

# CRESCENDO OF DOOM QUICK REFERENCE DATA CARD

## INFANTRY FIRE TABLE 10.3

AT Mines (136.76)  
Hidden Demolition  
36+ /200+

DICE	1/20	2/30	4/40	6/50	8/60	12/70	16/85	20/100	24/120	30/150	36+ /200+
1	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
2	1	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
3	1	1	2	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
4	M	1	1	2	2	3	KIA	KIA	KIA	KIA	KIA
5	—	M	1	1	2	2	3	4	KIA	KIA	KIA
6	—	—	M	1	1	2	2	3	4	KIA	KIA
7	—	—	—	M	1	1	2	2	3	4	KIA
8	—	—	—	—	M	1	1	2	2	3	4
9	—	—	—	—	—	M	1	1	2	2	3
10	—	—	—	—	—	—	M	1	1	2	2
11	—	—	—	—	—	—	—	M	1	1	2
12	—	—	—	—	—	—	—	—	M	1	1
13	—	—	—	—	—	—	—	—	—	M	1
14	—	—	—	—	—	—	—	—	—	—	M
15+	—	—	—	—	—	—	—	—	—	—	—

### FIREPOWER FACTOR MODIFIERS:

POINT BLANK FIRE: into adjacent hex	..... 2X	Infantry fire from boat (128.7)	..... ½X	Charging cavalry (92.87)	..... 2X + (-2)
LONG RANGE FIRE: up to double normal range	..... ½X	Infantry fire from marsh (75.4)	..... ½X	HE fire vs fording infantry (126.58)	..... ½X
MOVING FIRER: moved & fired in same player turn	..... ½X	HE fire into marsh (75.5)	..... ½X	Captured Support Weapons (90.13)	..... ½X
AREA FIRE: target is concealed or hidden	..... ½X	Guarding units (89.62)	..... ½X	Fording infantry (126.57)	..... ½X
		Mounted firer (92.6)	..... ½X	AFV overruns vs soft vehicles (35.3)	..... -5 (-3)

(in motion)

## SEQUENCE OF PLAY 4.0

1. Rally Phase
2. Prep Fire Phase
3. Movement Phase
4. Defensive Fire Phase
5. Advancing Fire Phase
6. Rout Phase
7. Advance Phase
8. Close Combat Phase

Dual Player Participation Phase

## COUNTER BATTERY FIRE TABLE

2	Destroyed
3-5	Disrupted
6-12	No Effect

-1 DRM for continuous shelling/turn

## SEWER MOVEMENT

One die ... 1-4 Successful  
5-6 Lost

## CLOSE COMBAT TABLE 20.3

Odds Ratio 1-7+ 1-6 1-4 1-2 1-1 3-2 2-1 3-1 4-1 6-1 8-1 9+-1

Kill Number 1 2 3 4 5 6 7 8 9 10 11 12

### CLOSE COMBAT MODIFIERS:

Capture attempt (89.23)	..... +1	Vs. landing paratroops (99.41), ski units	..... -2
Vs. mounted cavalry (92.7)	..... -1	By landing paratroops, ski units (114.8)	..... +2
Gurkhas (104.233) vs. Italians	..... 2X(3X)	Advanced during heavy winds or rain (111.45)	..... -1
Vs. Counter Exhausted, CE (73.5)	..... -1	Advanced during mud (111.71)	..... +1

## SUPPORT WEAPONS CHART 5.7

### PORTAGE COSTS

### OPERATION CAPABILITIES

Support Weapon	Squad/Crew	Leader	Captured Use*	Squad	Leader
LMG	1	2		F(17.1)	1 MG at ½ firepower E(1) (17.3)
MMG, ATR	4	A	Yes		
HMG, Light Mortar	5	A			
Flamethrower	2	2	C,D,H	1 D (22.3-5)	1 C (22.4)
Demolition	1	1		1 D (23.3-4)	1 C
Charge			C,D,H		
Panzerfaust,MC,ATM	½	1	C,D,H	4 (37.3)	1 (37.33)
Bazooka, Panzerschreck	1	2	No	2 (37.4)	1 E (37.43)
Radio	1	2	No	NA	1 (46.1)
Anti-Tank Gun	B (48.4)	NA	Yes-G	1 (48.8)	NA
105mm Howitzer	*5		No		
Mortar (63.6)			D,H		

NOTES: A Two leaders may carry one MMG HMG 1 hex per Movement Phase.  
B Any squad may push 1 hex during Movement Phase.  
C Must have a leadership modifier of -2 or -3.  
D Must be Assault Engineer.  
E Any two leaders may fire full strength.  
F One MG or 4 firepower factors at no cost; or any two MG's in excess of 4 firepower factors and forfeit squads inherent firepower.  
G Must be Crew counter.  
H Must be American unit.  
I One leader may man an ATR.

