

Cover story

COVER TESTS

These are the "Exposure" figures. Examples - a Trench gives the best protection against incoming fire at only 9% exposure, but in Brush you're 52% exposed. Worst is open ground where you'll be 75% exposed.

Note - the figs are non-foxhole (except for one foxhole in open ground which I threw in for comparison)

Here are the exposure figs for units in foxholes in separate test -

Woods/Pines - 14%

Scattered - 23

Wheat - 42

Brush - 43

Cem/ Steppe/Open - 44

Soft - 45

(Craters of all sizes and foxholes give identical exposure figs)

Units in foxholes/craters in cover terrain get cumulative cover bonus

Walls give 30% exposure
Small hedges give 60%
but units must be close
behind them (15 metres
max) in both cases, not
IN them.

Note - figs are for units just inside the cover. If they move back deeper into it, their exposure is reduced even more. (But it will reduce their own spotting ability because of more leaves etc between them and enemy)

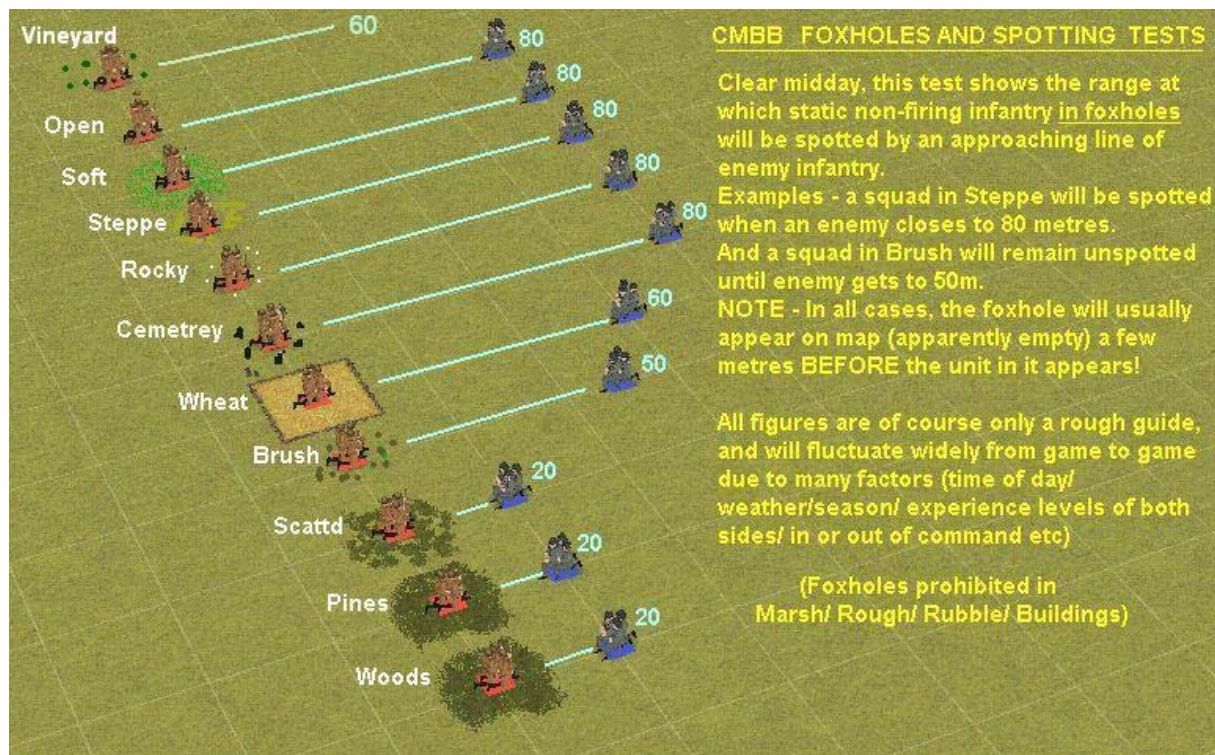
Emplacements (cmak) give 30% exp but negated if firer is appreciably higher. Foxhole in emplace gives no extra benefit.

Tanks get no hulldown in emplaces

OPEN - 75
SOFT - 75
STEPPE - 65
VINES/ MARSH - 64
WHEAT - 58
CEMY - 55
BRUSH - 52
ROCKY - 50
CRATER/ FOX in OPEN - 44
SCATT - 32
ROUGH - 28
LT BLDG - 20
PINES - 17
WOODS - 16
FACTORY 15
HVY BLDG - 12

100m
Enemy Rifle 43H
Exposure: 9%
in trench
Firepower: 93

Foxholes



This series of tests looks at foxholes.

Clear summer day, veteran troops on both sides.

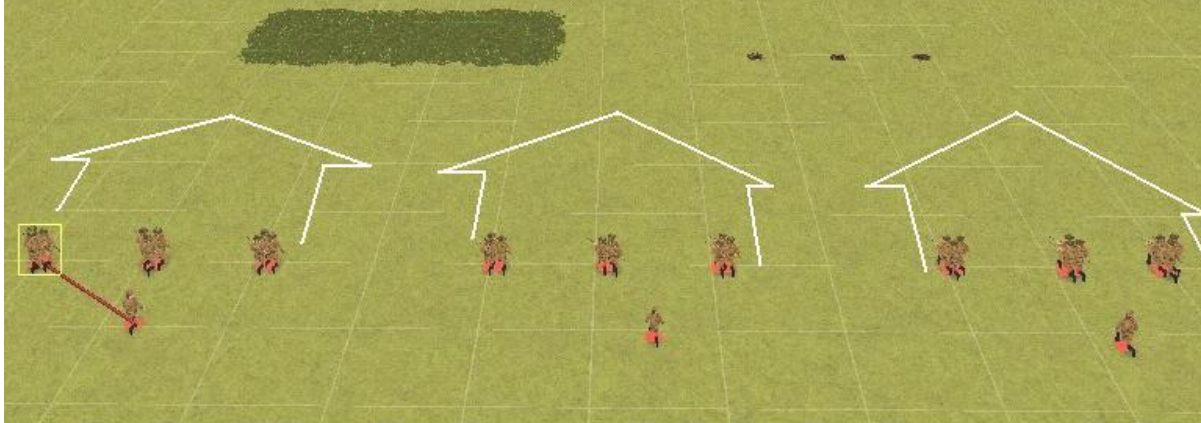
Remember the figures serve as a good *basic* reference only, and will probably fluctuate slightly during actual play because of factors kicking in like weather and visibility conditions, troop quality, tiredness etc (Incidentally, craters of all sizes (if there are any around) also give the same cover as foxholes)



