and deliberately stop at the Concept of Operations to allow you to develop your own if required). The first activity is for you to receive your Orders from the scenario briefing screen(s) and consider the ground from the tactical map. At this point it may be of value discussing the Platoon Mission in terms of in game outcomes – what are you expected to achieve before moving into the construction of a course of action. In the interest of time two pre-prepared Courses of Action (CoAs) have been created for you to consider (fig 9 & 10). This tutorial will enact CoA 2 but either can be applied or indeed, a third CoA or a variation of the two. When you are ready click the '**OK**' button to proceed to the in-game screen.
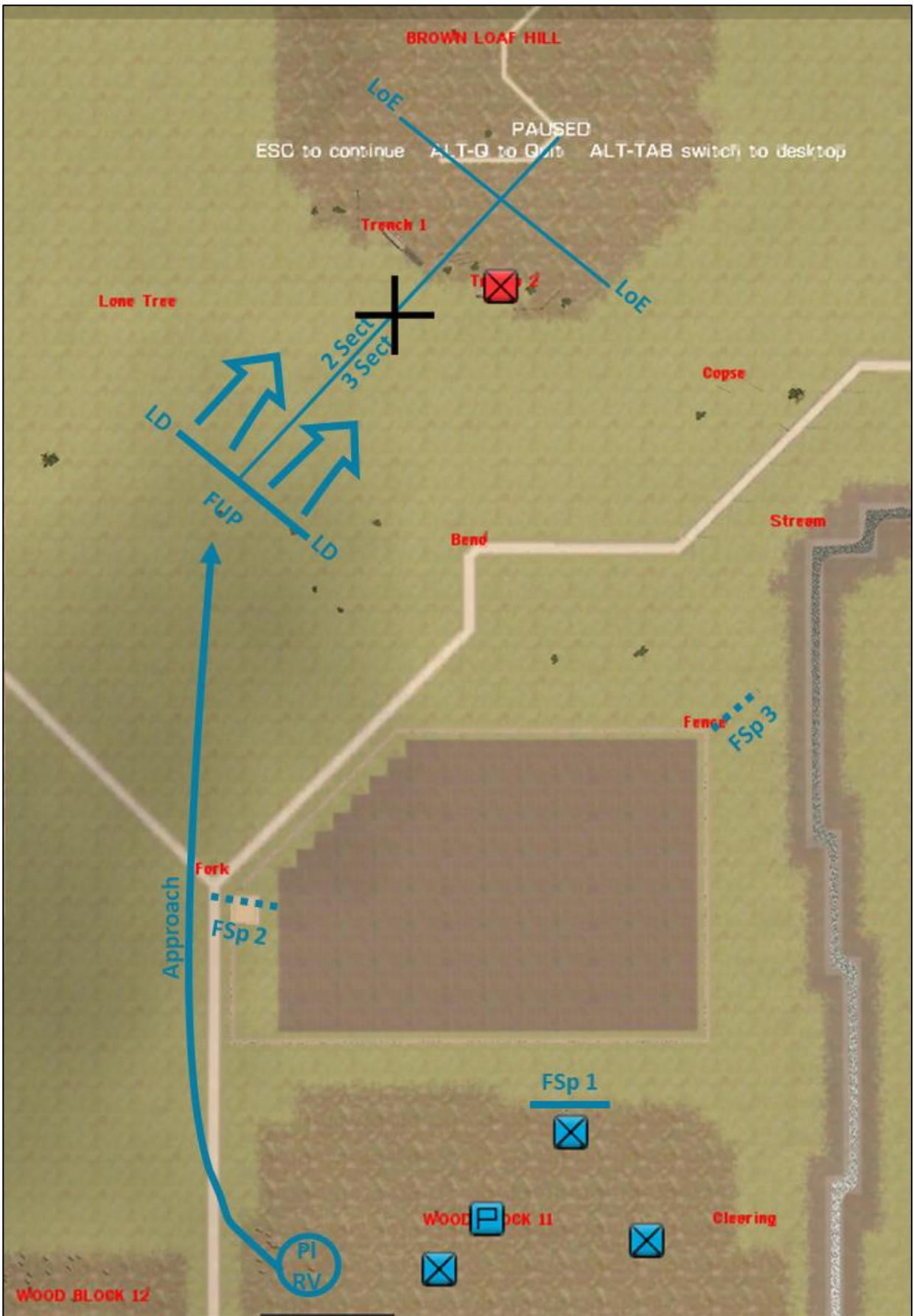
Figure 9: CoA 1 Two Up Left Flank with BG Mortars delivering Smoke to mask both enemy positions. Organic Fire Support can remain at FSp1 but risk becoming masked early, move to FSp3 for potential Enfilade fire or move to FSp2 as a close in reserve.
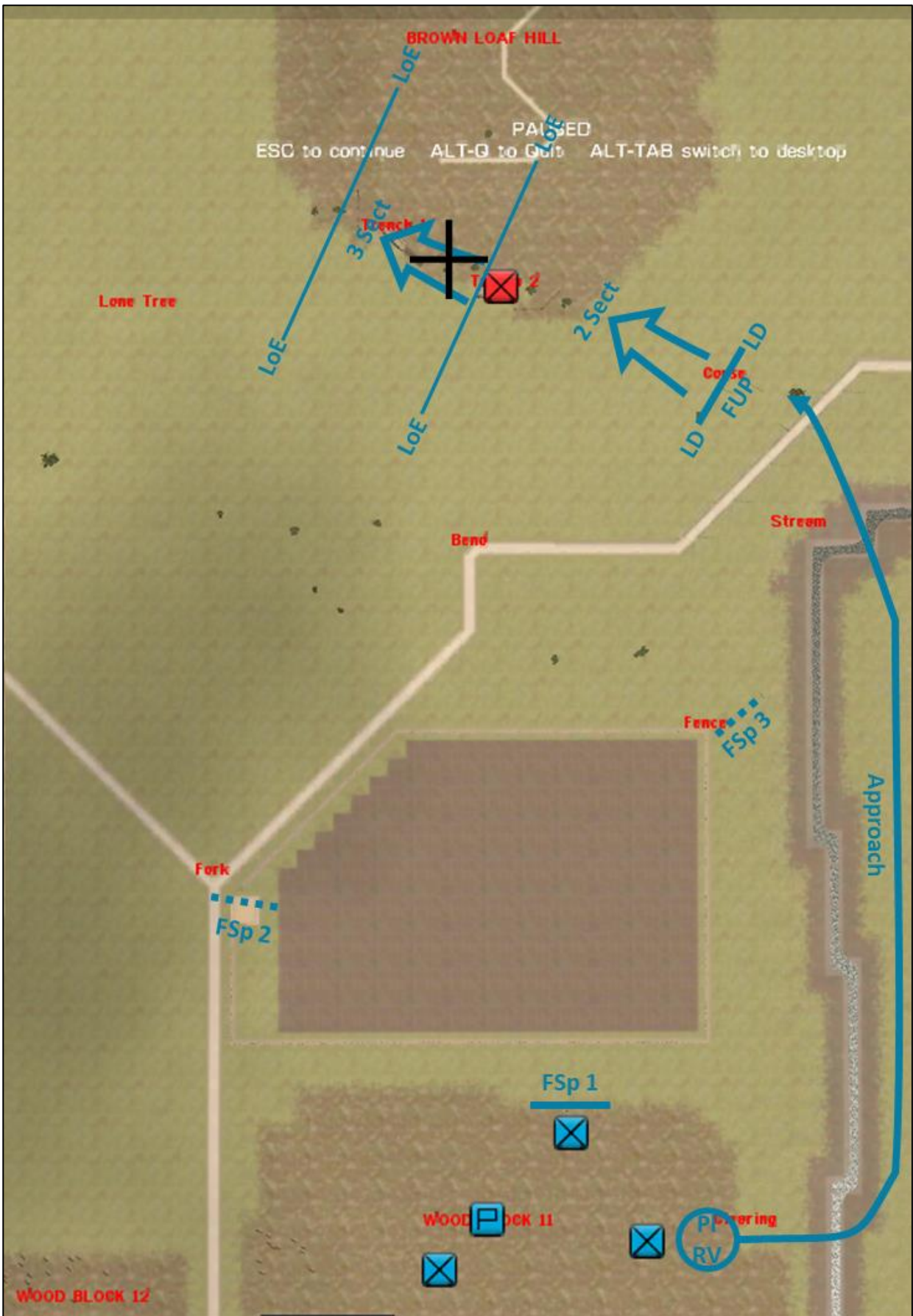
Figure 10: CoA 2 One Up Right Flanking attack using the low ground by the stream as a concealed approach with BG Mortars Harassing Fire onto the enemy positions for the duration of the move. Sections will then assault in sequence with Organic Fire Support from FSp1 then either to FSp2 to cut off fleeing troops to the W or to FSp3 to become a ready reserve.