\* For stacking purposes only.  
\*NA when using rule 90

## 55.6 PERSONNEL MINES Vs VEHICLES DRMS 136.77

Unarmored Vehicle	..... -3	Armored Car	..... -2
Halftrack	..... -1	Other types	..... 0

## 46.54 ARTILLERY BARRAGE Vs VEHICLES DRMS 63.39

Non-armored vehicle	..... -3	Tank (CE	..... 0) +1
Open Top AFV	..... -1	SP Gun (CE	..... +1) +2

## STACKING 6.1

Infantry ..... 4 units (3 squads maximum)  
Weapons ..... 10 Portage Points (PP)  
Vehicles ..... 1 (unless immobilized while traversing)  
Wrecks ..... Unlimited  
On AFV\* ..... 2 Infantry (1 squad maximum), 5 PP  
On a Truck ..... Per vehicle capacity  
Under an AFV\* ..... 3 Infantry (2 squad maximum), 5 PP  
Horses ..... Unlimited if unmounted; otherwise counts as infantry squad (92.2)  
Motorcycles ..... Squad size equals 2 squads if mounted, otherwise unlimited (123.3)

EXCEPTIONS: Bunkers, Close Combat, Entrenchments, Overruns, Upper Level Buildings, Sewer Moves.

\*Not allowed on armored cars, scout cars, bren carriers, or tankettes. Allies may not ride any AFV prior to 1942.

\*In addition to passenger capacity inside or on any vehicle.

## INFANTRY MOVEMENT COSTS CHART 5.5

*onto road from road hexside (73.1)	..... 1 MF	½ MF
*onto road from non-road hexside	..... 1 MF	
*open ground, shellhole, wheatfield, orchard	..... 1 MF	
*woods (partisans 98.1)	..... 1 MF	2 MF
*enter any building	..... 2 MF	
move within any building, per hex	..... 2 MF	
move up or down staircase	..... 2 MF	
cliff hexside	..... NA	
over wall or hedge hexside	..... 1 + COT	
into smoke filled hex	..... 1 + COT	
enter/exit bunker/extrenchment to/from same hex	..... 1 MF	
mount horses (92.31)	..... 2 + COT	
enter gully (80.2) (exit gully	..... 2 + COT)	1 + COT
mount motorcycle or bicycle (123.42)	..... 1 MF	
dismount motorcycle	..... 1 MF	
mount skis (114.4)	..... 2 MF	

COT = Cost of Terrain in the hex entered \*Double cost if move is to higher elevation

## TERRAIN EFFECTS MODIFIERS 11.1

open ground: moving (11.3)	..... (non-moving: 0)	-2
wheatfield, orchard: moving or non-moving	.....	0
LOS crosses AFV counter at moving infantry in different hex (32.7)	.....	0
woods, shellhole	..... (partisans in woods: +2)	+1
behind hedge hexside (11.2)	.....	+1
beneath AFV counter	.....	+1
wooden building	.....	+2
behind stonewall hexside (11.2)	.....	+2
stone building	.....	+3
moving double time (73.5) in woods or building	.....	-1
bore-sighted target hex (78.4)	.....	-2
higher elevation (91.1), not due to upper level bldgs	.....	+1
horses (92.7), pulkkas, wagons (108.243)	.....	-1
inside boats (128.73)	.....	-1
mounted on bicycles (132.7) or motorcycles (123.63)	.....	-1
fog (111.23), camouflage suits in snow (111.81)	.....	+1

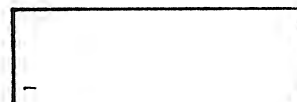
## Tournament Scenario 2

# PAVLOV'S HOUSE



**STALINGRAD, October 20, 1942:** At the end of September, units of Rodimtsev's 13th Guards were ordered to seize buildings on Lenin Square and form strongpoints. A damaged apartment building was attacked and occupied by Sgt. Jacob Pavlov and his men, who formed a defensive position with some meager reinforcements. Since it sat astride the German line of advance to the Volga only 250 meters away, his strongpoint came under frequent attack. On 20 October, as part of the general German effort to complete their seizure of the city, one of the strongest attacks to date was launched against Pavlov's house.

### Board Configuration



## VICTORY CONDITIONS

The player with the most unbroken full squads (not crews) in any hex of building 1Z7 at the conclusion of play wins. Should both players have an equal number of unbroken full squads in the building, it is considered a Russian victory.