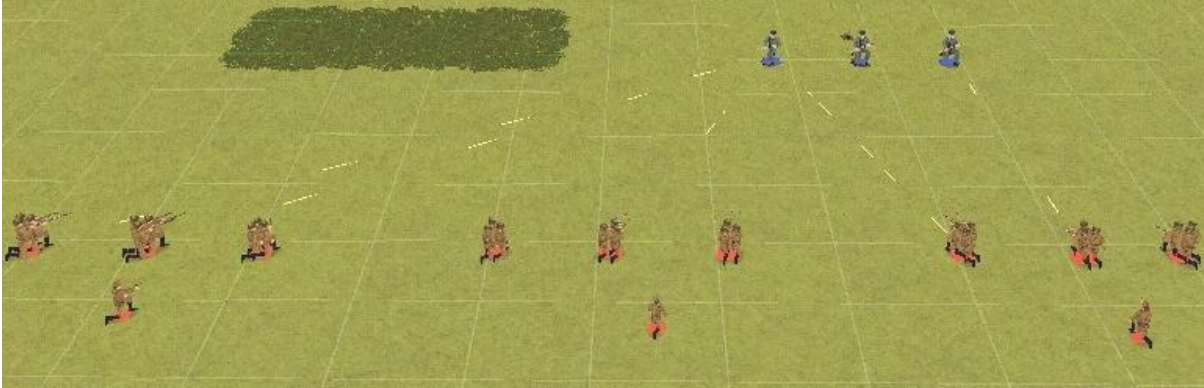
...the Russians can see nothing



But as the Russians advance, foxholes appear
on the map 100 metres away.
(the grid squares are 20m)



..and as the Russians close to 80m they see the Germans and open fire



However the foxholes in the woods are much harder to see despite the Russians getting very close



..the foxholes finally show up at inside 20m, but the occupants stay unseen



..the occupants show up at last when the Russians get to 10 m



Trenches

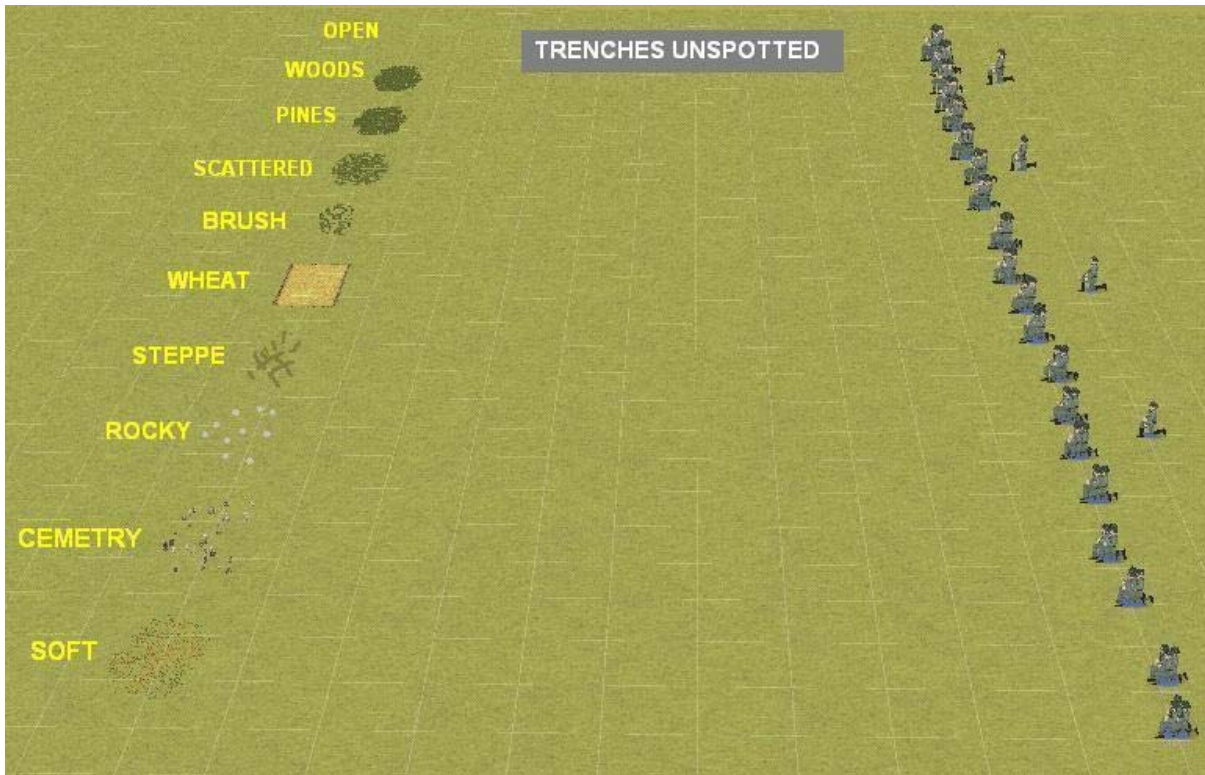
Clear summer day, a line of infantry approaches from the right. They can't see any trenches yet..