14.   You are now in the 'Setup' part of the scenario. This is the game equivalent to a 'zero time' prelim movement and deployment. Take some time to move the view around the map, see if you can spot the landmarks that were provided in the orders and locate your platoon elements. Your three rifle sections and Pl HQ have been prepositioned for you (fig 6). 1 Section is on point observing Brown Loaf Hill from the forward edge of Wood Block 11. 2 Section is rear left and 3 Section is rear right with Pl HQ centrally located. The game is paused at this point but you can do two important actions in the setup. The first is to redeploy your troops to new locations within the authorised deployment zone (blue). To do this select an element icon and press the '**N**' key then click a terrain tile within the blue area. The second thing you can do is to issue starting orders to elements ahead of the battle's start. This is useful for executing a pre-planned attack but is less useful when you have an insufficient understanding of the situation. As you know that you will be right flanking try redeploying your Pl HQ and 3 Section to the vicinity of 2 Section on the right.

Figure 11: Your Rifle Platoon in the shaded blue setup area of the map. 1 Section is at the forward edge of the wood block.

15.   Try orientating the elements in all round defence by altering their facing; select each element's icon and press the '**G**' key and click a point on the ground you want the element to face (remember to adjust facing in the future or the troops will revert to facing back to the original point you indicated).
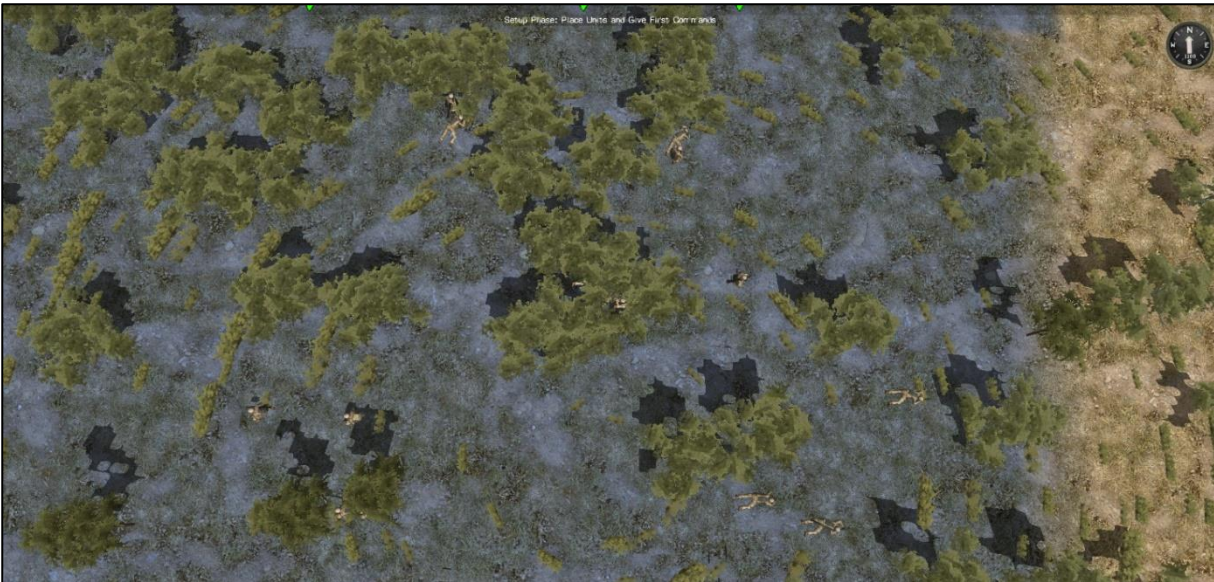
Figure 12:Pl HQ 2 and 3 section 'redeployed' to the edge of the deployment zone and in all round defence.

16.   **Suppressing the Enemy**. Now that the Pl (less 1 Section) is staged on the right-hand side you need to establish the indirect fire plan for your chosen CoA. *The procedures outlined here concern indirect fire but the methodology is almost identical for Air and Avn*. Creating fire missions in the setup phase means that the fire mission is considered 'pre-planned' – it will not require spotting rounds and can arrive at the start of the mission time (if that is what you want). 1 Section will provide the 'spotter' for this fire mission so select their element icon. Click on the **Orange Artillery** Icon in the unit panel and select the **Mortar Icon tab** (fig 15). You will now be presented a series of options to compose the fire mission. The first three options concern the target: *Point Target*; *Area Target*; and *Linear Target*.

17.   Select the **Area** target and move over to the enemy trenches. Place the strike point cursor midway between the enemy trenches and left click, now move your cursor outwards to create a green flashing circle (fig 13). This is the target area for the mortar barrage. Once you are happy left click again.

Figure 13: 1 Section's call for fire location and a diameter of 82m sufficient to cover both enemy trenches. The Ural truck is less of a threat but this could also be included. The greater the area the greater the dispersal of rounds.

18.   You will now be presented with an option for how many guns/barrels/tubes of artillery you wish to fire. As we have two trenches, we are going to need all three. The next option is the Type of Mission:

Emergency – no spotting rounds, otherwise like Heavy (not available for pre-planned artillery strikes)
Harass - very slow ROF to conserve ammunition
Light - slow ROF, remaining at slow ROF
Medium - medium ROF, then going to sustained ROF
Heavy - max ROF, then going to heavy sustained ROF
Precision - single round, fires up to one precision guided shell per tube at the target. Only available for Point Fire targets. No spotting rounds, and Adjust is not available.
Smoke - medium ROF, firing smoke ammunition to create a smoke screen rather than explosive ammo to damage or destroy the target

19.   Select **Harass** to conserve mortar ammo over the duration of the assault move. The next option presented is the duration of the fire mission:

Quick - 2-4 rounds
Short - 6-12 rounds
Medium - 12-18 rounds
Long - 20-28 rounds
Maximum - exhausts ammo supply

20.   For this fire mission select **Short** (this will produce five minutes of fire (see the conversion table below). The next option is the effect or what you are trying to do damage to: 1) General; 2) Personnel; 3) Armour. As we are firing at infantry, we will select **personnel** which will increase the number of airburst munitions. The next option is when we want the fire mission to occur, immediately, in 5 minutes, 10 minutes or 15 minutes. Select **5 mins** to give us time to do some confirmation of the enemy dispositions. This also means we will need to synchronise movement with fire at mission time at 11:05 left so we want our mission to commence immediately. Finally, you are presented with the choice to confirm the fire mission or cancel it. Ensure you check all the elements are accurate before **confirming**. You should hear an audio clip (in US or UK accent) indicating the fire mission has been submitted. Note that you can only totally cancel the mission and restart from scratch rather than amend each prior option.

UK BG Mortar Fire Mission Conversion Chart												
Duration	**Quick (2-4)**			**Short (6-12)**			**Medium (12-18)**			**Long (20-28)**		
Mission \ **Barrels**	1	2	3	1	2	3	1	2	3	1	2	3
Emergency!	<1	<1	<1	<1	<1	<1	1	<1	<1	2	2	1
Heavy *(max to sustained RoF)*	<1	<1	<1	<1	<1	<1	1	<1	<1	2	2	1
Medium *(medium to sustained RoF)*	<1	<1	<1	1	1	<1	2	1	1	3	2	2
Light *(slow RoF)*	<1	<1	<1	1	1	1	3	2	2	4	4	4
Harass *(very slow RoF)*	1	1	2	3	4	5	9	7	9	13	15	12
Precision *(single round)*	N/A											
Smoke *(medium RoF)*	<1	<1	<1	1	<1	<1	1	<1	<1	1	<1	<1

Table 1: A conversion chart showing the total duration of a fire mission in game minutes after selecting various options in the in-game menu. This has been tested 'in game' on UK BG mortars only and is indicative as opposed to 100% accurate.

21.   Press the **'Game Turn'** button (flashing red button) when you are ready to commence the mission. The Game Time counter on the right of the Game User Interface and the Mission Time Clock (top right in the compass) should now be ticking down and up respectively. Press '**4**' to get a good overview of the area of operations and let 30 seconds elapse before pressing the **'Esc'** key again to pause (fig 14).
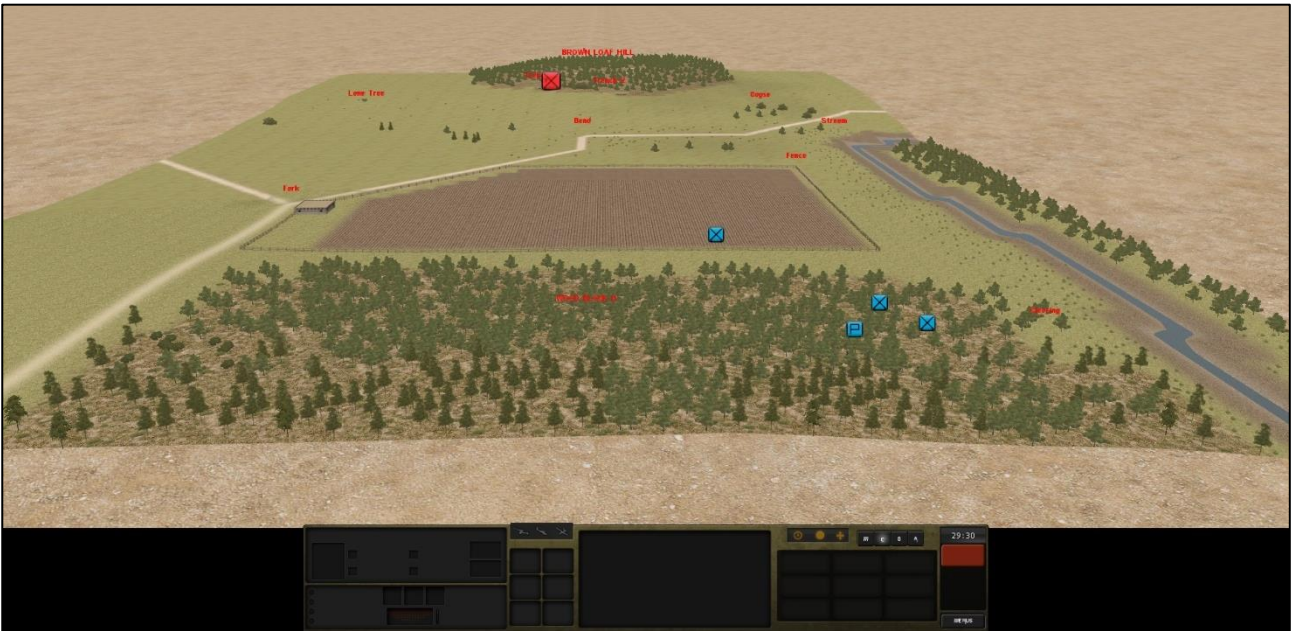

Figure 14: It looks like some enemy have been spotted in trench 1.