## TURN RECORD CHART

★ Russian sets up first	1	2	3	4	5	6	7	END
● German moves first								

**Elements of 42nd Regiment, 13th Guards Division set up concealed in any hex of building 1Z7:**

6-2-8	4-4-7	2-3-7	1-8-8	9-1	8-1	50 2-10	2-8 B10+	4-12 B10+	12 B11+	?	57LL <sup>2</sup>
2		3					2		11		

**6th Army Assault Group set up any whole hex north of Hex Row Q, inclusive:**

4-6-7	9-2	8-1	8-0	2-8 B12	4-12 B12
9		4			

Enter on turn 1 anywhere along west edge, north of Hex Row Q, inclusive:

8-1  
75

13  
75 4/2

## SPECIAL RULES

- T2.1 All hexes comprising building 1X4 are considered clear terrain. This is the Lenin Square.
- T2.2 Hex 1X7 is considered clear terrain.
- T2.3 Hex 1Z6 has been rubble; place a rubble counter in this hex before play commences.
- T2.4 Hex 1AA7 is a third-level building hex (125.).
- T2.5 All Russian units are fanatic (26.) regardless of location.
- T2.6 The Russian ATG and its attendant crew may be set up using Hidden Initial Placement (42.).
- T2.7 Prior to initial placement, the German player must roll a 200mm

artillery attack against each hex of building 1U2 and of building 1Q4. Place rubble counters where appropriate but do not place fire markers.

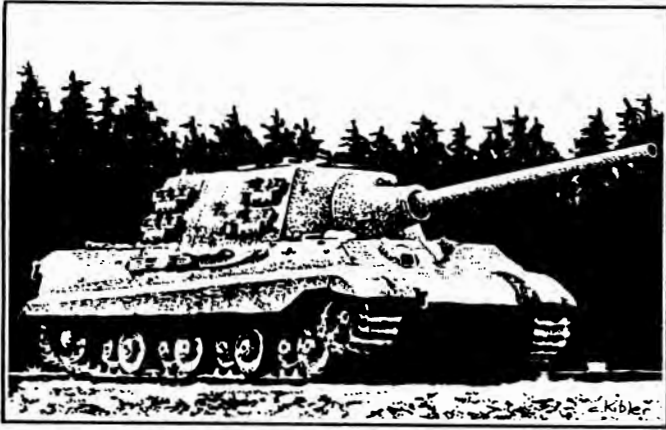
**T2.8** Neither side may deliberately set fires.

**AFTERMATH:** As the German assault group approached the building, Pavlov's men opened fire on the infantry with MGs. When the panzers moved forward to silence the threat, the Soviet AT gun was able to destroy or drive all of them off. Without armor support, the infantry was unable to make any headway. Failure to properly coordinate air and artillery support with such local attacks led to repeated costly failures. This allowed many strongpoints, such as the apartment building that eventually became known as "Pavlov's house", to hold out until the siege was lifted.

*Design by Burt Baker. Development by Jon Mischen & Joe Suchar.*

# SOLDIERS OF DESTRUCTION

## Tournament Scenario 4



**RADZYMIN POLAND, October 10, 1944:** The men of the SS Totenkopf Division had stalled the advance of the Fifth Guards Tank Army in late September. Then, silence. No fighting had occurred for the past three weeks. It seemed like a dream. Time to sleep; time to write; time to mend clothing; time to listen to the birds sing. Replacements arrived; weapons were stripped and cleaned. It was too good, too unreal. A feeling of unease pervaded the encampment. There was almost a sigh of relief as the dull thunder of the Russian advance began again.

### Board Configuration



6	4
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### VICTORY CONDITIONS

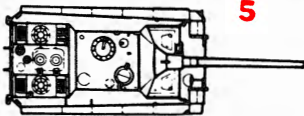
The Russian player must exit eight squads off the south edge of the map-board. AFVs with functioning main armament are the equivalent of two squads. The German player wins by avoiding the Russian victory conditions.

### TURN RECORD CHART

♣ German sets up first	1	2	3	4	5	6	7	8	END
★ Russian moves first									



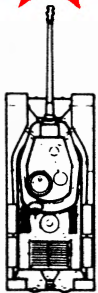
Elements SS Totenkopfdivision set up anywhere south of Hex Row Q, inclusive:



6-5-8	9-2	8-1	44a 3	ATM X12	LMG 2-8 B12	128L4	14 88LL
5			4	2	2		



Advance Elements, Soviet Fifth Guards Tank Army set up anywhere north of Hex Row I, inclusive:



6-2-8	8-0	13 122L
8		4

### SPECIAL RULES

**T4.1** German AFV crews are SS; all appropriate rules apply.

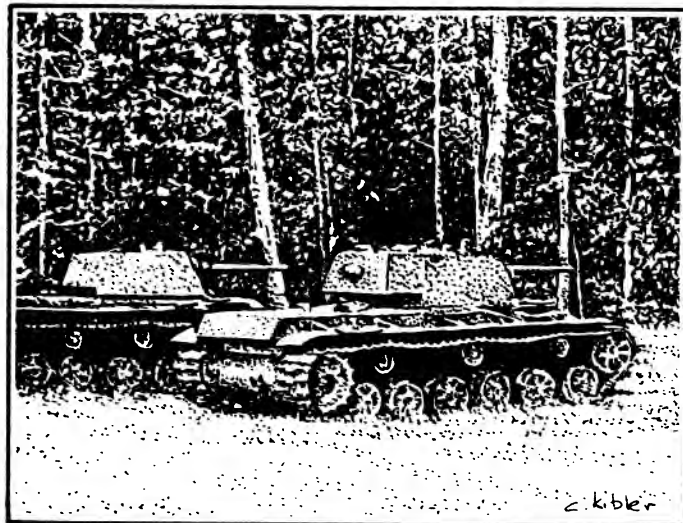
**T4.2** Battlefield Integrity (93.) is not in effect.