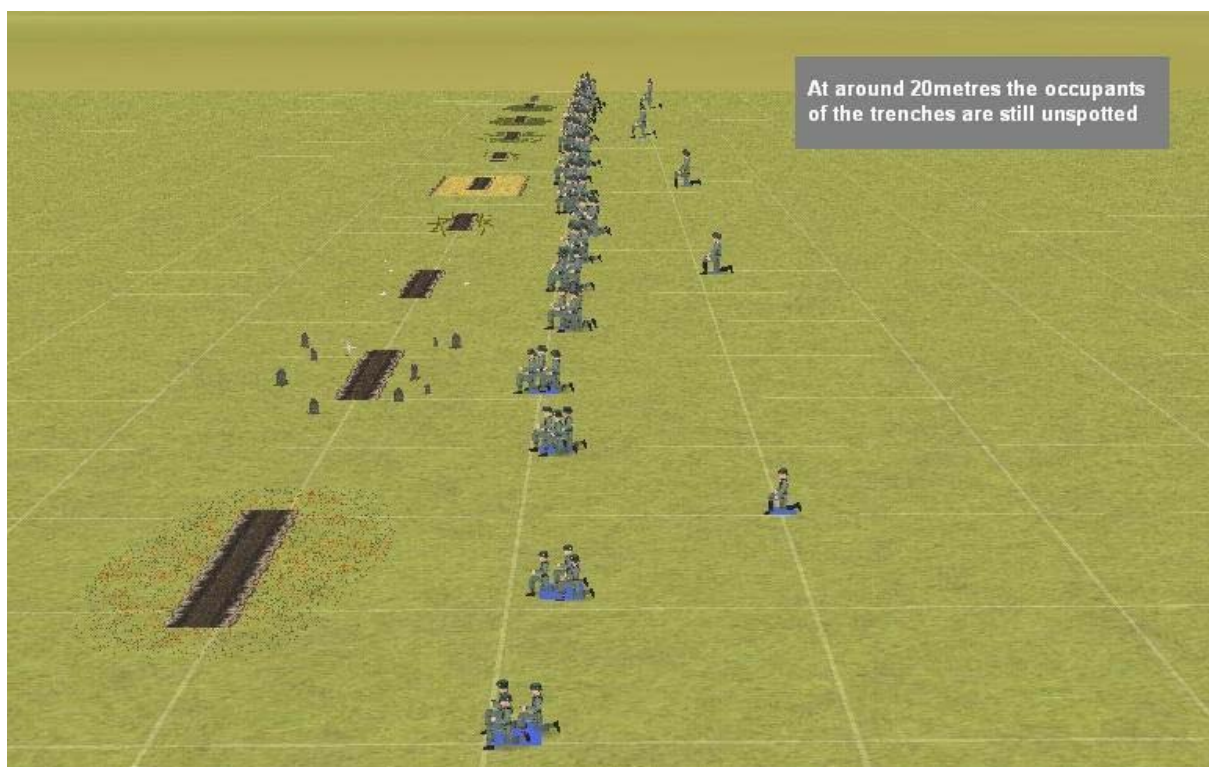
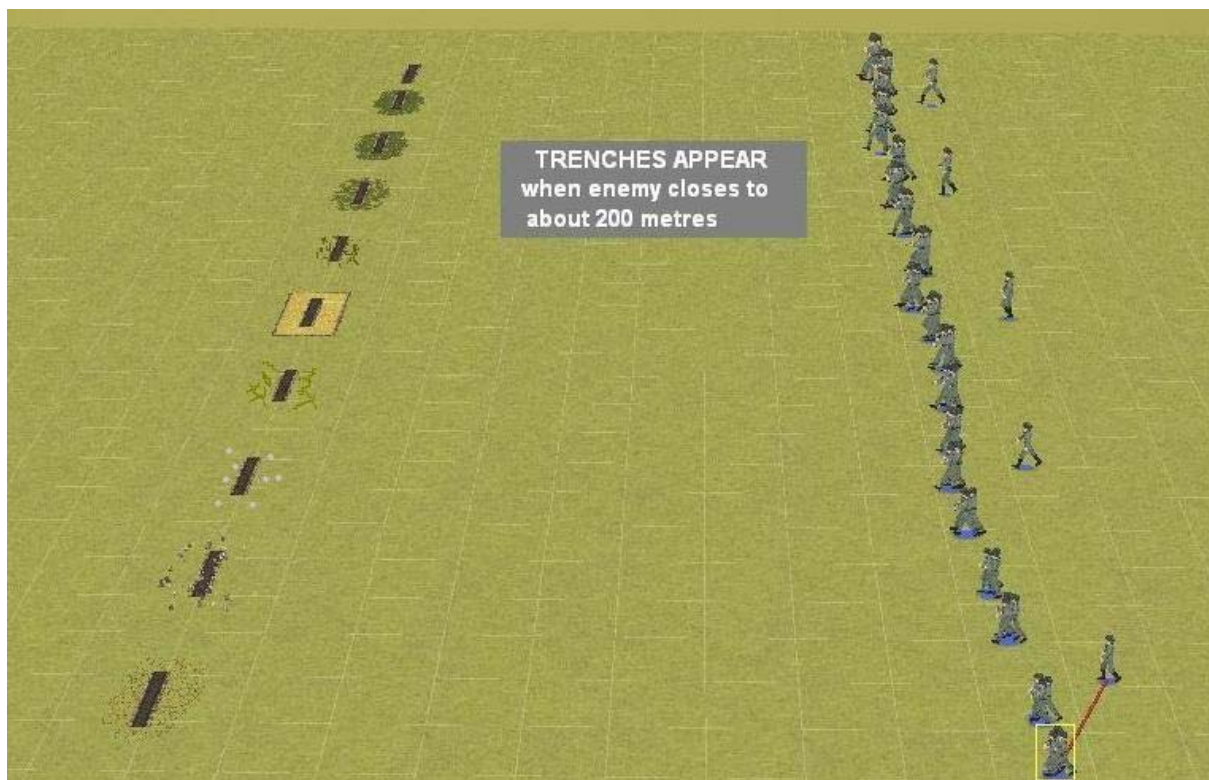
This series of test pics show how trenches are always spotted at around 200m (closer in dull weather or night) even if they're in terrain so long as there's LOS to them.