22.   Select 1 Section's icon and press '**tab**' to lock the view to this element. Press '**1**' to jump to a ground level view from the element's position and do some fine tuning with the view until you can see Brown Loaf Hill. Now click the '**Orange Artillery**' icon and then the '**BG Mortar'** icon (fig 15).

Figure 15: View from 1 Section's perspective. The pre-planned fire mission line is shown in green. The Fire Mission window indicates the total length of the fire mission will be 4 minutes.

23.   Close the artillery pop up window and then press '**Game Turn'** button and let another 30 seconds elapse to see if 1 Section can spot any more of the enemy (fig 16).
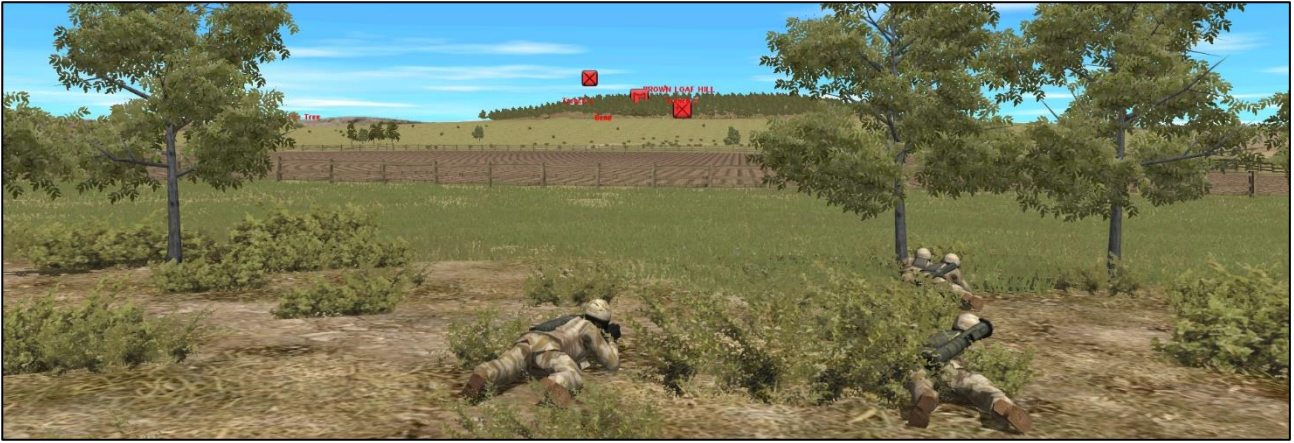
Figure 16: 1 Section have now spotted three groups of enemies: two infantry elements and a light vehicle of some kind.

24.   In the additional 30 seconds 1 Section have spotted two more enemy elements. Let's zoom in to get a closer look. Keep the view central between the two trenches and press '**X**' key to zoom in and observe the enemy more closely (fig 17).

Figure 17: Zoomed to 8.7x magnification out of a possible 20x zoom. The individual enemy soldier in Trench 1 is visible but little else.

25.   Now let's look at it from the enemy perspective (**note that you can't do this in real life so this should be used as a training aid and not in adversarial combat scenarios**). Press '**tab**' to unlock from 1 Section's view and then '**Ctrl Left Click**' near the trench and the camera will jump to that location. Move forward until you are right up at the trench then press '**V**' key to flip the camera 180 degrees to look back at the ground from the enemy's perspective (fig 18).

Figure 18: View from Trench 2. The enemy probably hasn't spotted 1 Section yet. Think about what arcs this position has and where it cannot see.

26.   Press '**Q**' key to swivel the camera left and then '**W**' key to pan forward to the other enemy trench and observe its likely arcs (fig 19).

Figure 19: View from Trench 2. No enemy has been seen in this trench yet. It could be unoccupied. Based on its arcs where is the enemy concentrating their observation and firepower?

27.   Move the camera back to the Pl HQ and press '**3**' key to get a slightly higher view, then '**V**' to turn back to face the enemy trenches. Select the HQ icon (fig 20) then press the '**Game Turn**' button.

Figure 20: Pl HQ's situational awareness. Note it knows about the enemy in Trench 1 (red icon) but as yet not about the others. It has knowledge on 2 and 3 sections who are collocated but only a basic understanding of 1 section's location by the faded blue icons.

28.   It is time to issue the movement orders for the rest of the platoon to move to the designated FUP. To select all three icons at once press 'shift and left mouse button hold' and drag a selection box over the icons or troops on the terrain (fig 21).
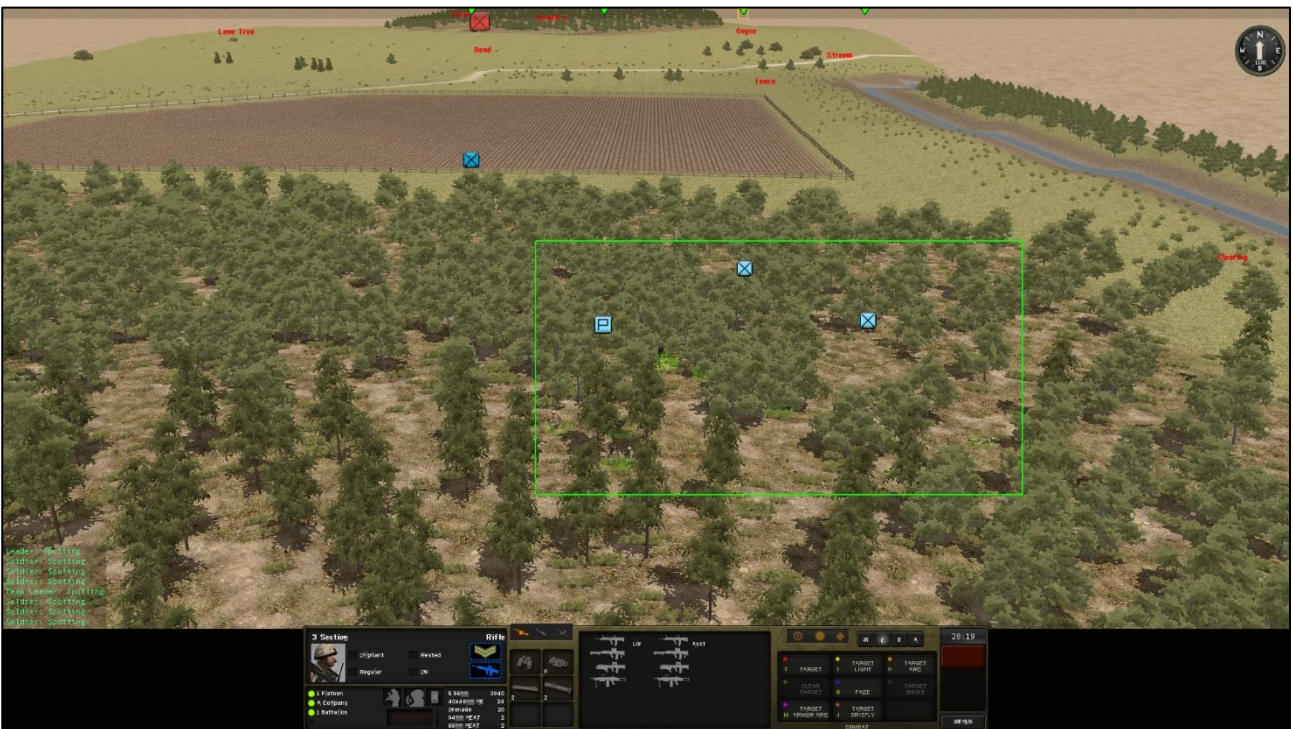

Figure 21: Selection box over multiple element icons allows orders to be given to multiple elements.

29.   Although only a single element's information will appear in the Game User Interface you will be giving orders to all three elements. Press '**N**' key to issue a '**Move**' command and then select a terrain tile at the edge of the wood near the clearing landmark. A blue movement line will extend from one of your elements to that location. To avoid the sections in the Pl RV being seen issue the '**Hide**' command with the '**H**' key. All three elements will start movnig twards their waypoints. **Select** the other elements icons indivudally to see how they have waypoints different to the previous elements waypoint, mirroring the laydown they were in when the command was given.

