

## Terrain

**Woods:** Woods can be defined with a border of felt and green lichen or model trees. When models are placed into woods the lichen can be rearranged to accommodate the model without moving the woods boundary.



Only a felt border is needed to outline each wooded area.

**Spare Villages/suburbs** (wood and terra cotta): A collection of sparse wooden buildings. A few scale buildings are used to represent the village. Each building model is considered one building.

**Movement:** No effect

**Combat:** Infantry: +1 modifier on kill power against small arms on targets in buildings.

**Armor:** +1 to hit targets adjacent (some part of the casting is touching the building) to a building. +4 to hit a vehicle INSIDE a building(????). Vehicles inside buildings may only fire if they were SET UP in the building at the beginning of the scenario. If they were, they may NOT turn their turret while inside the building and fire at a target. That means that if they are set up inside a building, their covered arc is 15° on either side of their guns.

**Sighting:** Does not block LOS. Targets in Sparse Villages (actually IN the buildings) are sighted as in buildings. Vehicles touching the buildings are sighted as if "among buildings".

**Fires:** Each HE hit roll D10. Match the HE KP or lower and a fire starts. Fire cannot spread. The fire goes out on a roll of 1 or 2 D10.

### Dense Villages

**/suburbs Soft (wood):** A dense collection of wooden buildings. Sections marked by markers (felt outline?) with a few scale buildings on top. Unless otherwise



The house models can be moved to allow tanks or infantry to enter their alleys or gardens.

stated, the size should be from 15 to 25 wide x any length. The outline marker determines the location of the area, not the scale buildings. The buildings may be moved around as is convenient.

**Movement:** Vehicles: Vehicles can move perpendicular to the long axis of the strip at a cost of an extra 25GSU's. Full tracked AFV's may move parallel to the long axis of the strip at ¼ the normal rate. Wheeled and half-tracked vehicles may not move through the area parallel to the long axis of the strip of the buildings.

**Infantry:** Infantry may move perpendicular to the long edge at no cost. Infantry may move only 15 GSU's parallel to the long direction of the buildings.

**Combat:** "Armor thickness" for wood buildings is 0.

**Infantry:** +1 modifier on kill power against small arms.

**Armor:** +1 to hit targets adjacent (some part of the casting is touching the area) to a building. +4 to hit a vehicle INSIDE the buildings. Vehicles inside buildings may only fire if they were SET UP in the building at the beginning of the scenario. If they were, they may NOT turn their turret while inside the building and fire at a target. That means that if they are set up inside a building, their covered arc is 15° on either side of their guns. If they were, they may NOT turn their turret while inside the building and fire at a target outside the building.

A vehicle is considered INSIDE a building if a scale building is placed over the vehicle, otherwise, it is considered in an alleyway or between the buildings.

**Sighting:** Blocks LOS one contour level (15mm) high\*. Targets in Dense Villages are sighted as in buildings. Elements may sight into or out of DV/S's for 15 GSU's after which the LOS is blocked.

**Fires:** Each HE hit roll D10. Match the HE KP or lower and a fire starts. The fire is a section of 20x20 GSU's. The fire spreads on a 1 D10 per turn to adjacent 20x20GSU section. One roll per adjacent side per turn. The a fire goes out on a roll of 1-2 D10. Roll for each section on fire.

**Dense Villages/suburbs Hard** (brick, stone or other hard cover building material): Same as Dense Villages/suburbs (wood) except:

**Movement:** Armor may not move parallel to the long axis of the strip of the buildings.

**Combat:** "Armor thickness" for hard buildings is between .5 and 2 depending on conditions. Normally the thickness is .5, but if the buildings are a part of a fortress line (Maginot or Siegfried), they may be

concrete and steel reinforced in which case they may be armored as a bunker.

Infantry: +2 modifier on kill power against small arms on targets in buildings unless the "building armor" is penetrated.

Sighting: Blocks LOS 2 (30mm) contour high\*.