(Incidentally the grid is 20-metre squares)

Once spotted, an attacker can rain artillery or tank area-fire on them to try to flush out the occupant even though he can't see if anybody's even in there. (In fact leaving a few trenches empty is a common CM tactic to make an attacker waste time and ammo shooting at them or avoiding them)

Also note the excellent cover trenches give to the occupant, the enemy can't see him until he closes to inside about 20 metres.





The occupants are finally spotted at under 20 metres and the shooting starts



Craters, the hole truth

WARNING - Some craters in CM are 'unreal' craters and give no cover in CM even though they look exactly like real craters.

So you have to tell which is which by selecting a unit, hit 'L' and cursor over the crater. if it reads 'crater', its real.

Alternatively use my stunning Crater Mod as in these pics, to tell at a glance which are real and which are unreal.

(Incidentally real craters give exactly the same cover as foxholes)

PIC 1 (unmodded) -

The squad wants to run into a crater but he doesn't know which are the real ones..



PIC 2 (modded) -

With my mod the 'unreal' craters are just flat brown circles with no hole in the middle, and the squad knows they'll provide no cover at all, so he knows he'll have to run for the real ones with the hole in the middle.

(incidentally you can also drive AFV's over the unrels, knowing they won't slow or bog you)



REAL CRATERS

There are 4 sizes of craters, small/ med/ large/ huge, and they have two effects on gameplay: -

- 1 - They slow down tanks and vehicles, (the bigger the crater the longer it takes to traverse it)
- 2 -They provide cover (same rating as foxholes) for infantry and mortars and guns, even big guns, and no matter what the size of crater, the unit in it gets the same cover bonus. A higher enemy firer does NOT negate the cover bonus.

Tanks/vehicles get NO cover at all, not even a hull down bonus.

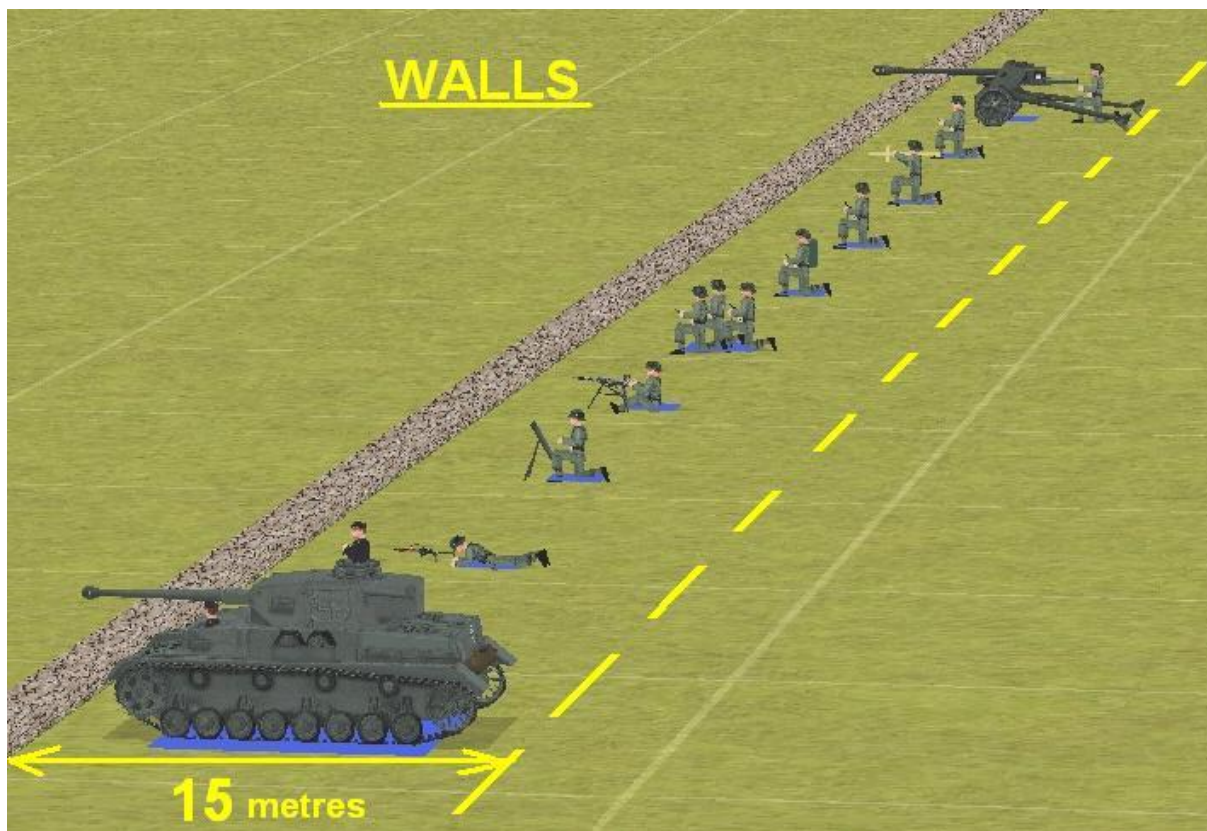
Mischievous designers can place craters at critical points such as bridge approaches (not allowed on bridge itself) or crossroads etc to give a nasty surprise to a tank or vehicle column hoping for a nice fast clean run. (Designers should remember to check if its a real crater, as the computer randomly designates some as 'unreal')

When the lead vehicle hits the crater it'll slow to a crawl for a few seconds and the rest of the column will concertina, bunch and mill around, giving enemy units with LOS time to gleefully squeeze off some shots before the column sorts itself out and picks up speed again.