Figure 22: Pl HQ, 2 and 3 Sections in the Pl RV in hide mode to minimise their exposure to enemy observation.

30.   We are now going to order the Pl (less 1 section) to move to the FUP but we don't want them to move just yet. Select the elements in the clearing and press the '**Halt**' instant command 🕐 button (fig 23).

Figure 23: All three elements have been given the Halt Command which means all orders issued to them will not be carried out until the Halt command is rescinded.

31.   Now you can issue orders to them without them bursting out of the RV before the fire mission starts landing. Press '**7**' to move the view to an overhead for simplicity. Now select the Pl HQ and press the '**I**' key to issue a quick command. Enter waypoints that move the Pl HQ over the stream and into the woods on the far side. Now press the '**N**' key to change to a move command and set

waypoints through the wood towards the stream bend. Press 'I' again to quick move over the stream keep placing waypoints through the wood and across the stream again to the copse and the FUP (fig 24).
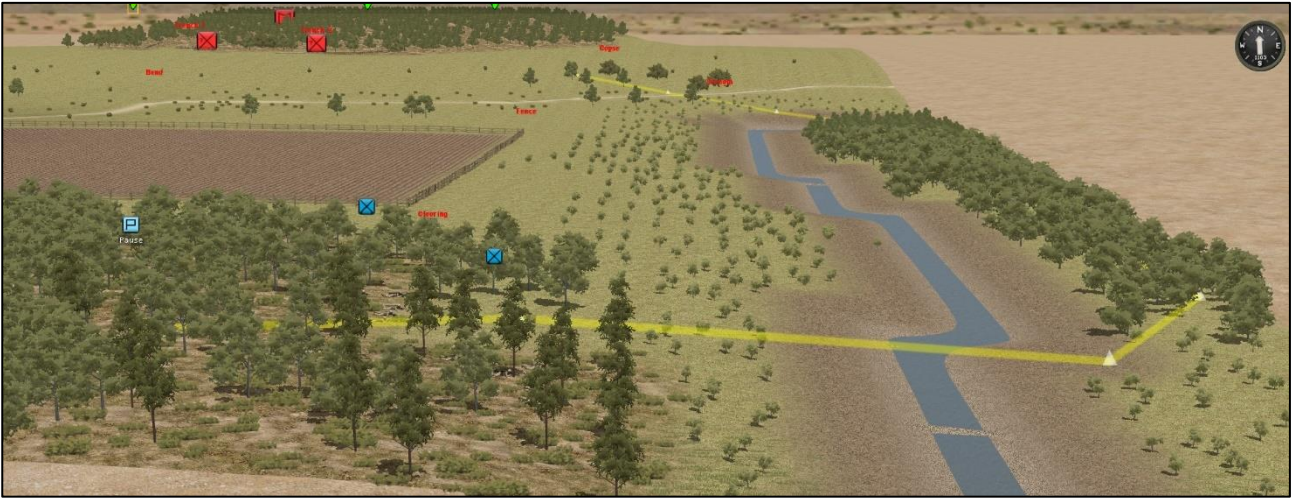

Figure 24: The route for the Pl HQ from the Pl RV to the FUP. The triangles denote each waypoint and the AI will try to move as the crow flies between them. Note that although the game is not paused the element does not execute the command because of the previously issued halt command.

32.   Now issues similar orders to 2 and 3 sections. It is worth updating the facing of the assaulting elements by pressing '**G**' and selecting the respective trenches they will assault. This will keep them orientated towards the enemy as they move. In the final moments before the BG mortar fire starts let's check on what we can see in the enemy position. Move to and observe closely each enemy trench location.

Figure 25: Trench 2 appears to have at least two riflemen and an RPG gunner.

Figure 26: More worrying is Trench 1 which has a sharpshooter and an LMG. This sort of visually cued information is useful in crafting your detailed tactics.

33.   **The Assault**. Everything is set for the approach. Move back to the platoon and take a view across the battlefield ready for the mortar barrage. Once the rounds start landing the enemy will take cover and the movement to the FUP should start. Identify the element you want to move first (the Pl HQ by doctrinal tradition) and be ready to press the '**Halt'** command to release them from the Pl RV.
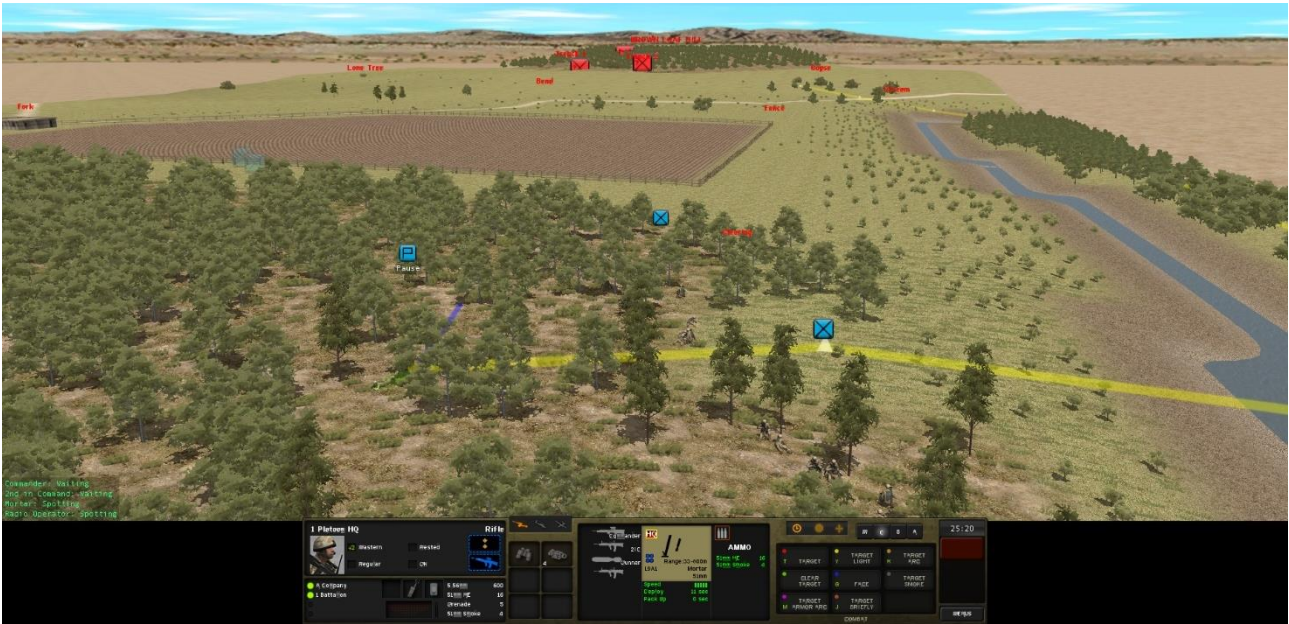
Figure 27: Pl HQ poised to break out of the Pl RV onto the approach route once the mortars suppress the enemy positions.

34.   You will hear the mortars before they impact. Observe Brown Loaf Hill for the detonations and airbursts. Move over to the enemy trenches to see how they are reacting (fig 28).

Figure 28: The enemy has dropped below the parapet of the trenches resulting in a change in their icon to one with a question mark. You will be unable to determine the effect of the fire mission in terms of casualties on the enemy till the assault begins.

35.   It's time to release the elements from the Pl RV. Click the '**Halt'** command to set the Pl HQ off and once a sufficient gap has been created follow by releasing 2 Section then 3 Section. Watch the troops move off on the approach and see of the enemy reacts to them with fire (fig 29).

Figure 29: A mad dash across the stream as Brown Loaf Hill takes fire in the background. Such a bunched target is not advised in view of an unsuppressed enemy.