**AFTERMATH:** The three week lull around Warsaw ended abruptly with the fury of the renewed Russian offensive. By sheer weight of numbers, the Fifth Guards Tank Army pressed the SS units back 30 kilometers northwest to the conjunction of the Vistula and the Bug. There, the SS Totenkopf-division held until the Soviets had exhausted themselves, late in October 1944. Afterwards, another long period of quiet fell as both battered combatants strove to recoup the strength that had once been theirs for the coming effort.



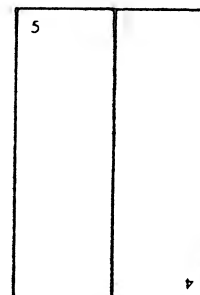
# FIRST CRISIS AT ARMY GROUP NORTH

## Tournament Scenario 1



**RIVER DAUGAVA, June 25, 1941:** When Army Group North moved toward the Daugava River, the Russian command responded by detailing the III Armored Corps to meet and destroy Manstein's units. On June 24th, the Soviet armored force made contact with the 6th Panzer Division, the spearhead of the XLI Panzer Corps. Over a hundred of the Soviet tanks were the super-heavy KV models. The size and power of these stunned the panzer crews and baffled the AT gunners: neither seemed to possess a gun which could penetrate the armor of their opponents. The German advance was halted and the 6th Panzer cut off. The following day, the 1st Panzer was ordered to relieve and reinforce the 6th, while the Soviet unit moved to continue its advance. These two efforts immediately collided.

### Board Configuration



### VICTORY CONDITIONS

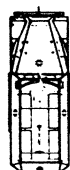
The Russian player must exit three tanks with functioning main armament off the west edge of the mapboard. The German player wins by avoiding the Russian victory conditions.

### TURN RECORD CHART

♣ German sets up first	1	2	3	4	5	6	7	END
★ Russian moves first								



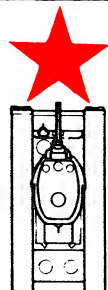
Elements of 1st Panzer Division set up anywhere:



4-6-7	2-4-7	1-8	1-8	LMG 2-8 B12	30 A	CE 9-2 Cpl. Whitman	14 -1 37L(4) 4/4	14 -1 50 4/2	18 -1 15/5PP	AT 37LH5#6
4				2	2		2	2	2	

Enter on turn 1 anywhere along west edge of mapboard:

2-4-7	1-8	21 15/7PP	AA 88L V
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Elements of III Armored Corps enter on turn 1 anywhere along east edge of mapboard:

4-4-7	1-8	MMG 4-1 B1	12 0 76 4/2x2	12 -2 45L -/2x2	22 -4 45L -/2
7			3	2	2

### SPECIAL RULES

**T1.1** There is no road movement bonus.

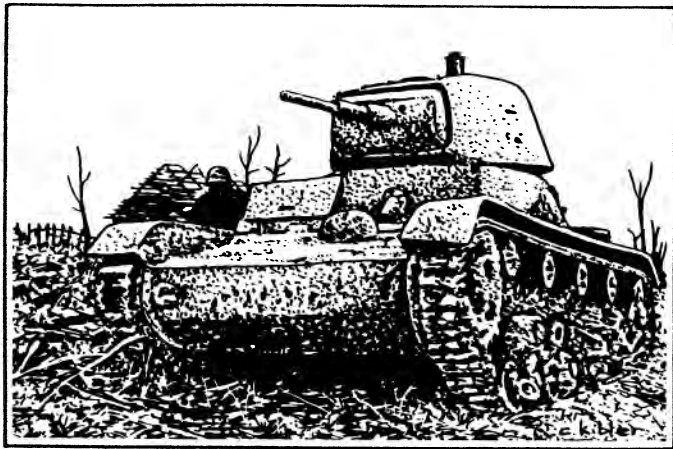
**T1.2** All German infantry and weapons must start and/or enter play loaded in or on vehicles.