To really annoy drivers designers can put tight clusters of craters along a section of road to churn it up real bad, think 'glue'..

AFVs and vehicles entering a crater stand a slightly higher chance of bogging, worse in wet weather or snow.

Walls



WALL TESTS

Walls give an exposure rating reduction♦♦to all infantry-class units and guns within 15 metres of it (30% compared to 75% in open)

Walls give hulldown to tanks within 15m

Note - with all the units, the 15m shrinks dramatically if firer is higher or is firing at sharp angle across wall, so always get as close up to it as possible but NOT actually ON the wall or their exposure skyrockets to 95% (think "sitting ducks")

Static non-firing infantry and guns in the 15m zone are harder to spot than if they were in the open (approaching enemy infantry will spot inf and gun units in the 15m zone when they close to about 280m, compared to 880m in the open)

But infantry units and guns on 'Hide' in the 15m zone will not be spotted until approaching infantry is about 20 m away.

However the 20m does not apply if the enemy saw them before they went on hide, in which case the usual 280m spotting figure applies instead.

Hiders DO have LOS over wall, they're not blind.

Halftracks, wheeled vehs and guns can't cross walls

TACTICAL SUMMARY -

1 - Get your units (inc tanks) within the 15-metre protection zone behind walls, the closer to the wall the better

2 - If you don't plan on shooting for a while, put your inf and guns on Hide in the zone so the enemy won't see them until they close to a pointblank 20m

Small hedges

Note, there are two types of hedge in CM, 'Hedges' and 'Tall Hedges'.

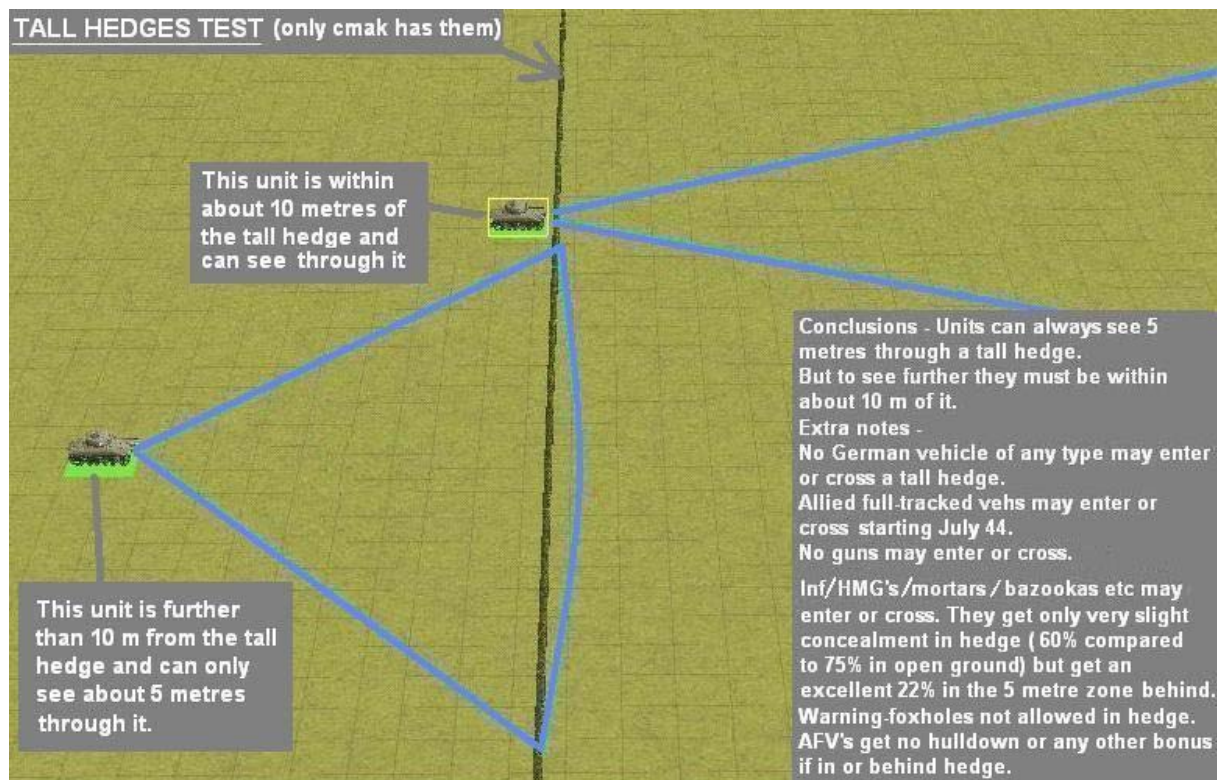
Only the small variety are in cmbb, but cmak has both types.

(see separate thread for Tall hedges)

In fact I call ordinary hedges 'small hedges' so we don't get the two types mixed up because they have very different properties.



Tall hedges



CAN CROSS TALLS - Allied tanks/TD's/SPG's from July 44/ Foot units.

CAN'T CROSS TALLS - German fulltracks/ All nations halftracks/ Armoured cars/ Trucks/ Jeeps/ Kubels/ Guns

Notice how the Cullin hedgerow device allows heavy Allied armour to cross and enter **from Jul 44**, but German armour can NEVER cross or enter. (Knowing that bit of vital info can win or lose games)..;)

EMPLACEMENTS

They're only found in Cmak and have to be placed by the scenario designer when he's creating the scen, they can't be bought in QB's.

As cover goes, they rate 30% which is about 'average', but they give NO cover if a firing enemy is appreciably higher.