**City Blocks:** These include 2 and 3 story buildings with flats or stores sharing walls. Sections marked by markers (felt outline?) with a few scale buildings on top. They have the same general shape as the Dense villages, but may be deeper.

These act as Dense Villages/suburbs Hard except the following:

Movement: When in the buildings, Infantry may move only 10 GSU's per turn parallel to the long axis of the block. This is to represent the difficulty in getting through the walls that separate the flats.

Sighting: Blocks LOS 3 (45mm) contours high\*.

For multi-story buildings, we include no rules for movement up or down floors or vertical combat...you may make up your own if you like. We assume that all forces are on the "ground floor," and so units of opposite sides may not move "through" each other even if it is possible by their being on different floors.

\*For convenience, the scale buildings can be used as the height at which LOS is blocked.

**15.7. Bunkers** - These are hardened battlefield structures made primary of reinforced concrete or logs and sandbags. They can contain a single team or gun crew to larger size where they contain up to 2 squads of infantry. Several may be joined with passageways but are considered separate bunkers (like multiple module buildings) for destruction or stun.

**15.7.1. Bunker Sizes** - This are reduced for convenience into three sizes: large, medium and small bunkers. The large bunkers can hold at least two squads and their equipment, machineguns and a large artillery piece. The medium bunker will hold up to a single squad or a large gun and its crew. The small bunker will hold up to a medium size gun and crew or a team with machineguns. Bunkers are harder to hit as follows: Large, size=0, medium, size=-1 and small, size=-3. As they do not move and are often camouflaged they tend to be hard to spot unless firing from their openings.

**15.7.2. Bunker Armor** - This are reduced for convenience into three classes: heavy, medium and small. The small bunker will have an all around armor

defense equivalent to 5cm of armor. The medium bunker will have the armor equivalent to 10cm and the heavy bunker will have an armor of 15cm.

**15.7.2.1.** Hits on bunkers may penetrate the armor or stun the occupants. Roll to penetrate as an armored element. If the armor is penetrated there is a +2 added to the projectile's killpower in trying to kill any occupant inside the bunker. Roll for each element within the bunker module separately. Note that AP will have a base killpower of 0 in this case.

**15.7.2.2.** Critical Penetration hits are allowed on bunkers for AP as well as direct fired HE. This is to represent a hit on a bunker slit. As HE does not have a critical penetration table it is defined as being 4 x the listed penetration if the variable penetration number is a '9' (a six backed by another six.)

**15.7.3. Destruction of bunkers** - Because the bunker is of a material that can be gradually broken by non-penetrating hits it can be destroyed by multiple hits. But this will take time and some bookkeeping.

**15.7.3.1.** Each hit by a projectile that penetrates ¼ or more the armor of the bunker will cause damage equal to the HE killpower of the projectile (or 1 whichever is greater)

**15.7.3.2.** Each 1 cm. of bunker armor will absorb 15 HE killpower factors before failing. This failing means that the armor of the bunker is reduced one factor.

**15.7.3.3.** Once bunker armor is reduced to 2 cm. the bunker collapses and is no longer considered a bunker. It is considered just rubble and can no longer be reduced in thickness or protection.

**15.7.4. Stun** - Troops within bunkers can be stunned by hits on the bunkers, but as the shock is absorbed by the earth there is a reduced stun effect. The number needed to stun is increased by 2 if the bunker is a heavy bunker and by 1 if a medium.

**15.7.4.1.** The stun is rolled on each element within bunker module and not on the bunker crew as a whole.

**15.7.4.2.** Stunned bunker elements become unstunned if a '7' or better is rolled in Turn segment H, unstun section.

**15.7.5.** Bunkers sight as buttoned up vehicles.

**15.7.6.** Bunkers have a covered arc only 45° either side of the front of the bunker.

**Mud/bog:** Mud/bog is very soft ground that vehicles and troops have difficulty traversing. It can be represented by dark brown felt or by dark brown areas on terrain boards.

Movement: Infantry:  $\frac{3}{4}$  speed.

High flotation vehicles:  $\frac{3}{4}$  speed. Can't move this turn on 0 or less (or 1 or less if non-German and performed a turning maneuver).