**T1.3** Units may not utilize Bore Sighting (78.).

**T1.4** Battlefield Integrity (93.) is not in effect.

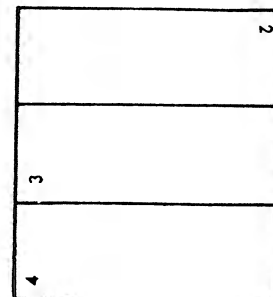
**AFTERMATH:** The Soviet heavy tanks outclassed the German defense and simply drove through the German units towards their objectives. The German armor commanders responded to this with careful maneuver and precision fire, turning their tanks around to follow the Russian advance while the infantry attempted to close assault the Russian behemoths. These tactics eliminated a few of the Russian vehicles, but the rest continued their steady advance until they ran into German AA and artillery positions in the rear. Unlike the AT and tank guns, these weapons had a fair chance of penetrating the thick armor of the Russian tanks. The Soviet advance ground to a halt. A rapid German counterattack threw the confused Russians back about two miles and relieved the crisis.

# Tournament Scenario 3 LAND LEVIATHANS



**LIPKI, July 3, 1941:** Under pressure from Stalin to hold Smolensk, Yeremenko was desperate to halt the German offensive. On 1 July, he committed his sole armored reserve: the 1st Moscow Motorized Rifle Division under Major-General I.G. Kreyzer. It was a crack unit, the pride of STAVKA. Equipped with the new T-34 and KVII tanks, the division moved off to meet and defeat the 18th Panzer Division, the spearhead of Guderian's 2nd Panzer Gruppe. On 3 July at Lipki, six miles east of Borisov, contact was made.

## Board Configuration



## VICTORY CONDITIONS

The Russian player must exit four AFVs (any type) with functioning main armament west off any road hex. The German player wins by avoiding the Russian victory conditions.

## TURN RECORD CHART

German sets up first	1	2	3	4	5	6	7	END
Russian moves first								

**Elements 21st Panzer Regiment set up anywhere on Board 3 west of Hex Row I, inclusive:**

4-6-8  
6

10-2  
2

9-1  
4

6-16  
B12  
B11+ 1PP

10-2  
B11+ 1PP

14  
37L(4) 4/4

Enter on hex 2GG6 on turn 2:

9-2  
75\* NS 4/2

14  
75\* NS 4/2

**Elements 1st Moscow Motorized Rifle Division enter on turn 1 on hex 3GG6:**

9-1  
152\* 4/-12

9  
76 4/2

17  
45L

24  
45L -/2

22  
45L -/2

12  
45L -/2

## SPECIAL RULES

**T3.1** To reflect the effect of the unexpected appearance of the new Soviet armor types, all rules for pre-1942 infantry versus AFVs (105.) are in effect regardless of the presence of functioning antitank weaponry in the hex.

**T3.2** Battlefield Integrity (93.) is not in effect.

**T3.3** All buildings are of wooden construction.

**T3.4** All rules for lack of wireless and one-man turrets are in effect.

**T3.5** AFVs may not deliberately enter any multi-story building. Bypass in such hexes is allowed. Should an AFV crash into a multi-story as an effect of shock (131.), the building hex is rubble but the AFV is considered destroyed.

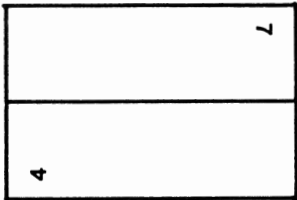
**T3.6** All third-level terrain is considered normal second-level hills.

**AFTERMATH:** A number of light Russian AFVs, supported by a single KVII and a single T-34, advanced on the lead elements of the 21st Panzer Regiment. Stunned by the appearance of the two armored monsters not encountered before on the Army Group Centre front, the German panzerjaegers scattered. A handful of German tanks were all that stood in the path of the Soviet advance. The T26S and BT5 tanks were routed by the PzKw IIIs. The German 37mm shells, however, were unable to affect the KVII or T-34. Two panzers were quickly destroyed. At that point three PzKw IVs arrived to engage the KVII, while the remaining PzKw IIIs concentrated on the T-34's vulnerable tracks. Soon both Russian heavy tanks were out of action, the KVII bogged on soft ground and the T-34 with its treads shot away. Without the threat of the KVII or T-34, the panzerjaegers rallied and were able to hold their position. This incident reveals the cardinal sin of the Russian command: employment of their superior T-34 and KV types not in formation, but individually among light and medium tanks, or as support for the infantry. It was a mistake Soviet Russia was to pay dearly for.



Near PFAFFENHECK, GERMANY, March 15, 1945: At the same time that the SS mountain troopers were striking one flank of the US 357th Regiment, the Wehrmacht's 159th Division struck the other. Every effort was to be made to prevent the Americans from establishing an artillery OP in the large farm building near the river. This would insure the safe retreat of remaining German troops to the Rhine.

Board Configuration

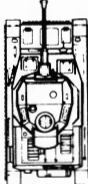



VICTORY CONDITIONS








The US player wins by being the last to solely occupy both hexes 4O6 and 4P6. The German player wins by avoiding US Victory Conditions.