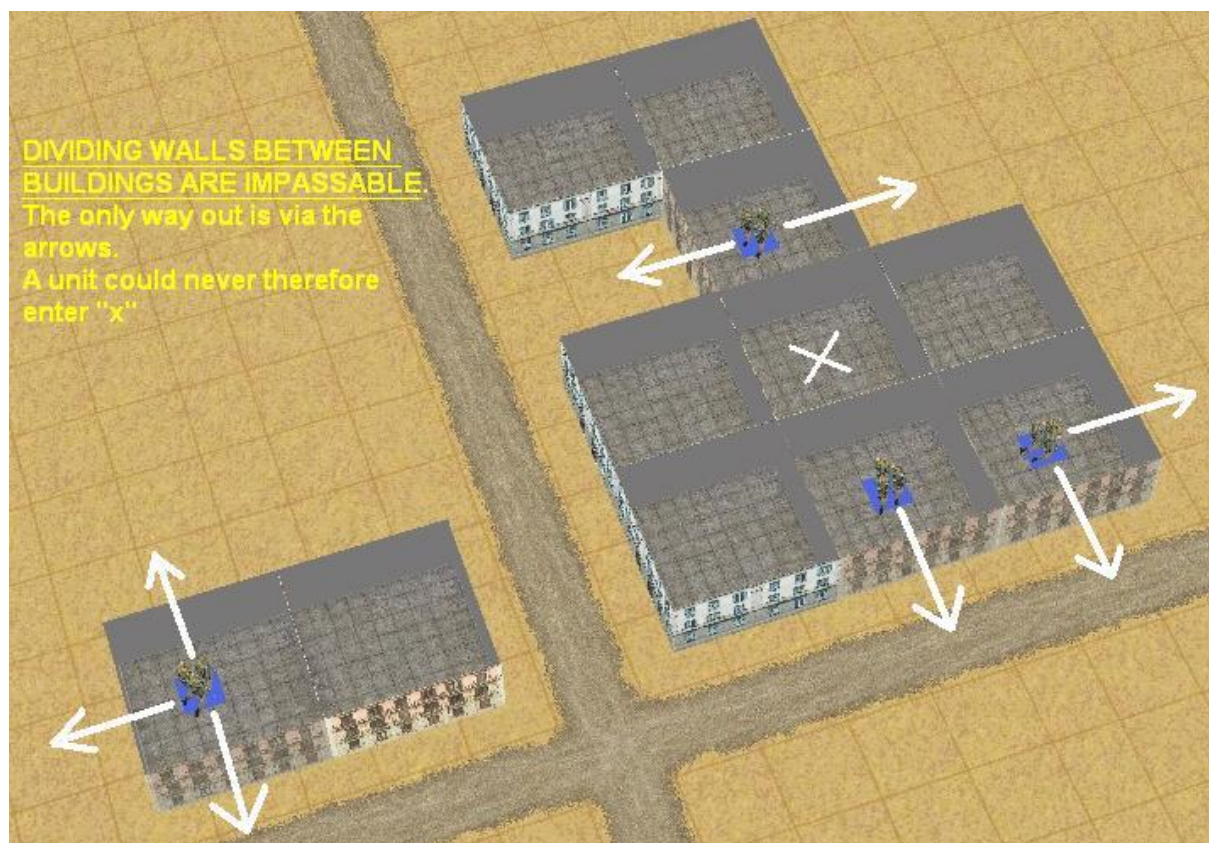
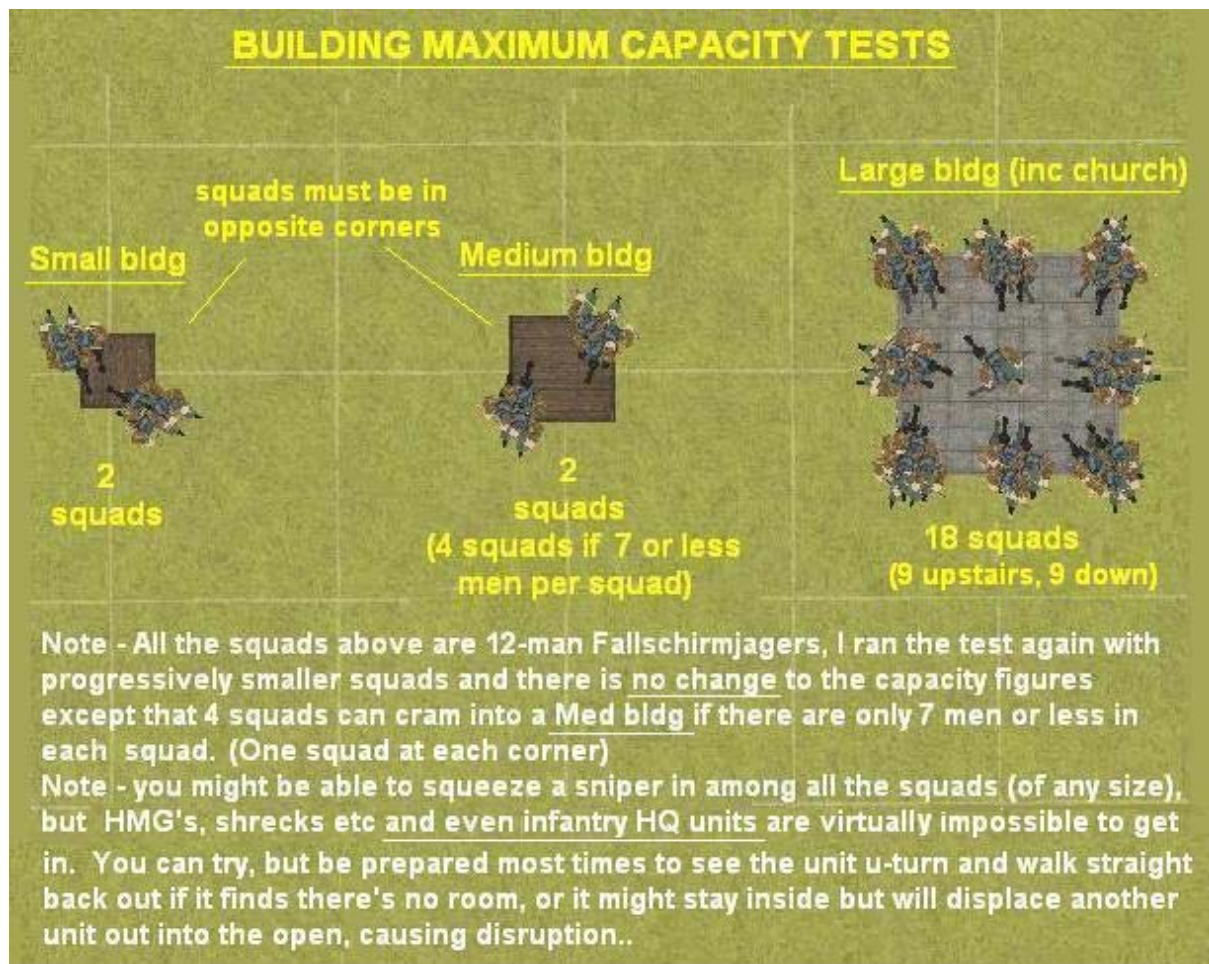
A foxhole in an emplacement gives no extra cover.