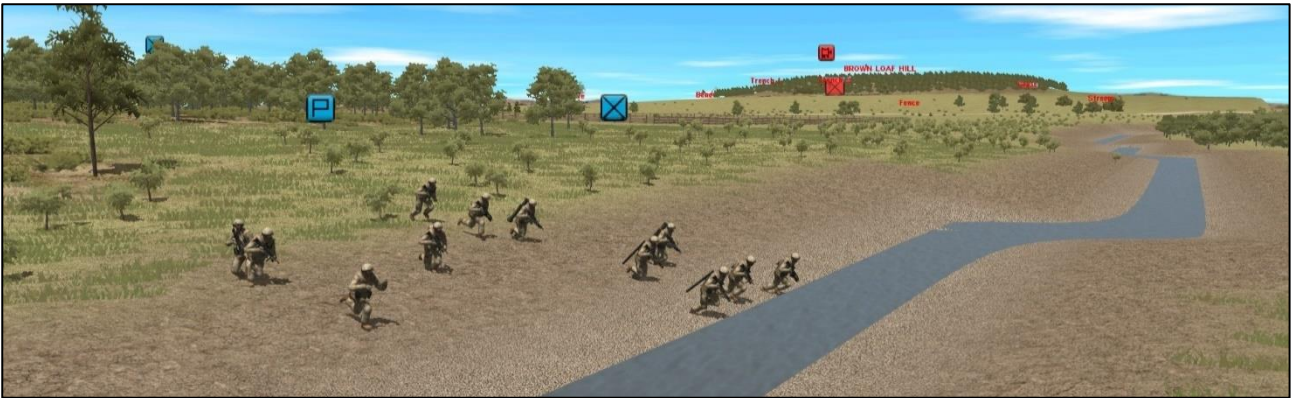36.   To check on the remaining duration of the fire mission select any element then click the orange artillery icon and select the firing BG mortars. Click on 'Go to Spotter' to jump to the element that originally called the fire mission (fig 30). You should now see the words 'FIRING' and the time remaining. Note that CMSF2 deals in absolute minutes so 3:59 of fire would show as 3 mins. Only once the mission has less than 60 secs does the <1 min appear.
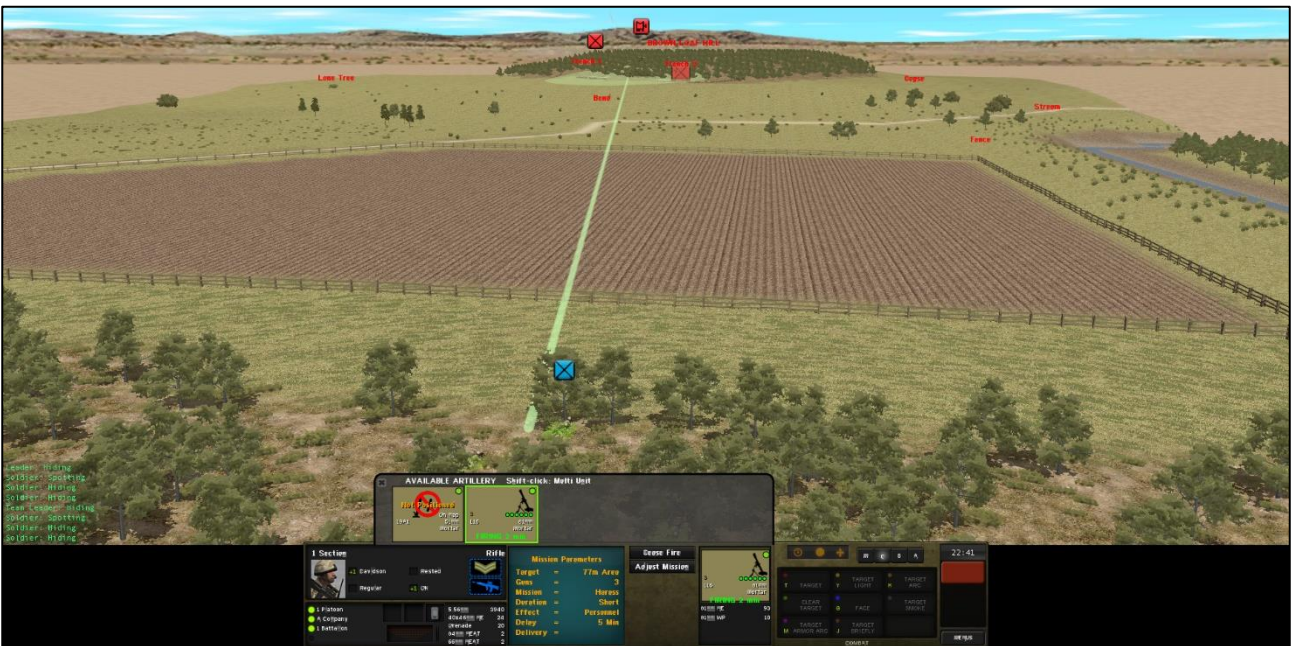
Figure 30: The BG mortars fire mission has approx. 2 mins remaining.

37.   Once the fire mission has less than a minute to run, we will need to set up an organic Fire Sp position centred on 1 Section. As we have two enemy trenches to cover rather than just one, we will need an arc of fire as opposed to a single point of fire. Select 1 Section's icon and press the '**K**' key to establish a target arc command. Move the cursor over to the W side of trench 1 and click. Now move the cursor over to the right of trench two and click again. You should now see a shaded arc over the terrain. If you are not content with the dimensions of the arc press '**delete**' and re-attempt. You may also need to press '**H**' to unhide 1 Section now they will be engaged in a firefight.
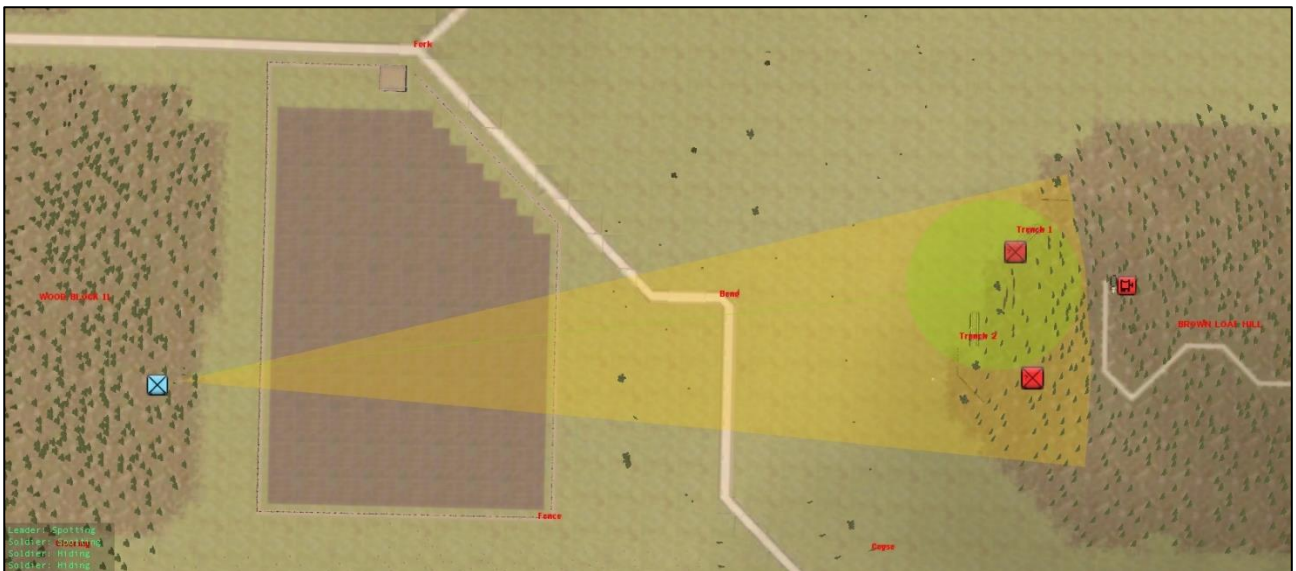
Figure 31: 1 Section's target arc covering both trenches. If the enemy appears within this target arc they will be engaged.

38.   Now check back with the assaulting troops in the FUP. They should have arrived but notice their respective levels of fatigue – likely to be either Tiring or Tired. Press the **'Esc' key** to pause the action and consider the next steps.

Figure 32: View from the FUP towards the enemy trenches. The troops will be exposed to enemy fire once they crest the slope.

39.   To ensure the enemy in Trench 1 are fully suppressed select 1 Section's icon and press '**T**' for the target command and click on one of the two terrain tiles that trench 2 sits on. Now select 3 Section's icon and press the '**K**' key and place a target arc to provide flank protection (fig 33).
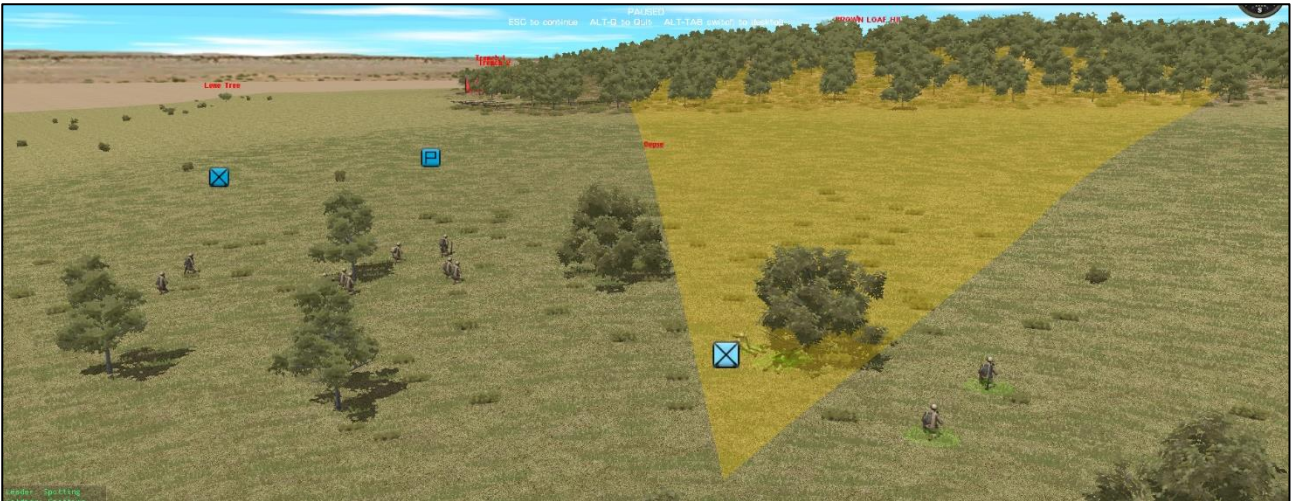
Figure 33: 3 Section provides flank protection for 2 Section's assault on Trench 2.