TURN RECORD CHART

Simultaneous setup	1	2	3	4	5	6	7	END
♣ Germans move first								














Elements of 159th Division set up anywhere east of T inclusive on board 4.

 1-5	 8-0	 4-6-7	 4-4-7	 4-12 B12	 2-8 B12	 13 -1 -1 75L 4/2/4
2	6	6	4	2		



Elements of 375th Infantry Regiment of 90th Division [ELR:4] set up anywhere south of the river and west of row K inclusive on Board 4, and row W inclusive on Board 7. In addition, U.S. may place five or less *counters* in building hexes 4O6 and 4P6.

 9-1	 8-0	 7-0	 6-6-6	 2-3-6	 9 △ B12	 60 22-45 9PP	 8-20 B12	 4-12 B12	 45a 6 WP6 1PPX11	 AT 57L
2	12			2	4					

SPECIAL RULES

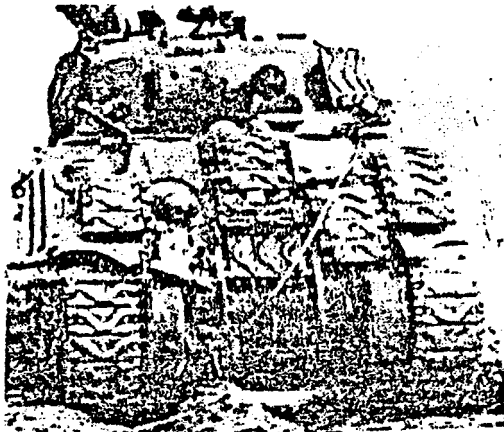
- 304.1 US has one 80mm mortar OBA module.
- 304.2 River is deep and a strong current flows from west to east.
- 304.3 All wheatfields are treated as Brush hexes (154).

304.4 The US ATG may set up hidden even if, after the German setup is revealed, it would have been in German LOS.

**AFTERMATH:** The Germans were able to throw the lead American units out of the farmhouse they had just occupied. However, aided by artillery and with bazooka fire keeping the German tanks at a distance, the GIs were able to retake that farmhouse. Using this as a jumping-off point, the division snaked forward.



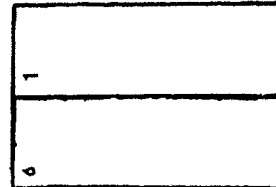
# SEP Scenario 28 Blood On The Bocage



June 1944, 1944. Villers Bocage, France. After the consolidation of the Beachheads the British had begun their breakouts. The first of what proved to be major attacks was Operation Perch, the outflanking of the Panzer Lehr around the town of Villers Bocage. If successful, an axis would be formed from the area of Balleroy and La Belle Epine southeast to this town. Perhaps the most famous tank duel in the West was taking place above Villers Bocage on Hill 112 where the famous Desert Rats of Africa fame pushed on from this soon to be famous town. What is not well known was the battle for the town itself. As Major Whittman was singlehandedly disposing of the lead regiment, the other Tiger Tanks from his Battalion, soon to be aided by elements of the 2nd (Vienna) Panzer Division struck the town.

## Board Configuration

N  
N



## VICTORY CONDITIONS

German win by clearing and having uncontested control 7 out of 9 Multilevel buildings on Board One at Game end OR Demoralize the British player Two levels. British win by avoiding these victory conditions. Control of the buildings is determined by having been the last player to have entered these buildings.

## TURN RECORD CHART

British sets up first	1 <sup>+</sup>	2 <sup>0</sup>	28.2 <sup>+</sup>	3 <sup>+</sup>	4	5	28.1 <sup>0</sup>	6 <sup>0</sup>	7	8	9	END
German moves first												

**ELEMENTS:** 4th County of London Yeomanry & 131st Queens Brigade of 7th Armoured Division set up first on any hex Boards 1 and/or 6.

**Reinforcements enter Turn two any North Edge Board 1.**

**Turn 6: enter any road hex Board 1.**  
As per special rule

**ELEMENTS:** 2nd Company SS PzAbt. 131/501 Heavy Tank Battalion enter Turn 1 South Edge

'Add a 9-2 Armor Leader, Major Whittman', On All Fronts, March 1984

**ELEMENTS:** 2nd Vienna Panzer Division enter Turn 3 as per special rule

## SPECIAL RULES

28.1. Beginning turn 6 the British player rolls one die. A roll of one or two brings in Both Firefly's, three to five will bring in one Sherman, a roll of six means that NO Firefly will enter into the game.  
28.2. Prior to play the German player draws one of four chits to determine the entry hexes for his reinforcements to come in. Chit 1: 6A6-A5. Chit 2: 6 GG6. Chit 3: 1 GG5, GG6. Chit 4: Any South hex Board 6.  
28.3 British receive one module of 88mm off board artillery support.  
28.4 Battlefield Integrity (93) is in effect.