Tanks get no cover in Emps, not even hulldown.

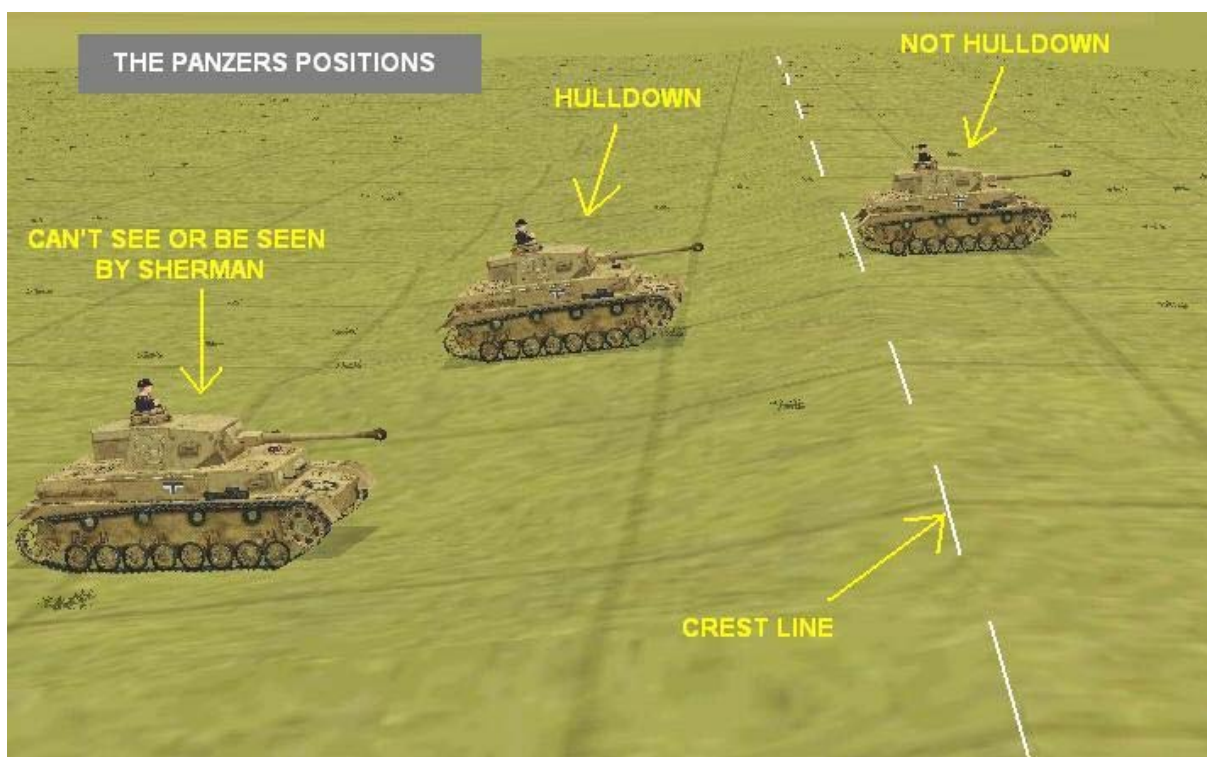
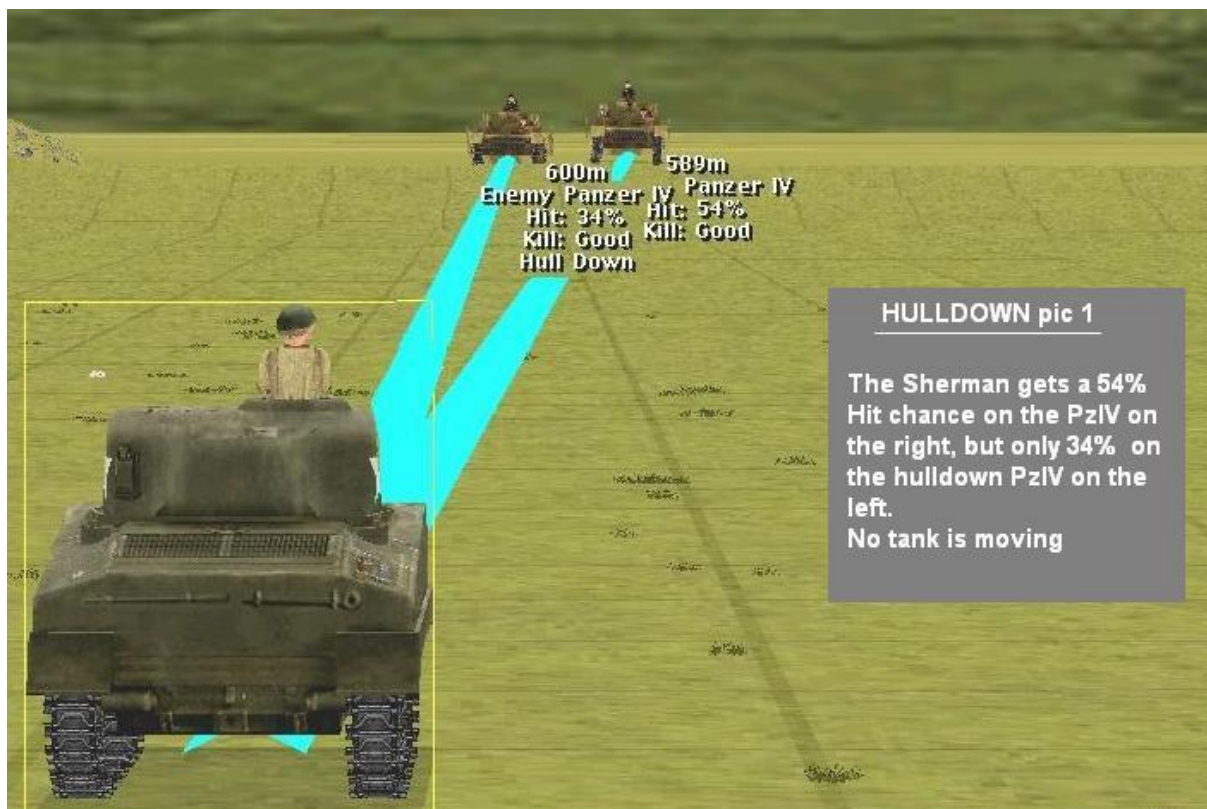
Only full-tracked vehs and foot units can cross or enter them, but guns can start the game in there.

