

Expanded Consolidated Charts for Panzergrenadier Series Rules 3d Edition

DIRECT FIRE

Fire Value	1	2	4	7	11	16	22	30	45+	Column Modifiers
Dice Roll										-2 tgt hex entrench/-1 town, woods hex entrench (16.4) -2 target hex town OR woods (not cumulative together) -1 night turn
2	M	M1	M1	X	X	2X	2X	3X	3X	-1 tgt hex is Dug In (Dug In NA in town or woods) (16.2) -1 target hex on hill (any elevation)
3	M	M	M	M2	M2	X	X	2X	3X	-1 target hex ≥ 3 hexes away from firer
4	-	M	M	M1	M1	M2	X	X	2X	-1 undemoralized AA ≤ 3 hexes of attacking air (15.4)
5	-	-	-	M	M	M1	M2	M2	X	+1 target hex is swamp
6	-	-	-	-	-	M	M1	M1	M2	+1 target hex firer-owned minefield
7	-	-	-	-	-	-	M	M	M1	+1 target hex has units assisted by ENG in river Xing
8	-	-	-	-	-	M	M	M1	M2	+1 target is mortar/AA/AT/Cavalry
9	-	-	-	-	M	M	M1	M2	M2	+1 Opportunity Fire (13.0)
10	-	-	M	M	M1	M1	M2	X	X	+1 target hex 3 combat units stacked (NA for Opportunity Fire) (4.4, 13.2)
11	M	M	M1	M1	M2	M2	X	2X	2X	+2 target is artillery
12	M	M1	M2	M2	X	X	2X	2X	3X	+2 target is adjacent to all firing units

BOMBARDMENT

BV	3	5	8	12	16	21	30	42	55	70+	Column Modifiers
FF #	(1)	(2)	(3)	(4)	(5)	(6)					
Roll											
2	M	M1	M2	M2	X	X	2X	2X	2X	2X	-2 target hex is town OR entrenchment -1 target in swamp hex
3	-	M	M1	M1	M2	M2	X	X	2X	2X	-1 night turn
4	-	-	M	M	M1	M1	M2	M2	X	X	-1 target is Dug In (Dug In NA in town or woods) (16.2)
5	-	-	-	-	M	M	M1	M1	M2	M2	+1 target hex is firer-owned minefield
6	-	-	-	-	-	-	M	M	M1	M1	+1 target is artillery/mortar/AA/AT/Cavalry
7	-	-	-	-	-	-	-	M	M	M1	+1 target hex spotted by firing unit
8	-	-	-	-	-	M	M	M1	M1	M1	+1 target is loaded truck, prime mover, wagon, or sledge
9	-	-	-	M	M	M	M1	M2	M2	M2	+1 target hex 3 combat units stacked (4.4)
10	-	-	M	M	M1	M1	M2	X	X	X	
11	-	M	M	M1	M1	M2	X	X	2X	2X	
12	M	M	M1	M2	M2	X	X	2X	2X	2X	

ASSAULT COMBAT (HMGs and AA without other infantry is ½ FV (12.54))

FV	1	3	5	9	13	18	24	30+	Column Modifiers
Die Roll									
1	-	-	-	-	-	M	M1	M2	-2 tgt units in entrench OR town -2 atkr in Major River on 1 st rnd if neither has ENG (5.75) -1 target units in woods +1 ALL atkr morale > def (ldr NA) +1 side has undemoralized leader (tank leader NA) +1 all enemy units demoralized +1 side includes ENG in town/entrench hex +1 Charging Cavalry (15.41)
2	-	-	-	-	M	M1	M2	1	+1 side has ≥ 1 undemoralized CT AFV and ≥ 1 Inf of any type except HMG (NA in CASSINO '44 Towns). Mods only apply to Germans (always), Soviet Guards after '42; Polish, US, Commonwealth after '43.
3	-	-	-	M	M1	M2	1	1	+1 Vs AFV in town/woods w/o Inf (HMG or loaded Inf on APC or Transport NA)
4	-	-	M	M1	M2	1	1	2	+1 Vs higher elevation 1 st Round.
5	-	M	M1	M2	1	1	2	2	
6	M	M1	M2	1	1	2	2	3	

ANTI-TANK FIRE TABLE (Armor Efficiency units makes 2 AT Fire attacks per turn (11.2))

Roll 2 dice, add attackers AT fire value, subtract target armor value, add applicable modifiers. Trucks have armor value of -1 for calculating AT modifiers (11.11) AT FV of ≥2 fires ½ from max range-x1.5 max range.		AT Fire Modifiers (Cumulative with no maximum +/- modifiers): -1 target moved in preceding action segment -1 Opportunity Fire (13.0) -1 target Dug In OR occupies town OR woods (Dug In is NA in town or woods) (16.2) -1 target in hill hex at higher elevation than firing unit -1 range to target is > 5 hexes +1 target occupies adjacent hex (not the same hex) +1 target is crossing river with ENG assistance (5.73) +2 for Crossfire; target is attacked this turn through two or more non-adjacent hexes; only applies after first AT attack on the target this turn (11.12)
Modified Result	Effect	
9 or less	None	
10 to 12	Target loses one step. Surviving step make M2 morale check.	
13 or more	Target eliminated	

Disrupted: (14.2) Combat Values Halved
Cannot initiate Assault
Move 1 hex only



Demoralized: (14.3) Cannot fire
Cannot initiate Assault
Defends at quarter value vs Assault against it (12.13)
Morale reduced 1
Must attempt recovery vice Fire/Move on activation
If fails to Recover, must Flee (14.31) to reach safe hex