40.   Now to initiate the assault select 2 Section and press the '**L**' key to issue an assault command. The assault command will order the element to fire and manoeuvre by teams towards the selected terrain tile. Place the cursor on one of the tiles of trench 2 and click (fig 34).

Figure 34: 2 Section's assault axis towards Trench 2 shown in red. The section commander will control the fire and manoeuvre.

41.   It's now time to launch the assault. Press the **'Esc' key** to re-commence the game (fig 35).

Figure 35: 2 Section's fire teams bound forwards as direct fire from 1 Section hits the trench. The section commander is going to break in to the right of the wired entrenchments. Let's hope there are no mines there!

42.   **The Fight Through**. Once 2 Section has line of sight onto trench 2 you can order them to target the trench by pressing the '**T**' key (fig 36). This works in addition to the assault command. Once 2 Section begin firing you can switch 1 Section's target command from Trench 2 to Trench 1 to suppress the enemy there.

Figure 36: 1 Section's assault route with target order to guarantee fire is going down on the enemy trench. The angle of fire will reduce the effectiveness of the trench's defences.

43.   As the lead edge of 2 Section reaches the trench press the 'delete' key to cancel their target command. The troops will now only fire if they directly observe an enemy.

Figure 37: 1 Section Commander and their grenadier fight through the position. At least two enemy casualties can be seen in the trench meaning the remainder may not yet have been discovered or have fled somewhere else...

44.   When 2 Section is complete in Trench 2 issue a target order onto Trench 1. This close in fire will be more effective than 1 Section's fire that is some 300m distant. You can now either start to move 1 Section to re-join the Platoon or keep it in place and issue a target arc to watch and shoot any enemy that flee from Trench 1. It is now time to echelon 3 Section onto Trench 1. Select their icon and issue a quick command with the 'I' key and follow the proven route (figs 38-39).
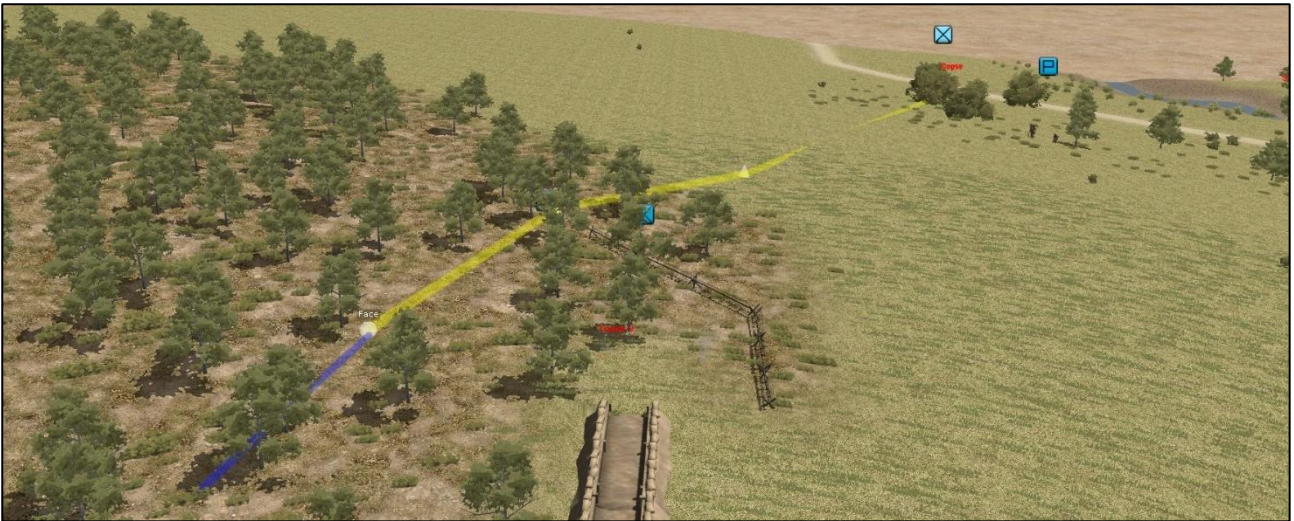
Figure 38: 3 Section's route to bring them up in line with 2 Section, from where they can launch onto Trench 1. Note the updated Face command to ensure the section is orientated correctly.

Figure 39: It looks like 2 Section did trigger a mine on their assault route. The mine marker symbol is the only in game identifier you will be able to see. Click and drag the triangle waypoint of the following elements to avoid the minefield or risk further casualties.

45.   When 3 Section has completed its move select a top down view and press the '**Esc**' key to pause the game. With 2 Section providing close in fire support we now have the option of splitting 3 Section into its two fireteams to deal with Trench 1 and the enemy vehicle on the dirt track which could be housing further enemy soldiers.
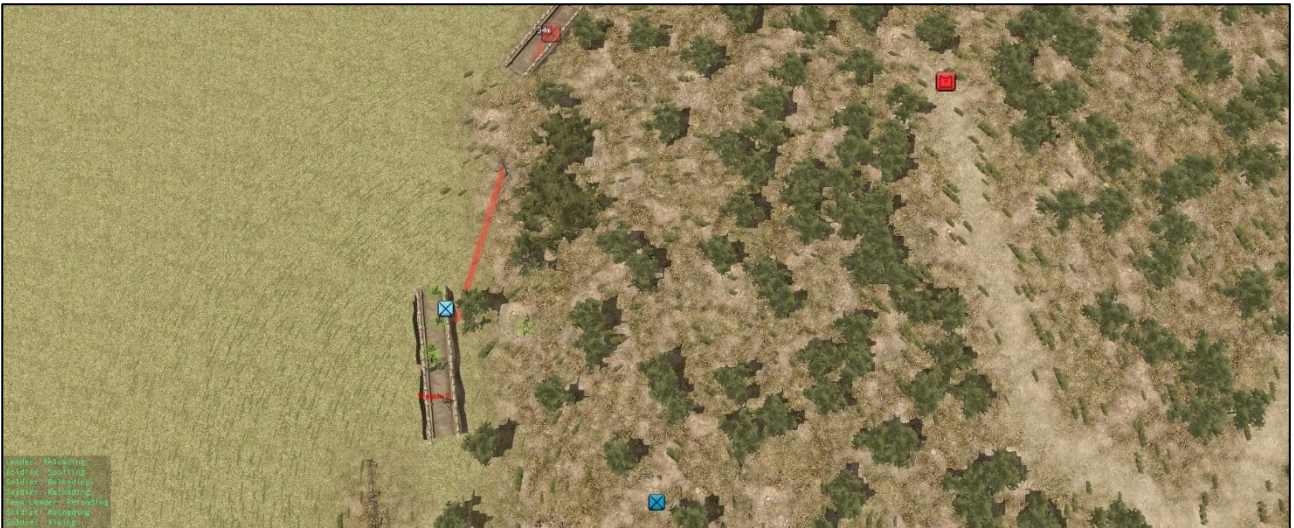
Figure 40: 2 Section's target command line is visible on the left and 3 Section is ready to go but that enemy vehicle on the right could be housing more troops that would pose a risk to the flank of an assault.

46.   Select 3 Section and in the Command/Orders menu select the '**A**' tab for Admin Commands. Click the '**Split Teams**' option to break the section into Charlie and Delta fireteams. Note that other combinations are available but this give the most balance option for any eventuality. You should now have two icons instead of one. Select Charlie Fireteam (denoted by the 'Ldr' text in the team info part of the Game User Interface) and press '**I**' to issue a quick command into the trench. Now select Delta Fire team and press '**U**' to order a hunt command and select the approximate location of the enemy vehicle (fig 41). Note that once an element has been sub divided it cannot be reunited during the same mission. You will need to weight the additional flexibility of sub team vs the increased command burden of ordering them individually.

Figure 41: The assault path of 3 Section's Charlie Fireteam maximises the duration of 2 Section's fire meanwhile Delta Fire Team will cautiously advance towards the enemy vehicle.

47.   Once Charlie Fire Team makes it to the 90-degree waypoint select their icon and press the 'backspace' key to cancel their next order. They should go to ground and wait. To provide a last bit of concealment press the ';' key to issue the 'pop smoke' command. Once the smoke has been thrown re-issue the quick command (or alternatively issue a 'slow' crawl command by pressing the '**O**' key) and then order 2 Section to cease fire by selection their icon and pressing the '**delete**' key (fig 42).

Figure 42: 3 Section Charlie Fire Team conducting their fight through. Getting the timing of fire support is crucial to either prevent the enemy from returning fire or avoiding friendly casualties from fratricide.

48.   Watch the fight through occur on Trench 1 (fig 43) but also be aware that Delta Fire Team will be closing with the enemy vehicle.

Figure 43: A successful clearance of Trench 1 by 3 Section's Commander with no casualties.

49.   **Exploitation**. Now would be a good time to pause the game by pressing the '**esc**' key. Press '**4**' to get a higher view of Brown Loaf Hill (fig 44). Take stock of the situation; how many enemies are accounted for, where are your troops, how many casualties do you have, what are the ammunition states of the sections?