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**AFTERMATH:** As the Tigers rolled into the town they had lost their weapon range superiority by fighting other Tanks at point blank range. Stalking the Tiger with PIATS the British had succeeded in repulsing the attack now also entered by elements of General Luetwitz's 2nd Panzer. Tank fired at Tank around the corners of buildings as the Germans were gradually repulsed, despite efforts of the local Fire Brigade who insisted on trying to distinguish the fires from the burning tanks. Threatened now by the enemy on three sides the 7th armoured, now smarting after staggering losses to the Tigers. withdrew from town

Target Type/Range	1-6	7-12	13-24	25-39	40-59	60+
-------------------	-----	------	-------	-------	-------	-----

INF in building, shellholes, entrenched	8	8	7	6	6	5	5	3	3	0	0	-2
INF in woods	8	8	6	6	5	4	4	2	2	-1	-1	-
INF in other	9	9	8	7	7	6	6	3	4	1	1	-1
Vehicle is hull down	7	6	5	4	4	3	3	1	2	-1	-2	-
Vehicle is in woods/bldg	9	9	8	7	7	6	6	3	4	1	1	-2
Vehicle is in other <u>Bridge</u>	10	10	9	8	8	7	7	4	5	2	2	0
Gun	6	5	5	4	4	3	2	0	0	-2	-2	-

### GUN & AMMO TYPE MODIFICATIONS

Range/Type	*	L	LL	APDS APCR
7-12 hexes	+1	0	0	0
13-24 hexes	+2	-1	-1	+1
25-29 hexes	+3	-1	-2	+2
40+ hexes	+4	-1	-2	+3

- \*J. Target is moving (Defensive Fire or Motion target, 135.3).  
 \*K. Target is concealed (rain, snow 6 + hex range, 111.44 & .5)  
 L. Target is in adjacent hex .....  
 M. Target is in bore-sighted hex (78.4) .....

\*Applicable to shaped-charge weapons with separate To Hit Table (PF, PIAT, bazooka, psk); add +2 if hull down or in wooden building; add +1 in woods

### HIT DETERMINATION DICE ROLL MODIFIERS 33.31

### FIRER MODIFICATIONS

- |   |                           |    |    |
|---|---------------------------|----|----|
| A. Tank firing outside Covered Arc .....  | (A: fast turret traverse) | +2 | +1 |
| B. Tank firing during Adv. Fire Phase after pivoting within<br>hex during Movement Phase .....  |                           | +1 |    |
| C. Tank firing during Adv. Fire Phase after moving to a new hex or<br>motion vehicle defensive fire (133.41); (G: gyrostabilizer) ..... |                           | +5 | +3 |
| D. SP Gun/AT Gun firing during Adv. Fire Phase after pivoting<br>within hex during Movement Phase (French Case B) .....                 |                           | +3 |    |
| E. SP Gun/AT Gun firing during Defensive Fire Phase after pivoting<br>within hex during Defensive Fire Phase (French Case A) .....      |                           | +4 |    |
| F. Intensive Fire (70.2) .....  |                           | +2 |    |
| *G. Deliberate Immobilization (66.2) side/rear target facing .....  |                           | +3 | +5 |
| *H. Captured Ordnance (90.13) .....   |                           | +2 |    |
| I. Buttoned Up (64.47) .....  |                           | +1 |    |

### TARGET MODIFICATIONS

- |  |    |  |                              |
|--|----|--|------------------------------|
| *J. Target is moving (Defensive Fire or Motion target, 135.3).....   | +2 | N. Target is acquired (69.1).....                                | /fire phase -1               |
| *K. Target is concealed (rain, snow 6+ hex range, 111.44 & .53)..... | +2 | *O. Moving target using 1 or less MPs or MFs in firer's LOS..... | +1                           |
| L. Target is in adjacent hex.....                                    | -2 | *P. Moving target using 3 or less MPs in firer's LOS.....        | +1                           |
| M. Target is in bore-sighted hex (78.4).....                         | -2 | *Q. Target size (64.6).....                                      | per vehicular target counter |