TERRAIN EFFECTS CHART

Type	Foot	Motzd	Mech	Spotting Range	Combat Modifiers
Clear	1	2	2	12 hexes	None
Cliff Hexside	All + M check	P	P	Blocks LOS to/from base of cliff hex unless adjacent	Assault across NA, exit assault NA
Creek	+0	+3	+1	Use other terrain	Use other terrain
Dug In (16.2)	2 actions; Cavalry NA	2 actions; Transport NA	2 actions	Use other terrain	-1 Direct Fire (NA in Town or Woods) -1 Bombardment (NA in Town or Woods) -1 AT Fire (NA in Town or Woods)
Embankment	+1	+2	+2	Blocks	-1 Direct Fire, 1 st Round of assault
Embankment, Railroad (non-Russian/Russian) Extra 1 MP for foot solely on RR in CASSINO '44	1/1 (add an additional +1 from non-RR embankment)	2/4 (add an additional +2 from non-RR embankment)	1/1 (add an additional +2 from non-RR embankment)	Blocks LOS as 20m elevation; increases spotting range as 20m elevation hill	-1 Direct Fire -1 AT Fire if firing unit is on lower elevation +1 defender on first round of assault from lower elevation hex(es)
Field	2	4	3	Blocks LOS; units within can't be spotted > 3 hexes away	None
Flooded (negates Roads)	+1	P	+2 and M check (exc: ENG & 1 hex move)	Use other terrain	Use other terrain
Gully (from outside/another)	1/1	8/2	6/2	From outside, only spot adjacent units in gully. Inside, spot outside normally; other units in gully only thru gully LOS	-1 for units in gully assaulting out 1 st round +1 for units outside assaulting gully 1 st rnd
Gustav Line	2	2	2	Germans: 2 hex spotting range in limited visibility requiring 1 hex range	+1 Direct Fire (cumulative with other terrain) +1 Bombardment Fire (cumulative w/ OT)
Heavy Forest	3	P	P	Blocks LOS; units within can't be spotted unless adjacent	-2 Direct Fire -1 Bombardment
Hedge	+0	P	+2	Blocks LOS unless adjacent-1	-1 Direct Fire, -1 AT Fire
Hedgerow	+1	P	+4	Blocks LOS unless adjacent	-2 Direct Fire, 1 st Round of assault
Hill	+0	+2	+1	One elevation line blocks LOS between hexes at lower elevation. 2 lines of equal elevation blocks LOS between hexes if one is lower than both lines. Units on hill cannot be spotted from > 3 hexes away. Units add 6 hexes (8 in desert) to their own spotting range for every 20 meters they are above the spotted unit.	-1 Direct Fire -1 AT Fire if firing unit is on lower elevation +1 defender on first round of assault from lower elevation hex(es)
Marked Summit	Other terrain	Other terrain	Other terrain	Blocks LOS between hexes at same level or lower.	Automatically considered Dug In
Minefield	Roll 1 die per factor	Roll 1 die per factor	Roll 1 die per factor	Use other terrain	Roll 1 die for each mine factor; 1-2 = no effect; 3-4 = stop moving; 5 = demoralized & stop moving; 6 = step loss, demoralized, and stop moving. Stopped units move out next turn, to include Fleeing.
Mountain	2 (1.5 = Gurkha, German Mtn)	P	+5 and M1 check	Blocks LOS; elevation lines 100-150 meters; units in mountains have unlimited spotting range.	
Mountain Elevation Line (Mtn Road/Track neg movmnt)	+1 (+0 Gurkha, German Mtn)	P	P	One elevation line blocks LOS between hexes at lower elevation. 2 lines of equal elevation blocks LOS between hexes if one is lower than both lines.	No Effect
Mountain Road	1 (2/3 Gurkha, German Mtn)	3	3	Use other terrain	Use other terrain
Mountain Track	1.5 (1 Gurkha, German Mnt)	P	+4 and M check	Use other terrain	Use other terrain
Road	2/3	½	½	Use other terrain	Use other terrain
River (Minor/Major) (5.7)	+2/+2	P/P	4/P	Use other terrain	+1 Direct and AT Fire against units crossing river with ENG assistance (5.73). -2 for attacker on first round of assault in major river hex if defender does not include ENG (5.75)
Salt marsh * = miring roll	2	5*	4*	Use other terrain	+1 Direct and AT Fire versus target in hex
Smoke	+0	+0	+0	Blocks LOS as Limiting Terrain (8.2)	Use other terrain
Swamp	2	P	P	Not spotted by non-adjacent unit	+1 Direct Fire; -1 Bombardment Fire
Track * see AK/DR special rule	1*	2	1	Use other terrain	Use other terrain
Town	1	1	1	Blocks LOS as Limiting Terrain (8.2). Adds 20 meters to hex and 6 hexes of spotting range of units within. May not be spotted > 3 hexes away.	-2 to Direct Fire, Bombardment, Assault -1 to Direct Fire in desert town -1 AT Fire
Wadi	2	P	P	May not be spotted > 3 hexes away.	-1 Direct Fire ≥ 2 hexes away
Waterlogged (negates Roads)	+1	P	+1 and M check (exc: ENG & 1 hex move)	Use other terrain	Use other terrain
Woods (Light Forest)	2	5	4	Blocks LOS as Limiting Terrain (8.2); Light Woods must be >1 hex to block LOS	-2 Direct Fire -1 Bombardment
Wrecks 1/2/3	+0	+1/+5/P	+1/+5/P	Use other terrain	Use other terrain
AT Ditch	+0	P	P	Not spotted > 3 hexes away	-1 Direct Fire ≥ 2 hexes away
Wire	+1	+3	-	Use other terrain	Use other terrain