Figure 44: Situation on Brown Loaf Hill post Trench 1 assault. 6 enemy casualties are accounted for meaning there could be up to 3 more still effective somewhere on the hill. You know they haven't driven away because the vehicle has been neutralised.

50.   It's entirely possible that the remaining enemy could call down a fire mission on the hill as a last ditch effort despite risking their own lives. You have two options here: either stay and adopt the best cover available (the enemy trenches perhaps) or move off at least 200m. Since your mission is DESTROY the CSOP on Brown Loaf Hill moving off may be better to stay put but seek cover. Order any elements that are outside of the trenches into them with a quick command. It would also be a good idea to start 1 Section moving to re-join the platoon as it is the most combat effective section presently. Once 1 Section has linked up you may clear the hill as you see fit, a suggestion would be to use the move and hunt commands alternatively to maintain momentum and not fatigue the troops.

51.   **Reorganisation**. Around this point you may find the mission ends with a black summary screen (fig 45). You will have the option to '**Review Map'** or '**Exit**'. It is strongly advised that you click '**review map'** as there is no AAR/rewind function in CMSF2. Once you click '**Exit**' you will return to the base game menu screen and be unable to review the battle/mission.

Figure 45: End of Mission Summary screen

52.   **Review of Enemy Laydown**. If you wish to at this point you may load up the scenario again and choose to play as REDFOR to understand how they were deployed and cross reference this with your own plan.

Figure 46: Trench 2 was defended by a fire team of four, including an RPG. They have positioned AP mines at the left-hand edge of their barbed wire and have a target reference point for artillery near the far-left hand corner of the ploughed field.

Figure 47: Trench 1 was defended by a fire team of 5 with a Dragunov sharpshooter and an RPD LMG. There is a target reference point adjacent to the building along the roadway and another one between the two trenched for Final Protective Fire. The CSOP was linked to a section of mortars and could have brought these onto the attacking platoon.

Figure 48: Obstacles are very easy to overlook. They channel movement and therefore are used by the defender to place attackers at some form of disadvantage. Most basic tactics involve flanking so consider how your opponent will protect their flanks – very rarely will the answer be 'nothing'.

53.   **Additional Utility**. This scenario file can be used for the following additional benefits:

a.   Conducting a 'virtual TEWT' using the orders as given, followed by an execution of an agreed-on plan by a student.

b.   Reverse virtual TEWT by providing the tactical problem from the enemy perspective and adjusting the laydown of the enemy (this requires familiarity with the scenario editor function) accordingly.

c.   Practising full vs hasty Combat Estimates or other planning methodologies (see Maj G Long's Combat Journal 2019 article on 'The 3 Step Estimate' as an example).

d.   Competition. See who can accomplish the mission in the fastest time with the least losses

e.   As a vehicle for tactical discussion. Bring in actual section commanders and pause the game at regular points and invite their opinion on section level tactical employment.

f.   As a terrain template for variations on the same theme. Add/remove enemy and friendly forces/capabilities and change the base orders (this requires familiarity with the scenario editor function).

54.   **Next Steps**. Having successfully completed the tutorial we recommend you complete the five-mission series of Fight Club's 'OPERATION RISING MOON' Campaign. This is available on the Fight Club Slack in the relevant mission threads. It is also advised to review the experiences of the wider CMSF2 user community on YouTube of particular note is the blogger Usually_Hapless.

55.   **Summary**. By the end of this tutorial you should be familiar with the fundamentals of the game engine within Combat Mission Shock Force 2. More importantly, you will understand what it simulates well, what it simulates adequately and what it does not simulate. Bear this in mind when using it as a training or instructional tool. Ultimately, the best results will be achieved by human vs human interaction with the simulation as a vehicle for discussion as opposed to outright arbitration of 'winner' and 'loser'. The important thing is that everyone learns and learns now, left of the next battlefield. For those who might feel daunted by the depth of this simulation – this tutorial scenario was conceived, designed and constructed by a staff officer with zero prior experience of Combat Mission games; just plenty of willpower and, of course, sets and reps. Good Luck Fighters!

#IronSharpensIron

#ThinkFightLearnRepeat

[Electronically Signed]

Fight Club

Warrior Council
Fight Club
British Army

CMSF2 KEYBOARD LAYOUT QUICK REFERENCE SHEET

Alt + B	Alt + C	Alt + E	Alt + H	Alt + I	Alt + J	Alt + K	Alt + L	Alt + M	Alt + P	Alt + Q	Alt + S	Alt + Z
Toggle Bright Night Graphics	*Toggle Camera Shake*	*Toggle Screen Edge Panning*	*Toggle Vehicle Hit Description*	*Toggle Floating Icons*	*Toggle Show Objectives*	*Toggle Smoke*	*Toggle Show Landmarks*	*War Movie Mode (grainy)*	*Show all move paths*	*Quit*	*Toggle Sound On/Off*	*Toggle Visible C2 Links*

esc — *Pause Game*

Horizontal | Oblique | Top Down

1	2	3	4	5	6	7	8	9
Altitude Level 1	*Altitude Level 2*	*Altitude Level 3*	*Altitude Level 4*	*Altitude Level 5*	*Altitude Level 6*	*Altitude Level 7*	*Altitude Level 8*	*Altitude Level 9*

← *Delete last waypoint*

TAB — *Lock view to element*

Q	W	E	R	T	Y	U	I	O	P	[	]	Del
Swivel Left	*Pan forward*	*Swivel Right*	*Raise Camera*	*Target*	*Target Light*	*Hunt*	*Quick*	*Slow*	*Pause*	*Dis-mount*	*Open Up*	*Clear Target*

A	S	D	F	G	H	J	K	L	;
Pan Left	*Pan Back*	*Pan Right*	*Lower Camera*	*Face*	*Hide/ Unhide*	*Target Briefly*	*Target Arc*	*Assault*	*Pop Smoke*

Z	X	C	V	B	N	M	/	↑
Zoom Out	*Zoom In*	*Wide Angle*	*Flip Camera*	*Fast*	*Move*	*Target Armour*	*Deploy Wpn*	*Fine Camera*

Space — *Pop Up Command Menu*

\ *Reverse*   ← *Fine Camera*   ↓ *Fine Camera*   → *Fine Camera*

Move the view	**Pan** the view	**Swivel** the view	**Zoom** the view	**Command** Related	**Game** Related

Left Mouse Click

ctrl — *Jump view to point*

Right Mouse Click and Hold — *Swivel View*

Left Mouse Click and Hold — *Pan View*

Middle Mouse Wheel — *Zoom In/out*

Right Mouse Click and Hold

shift — *Selection Box*

CMSF2 COMMANDS AID MEMOIRE

MOVE

Move (N) — M

Type	Activity	Restrictions
Infantry	Walk (sustainable)	Infantry fatigue and team casualties
Vehicles	Slow (unbuttoned)	Vehicle/crew mobility and going

Tactical Application: Patrol at a walk maintaining good situational awareness but not expecting enemy contact. Good for vehicles moving whilst maintaining good situational awareness.

Face (G) — C

Type	Activity	Restrictions
Infantry	Orientate weapons/seek cover	
Vehicles	Orientate hull/turret	Vehicle mobility

Tactical Application: When you suspect a threat from a particular direction and want your troops to be disposed in a advantageous position. Facing is absolute to a point on the map rather than a compass heading.

Target Arc (K) — C

Type	Activity	Restrictions
Infantry	Overwatch / Watch & Shoot	Cannot mix with target and target light
Vehicles	Overwatch / Watch & Shoot	Cannot mix with target and target light

Tactical Application: Observe an area where enemy elements are known or suspected. Useful in defence to cover sectors of responsibility or in fire support during an attack. Enemies outside of target arc will be ignored unless directly threatening the ordered element.

Pause (P) — S

Type	Activity	Restrictions
Infantry	Hold position	Time limit
Vehicles	Hold position	Time limit

Tactical Application: When you want a particular element to wait in its current location or at a subsequent waypoint before continuing. Useful to sequence movement with another element's fire. Repeated clicks of the pause command will increase the wait time until after 9 clicks to indefinite.

Hunt (U) — M

Type	Activity	Restrictions
Infantry	Slow patrol (tiring)	Infantry fatigue and team casualties
Vehicles	Creep (walk speed)	Vehicle/crew mobility and going

Tactical Application: When contact is expected. Troops will actively look for enemies and be ready to react to fire. Can be used with a target arc. Infantry will tire and require rest pauses before continuing.

Quick (I) — M

Type	Activity	Restrictions
Infantry	Jog (sustainable)	Infantry fatigue and team casualties
Vehicles	Cruising Speed	Vehicle/crew mobility and going

Tactical Application: Move quickly in cover or in area already free from enemy. Do not use when crossing open terrain or likely covered approach.

Fast (B) — M

Type	Activity	Restrictions
Infantry	Sprint (tiring)	Infantry fatigue and equip load
Vehicles	Max speed (min awareness)	Vehicle/crew mobility and going

Tactical Application: Move rapidly across ground that is open or likely to be covered by fire. Only use in short duration or troops will require rest. Do not use when terrain ahead is unknown as risk of ambush high.