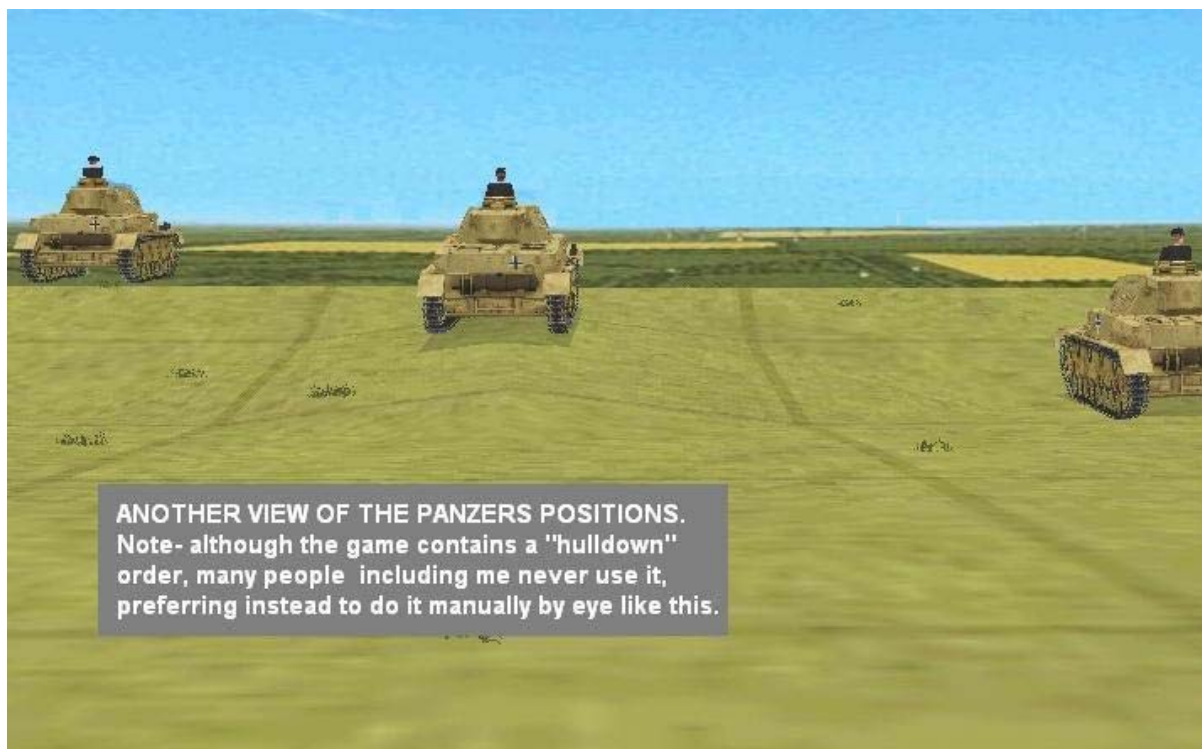


Housing situation



Hulldown







Hulldown tanks are immune to lower hull and immobilising hits



This test shows why it's always better to be hulldown **even if the turret armour is very thin** like on these PzIV's.

The T-34/76 in the background gets a hit chance of 25% on the non-hulldown PzIV on the right, meaning 1 shot in every 4 will hit the panzer, but it gets a hit chance of only 14% against the hulldown panzer on the left, meaning **only 1 shot in every 7 will hit**, which is an appallingly-low chance.

So while the T-34 is blasting away at the hulldowner and missing most of the time, the hulldowner is **firing back** with greater accuracy because its hit chance against the T-34 is 30%, meaning about 1 shot in every 3 will hit the T-34.

In other words the hulldown panzers accuracy is more than **twice as good** as the T-34's, a massive advantage...)



This pic confirms the panzers get 30% against the T-34