Medium flotation vehicles:  $\frac{1}{2}$  speed. Can't move this turn on 0 or less if moving straight or 1 or less if performing a turning maneuver.

Low flotation and  $\frac{3}{4}$  track (SDKFZ 251) vehicles:  $\frac{1}{4}$  speed. Can't move this turn on 1 or less or 2 or less if performing a turning maneuver.

Half-tracked vehicles:  $\frac{1}{4}$  speed. Can't move this turn on 2 or less or 3 or less if performing a turning maneuver.

Wheeled (4-wheel drive) vehicles:  $\frac{1}{4}$  speed. Can't move this turn on 3.

Trucks:  $\frac{1}{4}$  speed. Can't move this turn on 4.

Combat: No effect

Sighting: No effect

**High flotation vehicles:** T-34 (all marks and SU 85, SU 122), Panther (all marks and JG V), Tiger I and II.

Medium flotation vehicles: M4 HVSS, KV-I, KV-85, IS II, SU 100, SU 152, T-70, SU 76,

Low flotation vehicles: All those not mentioned above.

**Deep Snow.** This is snow roughly .5 -1 meter deep.

Movement: Infantry:  $\frac{1}{2}$  speed. If elements have skis, normal movement is 80.

High flotation vehicles:  $\frac{3}{4}$  speed.

Medium flotation vehicles:  $\frac{1}{2}$  speed.

Low flotation and  $\frac{3}{4}$  track (SDKFZ 251) vehicles:  $\frac{1}{4}$  speed.

Half-tracked vehicles:  $\frac{1}{4}$  speed.

Wheeled (4-wheel drive) vehicles:  $\frac{1}{4}$  speed.

Trucks:  $\frac{1}{4}$  speed.

Combat: No effect

Sighting: No effect

**Scrub/brush-** Brush and foliage roughly 4' high.

Movement: Infantry:  $\frac{1}{2}$  speed. Vehicles: half and fully

Tracked: no effect. Wheeled:  $\frac{3}{4}$  speed.

Combat: +1 adjustments to kill power against targets in scrub/brush.

Sighting: Vehicle: sight vehicles as hull-down.

Infantry that is NOT charging: subtract 8 on the sighting chart.

**Hedgerows** - Dense wood rows on a mound of dirt and roots. The height of the mound can vary from a few feet to over 10 feet. The steepness of the mound slope is a problem for vehicles, even tracked vehicles. Getting up on a row is more of a problem than getting out and off of

one.

Attempting to climb up and into a hedgerow takes an entire turn. If successful a vehicle climbing a hedgerow will end its turn in the row. Leaving a hedgerow takes  $\frac{1}{2}$  the movement of a vehicle moving at cross-country speed.

H1. An AFV must roll a D6 when attempting to enter or climb the slope of a hedgerow. On a '5' or '6' the vehicle successfully climbs into the hedgerow. On a '4' the vehicle fails and ends its turn stopped next to the hedgerow. It may make another attempt the following turn. On a roll of '2' or '3' the vehicle fails and stalls and cannot move in the next turn. On a '1' the vehicle loses a track and is immobilized for the remainder of the game. This movement is considered a shift move if the vehicle is a target.

H2. For 6 or 8 wheeled AFVs or half-tracked vehicles roll a D6 per vehicle but subtract 1 from the die roll and the results are as per H1 above.

H3. For trucks subtract 2 from the D6 roll and the result being as H1 above.

H4. When a tracked AFV successfully climbs over a hedgerow it makes a path for vehicles trying to cross in its exact trail. Trying to cross a hedge in the path of a tracked AFV will add 1 to the D6 roll of following vehicles. Check as per H1 to test if it successfully climbed the hedgerow.

H5. **Cullen Hedgerow cutter and Prongs** - These were mostly ad-hoc devices welded to the lower front hull of Allied tanks during the Normandy Operation. Tanks with this device have +2 added to their hedgerow climb D6 roll as per H1 above.