Slow (O) — M

Type	Activity	Restrictions
Infantry	Crawl (tiring)	Infantry fatigue and team casualties
Vehicles	Creep (walk speed)	Vehicle/crew mobility and going

Tactical Application: When sneaking close to an enemy or using low terrain feature for cover or trying to remain concealed. Very tiring only for short periods. Useful for vehicles to keep pace with accompanying infantry.

Dismount ([) — S

Type	Activity	Restrictions
Infantry	Disembark vehicle	Cannot be combined with move command
Vehicles	Disembark vehicle	Cannot be combined with move command

Tactical Application: When you are abandoning a vehicle that has become immobilised or otherwise damaged or moving a team from their transport vehicle into an observation post/fighting position.

Deploy Weapon (/) — S

Type	Activity	Restrictions
Infantry	Set up tripod based weapon	Immobilizes element
Vehicles	N/A	N/A

Tactical Application: Establish a fire support position with MGs, an anti tank position or a mortar line as required. Ensure direct fire weapons have line of sight to targets or engagement area before you deploy.

Hide/Unhide (H) — S

Type	Activity	Restrictions
Infantry	Go prone and hold fire	Cannot hide until stationary
Vehicles	Turret down and hold fire	Cannot hide until stationary

Tactical Application: When you wish to keep elements concealed from the enemy such as in a forward assault position, in an ambush or an observation point. This is the only command that HOLDS FIRE.

Halt/Hold

Type	Activity	Restrictions
Infantry	Halt all activities	Until Pause Clicked again
Vehicles	Halt all activities	Until Pause Clicked again

Tactical Application: When you want to stack commands for an element but don't want it to execute until other conditions on the battlefield have been met – such as a call for artillery.

FIGHT

Target Arc (K) — C

Type	Activity	Restrictions
Infantry	Overwatch / Watch & Shoot	Cannot mix with target and target light
Vehicles	Overwatch / Watch & Shoot	Cannot mix with target and target light

Tactical Application: Observe an area where enemy elements are known or suspected. Useful in defence to cover sectors of responsibility or in fire support during an attack. Enemies outside of target arc will be ignored unless directly threatening the ordered element.

Target Armour Arc (M) — C

Type	Activity	Restrictions
Infantry	Overwatch / Watch & Shoot	Cannot mix with target and target light
Vehicles	Overwatch / Watch & Shoot	Cannot mix with target and target light

Tactical Application: Observe an area where enemy armour elements are known or suspected. Useful in defence to cover sectors of responsibility or in fire support during an attack. Non armoured enemies will be ignored unless threatening ordered element.

Target Smoke — C

Type	Activity	Restrictions
Infantry	N/A (use Pop Smoke)	N/A
Vehicles	Fire smoke rnd at target	Smoke Ammo and capability

Tactical Application: When you need to blind an enemy element or provide concealment by obscuring a point of observation.

Pop Smoke (;) — S

Type	Activity	Restrictions
Infantry	Throw hand smoke	Smoke ammo and facing
Vehicles	Fire smoke dischargers	Smoke ammo and facing

Tactical Application: When an element is receiving fire or has been observed and wishes to retire to a new position.

Target (T) — C

Type	Activity	Restrictions
Infantry	Rapid Fire / Watch & Shoot	Weapon ranges and ammo availability
Vehicles	Rapid Fire/ Watch & Shoot	Weapon ranges and ammo availability

Tactical Application: When suppressive fire is required on known enemy elements or enemy occupied areas. Area targets will be engaged continuously whereas enemy elements will be fired upon if they emerge.

Target Light (Y) — C

Type	Activity	Restrictions
Infantry	Deliberate Fire	Weapon ranges and ammo availability
Vehicles	Secondary armament	Weapon ranges and ammo availability

Tactical Application: When conserving ammo or the use of heavier natures of weaponry is not required. The enemy may be too distant to justify excessive ammo use or your firing element may be overpowered in comparison.

Assault (L) — M

Type	Activity	Restrictions
Infantry	Fire and Movement (fast)	Infantry fatigue and team casualties

Tactical Application: Only infantry can assault. When in contact with an enemy you wish to advance towards. A team will break down into two elements and fire and manoeuvre (at fast speed) towards the target. Elements alternate the roles of firing and movement.

Open Up/Close Down (]) — S

Type	Activity	Restrictions
Vehicles	Button Up/Unbutton	

Tactical Application: When you wish the crew inside an armoured vehicle to either unbutton for greater situational awareness trading protection or button up for greater protection trading awareness.

Clear Target — C

Type	Activity	Restrictions
Infantry	Disengage current target	Must have a designated target
Vehicles	Disengage current target	Must have a designated target

Tactical Application: When you no longer want an element to engage a target. Note that elements who are being engaged will continue to return fire in self defence This command also clear the target arc command.

Target Briefly (J) — C

Type	Activity	Restrictions
Infantry	Deliberate fire for 15 secs	Cannot mix with target and target light
Vehicles	Deliberate fire for 15 secs	Cannot mix with target and target light

Tactical Application: For harassing fire or searching fire to prompt a response from hidden enemy elements. Multiple selections add 15 secs to the command so that a set duration of fire can be ordered – useful for fire support.

Evade

Type	Activity	Restrictions
Infantry	Cancel all orders – take evasive action Halt all activities	
Vehicles		

Tactical Application: When you want an element to withdraw form contact or take measures to protect itself immediately.

Bail Out — S

Type	Activity	Restrictions
Infantry	N/A	N/A
Vehicles	Abandon vehicle rapidly	Cannot be combined with move command

Tactical Application: When you wish all crew and passengers to exit a vehicle as quickly as possible.

REORGANISE

Split Teams   A

Type	Activity	Restrictions
Infantry	Split into sub elements	Team numbers – must be stationary
Vehicles	N/A	N/A

Tactical Application: Splits a squad/section into two or three teams for detailed tactical manoeuvre. The AI will try to split teams evenly and according to national doctrine

Assault Team   A

Type	Activity	Restrictions
Infantry	Split into sub elements	Team numbers – must be stationary
Vehicles	N/A	N/A

Tactical Application: Splits a squad/section into two teams. A Fire element that retains all machine guns, sharpshooter weapons and an assault element with grenades and riflemen.

Anti Tank Team   A

Type	Activity	Restrictions
Infantry	Split into sub elements	AT weapons – must be stationary
Vehicles	N/A	N/A

Tactical Application: Splits a dedicated anti tank team off from the squad/section. The remainder of the squad/section will stay as one team.

Scout Team   A

Type	Activity	Restrictions
Infantry	Split into sub elements	Team numbers – must be stationary
Vehicles	N/A	N/A

Tactical Application: Splits a dedicated scout team of riflemen off from the squad/section. The remainder of the squad/section will stay as one team.

Acquire   S

Type	Activity	Restrictions
Infantry	Replenish supply at location	Location supply items
Vehicles	N/A	N/A

Tactical Application: When an infantry element is low on ammo or other items it can resupply at a vehicle or bunker using this command. A pop up list of available items is show for player interaction.

Cancel

Type	Activity	Restrictions
Infantry	Cancel all orders	
Vehicles	Cancel all orders	

Tactical Application: When you want to halt an element and rescind all previously given commands.

CMSF2 GAME USER INTERFACE AID

🟢 *In communication/Under command
🔴 *Out of communication/Out of Command

Max
Pinned
Min

ELEMENT INFO PANEL

TEAM INFO PANEL

Element Name		Element Type
Element Picture	Leader Name and Leadership Modifier	Rank
	Physical Condition Level & Fitness Modifier	
	Experience Level and Modifier	Branch
	Morale Level and Modifier	

🟢 1 Up CofC*
🟢 2 Up CofC
🟢 3 Up CofC

C2 Links: Visual | Audio (voice/radio) | Satellite (comms)

Ammunition by nature (auto filtered by quantity)

Suppression Level**

Arty/Avn/Air Support

SPECIAL EQUIPMENT:

Day Optics	Night Optics
	Single Shot weapon
	Single Use Item

Soldier Health (Weapon) IC
Soldier Health (Weapon)
Soldier Health (Weapon)
Soldier Health (Weapon)

Soldier Health (Weapon) 2ic
Soldier Health (Weapon)
Soldier Health (Weapon)
Soldier Health (Weapon)

Soldier Health (Weapon) **Unhurt**
Soldier Health (Weapon) **Injured**
Casualty Soldier Health (Weapon) **Wounded/Dead**

Instant Orders

M C S A

Order Tabs

Orders

Time Remaining

Game Turn

MENUS

---

1 Section — Rifle

+1 Davidson — Rested
Regular — +1 OK

🟢 1 Platoon
🟢 A Company
🟢 1 Battalion

5.56 — 3940
40x46 HE — 24
Grenade — 20
84 HEAT — 2
66 HEAT — 2

Ldr   Asst

8
2   2

30:00

⏱ 🟡 ✛   M C S A

🔴 T TARGET
🟡 Y TARGET LIGHT
🟠 K TARGET ARC

🟢 CLEAR TARGET
G FACE
TARGET SMOKE

🟣 M TARGET ARMOR ARC
J TARGET BRIEFLY

COMBAT

MENUS