## AP AMMUNITION

### AFV KILL TABLE 33.4

Russian 76L																																							
		'42-'43 fighter				20LL								75*		37H		95H		76LL				75H															
1939-41 fighter		ATR		'44-'45 fighter		25L		25LL		40L		45LL		47H		76*		76L		77L		85L		75LL		150H													
↑MMG		12.7		20		20L		37L		28LL		40		45L		50		50L		88*		75		75L		88L		100H		128L		150*							
TARGET	↑HMG	15		37*		37		47*		37LL		47		47L		57		57L		57LL		122*		76		76L		90L		152		100L		122L		150L		152*	
AFV Front	-2	-1	0	1	2	3	3	4	4	5	6	4	6	7	8	9	11	10	12	7																			
AFV Side	-1	0	1	2	3	3	4	5	6	6	6	6	7	8	9	10	12	12	13	9																			
AFV Rear	0	1	2	3	4	4	5	6	7	7	8	7	8	9	10	11	13	13	14	10																			
Unarmored★	NA*	3	7	7	7	7	8	8	9	9	9	11	10	10	10	11	11	11	11	11																			
†must be within normal range		12.7 = 12.7mm or .50 cal HMG				15 = 14.5mm HMG				ATR = anti-tank rifle				(63.9) gunshields -4, guns -5				*see 51.4																					

## HE AMMUNITION & SPECIAL WEAPONS

Target	PF										FT		
	30+	40+	50+	70+	100+	120+	150+	PSK	PIAT	BAZ	ATM	DC	MC
AFV Front	−1	0	1	3	5	6	7	7	5	4	—	7	3
AFV Side	1	2	3	5	7	8	9	8	7	5	—	9	4
AFV Rear	2	3	4	7	9	10	11	9	8	7	10	11	5
Unarmored★	9	10	11	12	12	12	12	9	10	9	11	12	11

### AFV TO KILL MODIFIERS

- |  |             |
|--|-------------|
| A. As per individual target armor modifier       |             |
| B. Height advantage vs close topped armor (77.3) | -1          |
| C. Height advantage vs open topped armor (77.3)  | -3          |
| D. Critical Hit (68.2)                           | AFV Rear -1 |

E. Range Effects on Penetration (65.2) ..... AP ammunition only

<b>Gun Size/Range</b>	<b>1</b>	<b>2</b>	<b>3-6</b>	<b>7-12</b>	<b>13-24</b>	<b>25-39</b>	<b>40-59</b>	<b>60 +</b>
40mm or less	-2	-1	0	0	+1	+2	+4	+6
45mm or more	-3	-2	-1	0	0	+1	+2	+3

F. APCR Range Effects on Penetration ..... substitute for case E

Gun Size/Range	1	2	3-6	7-12	13-24	25-39	40-59	60+
37mm	-3	-2	-1	0	+1	+3	+6	—
45mm—57mm	-4	-3	-2	-1	0	+1	+3	+5
75mm—76mm	-5	-4	-3	-2	-1	0	+2	+4
85mm—90mm	-6	-5	-4	-3	-2	-1	0	+2

G. British 57L APDS; use case E and ..... -2

- H. British 76LL and 77L APDS; use case E and ..... -4

† Double if functioning enemy AFV

### VEHICLE MOVEMENT COSTS CHART

Terrain	Motorcycles & Armored Cars	Tracked AFV	Truck/Jeep
through road <i>hexside</i>	½ MP	½ MP	½ MP
open ground, orchard	3 MP	1 MP	4 MP
through hex containing wreck/vehicle†	2 MP/Vehicle + COT (0)	2 MP/Vehicle + COT	2 MP/Vehicle + COT
higher terrain than previously occupied	4 MP + COT	4 MP + COT	4 MP + COT
woods*	NA (†)	6 MP*	NA
wooden buildings*	NA (†)	4 MP*	NA
over walls or hedge <i>hexsides</i>	NA (†)	1 MP + COT	NA
outside of Covered Arc	2 MP + COT (0)	2 MP + COT	4 MP + COT
shellhole, entrenchment	2 MP + COT	COT	4 MP + COT
unload passengers	NA (1 MF)	2 MP	2 MP
stone buildings, cliff <i>hexsides</i>	NA	NA	NA
smoke/fog	1 MP + COT	1 MP + COT	1 MP + COT
enter gully	5 MP + COT	2 MP + COT	8 MP + COT
leave gully	9 MP + COT	4 MP + COT	12 MP + COT
reverse movement (71.1)	2 × COT (NA)	4 × COT	4 × COT

### IMMOBILIZATION 39.1

One die:	Russians, USA	6
	British, German	5,6
	All others	4,5,6

## CLOSE COMBAT AFV KILL NUMBERS 36.2

Dice roll equal to or less than firepower factor

<b>DRMs:</b>	vs Open Topped AFV (72.81) .....	-1
	vs vehicle in motion (135.7) .....	+2
	vs AFV without MG .....	-1

### ARTILLERY ACCURACY 46.21

One die:	Japanese, Russian, Minor	1
	All others	1.2

## DEFENSIVE FIRE AFV IMMOBILIZATION NUMBERS 36.13 &amp; MGs Vs ARMOR 119.4

Location of Firing Units	MGs vs Pre-'42 AFVs	Dice Roll
Leader only, any non-open ground		2
Squad in wheatfield, orchard, smoke, wreck	LMG	2
Squad in small building, shellhole, entrenched	MMG	3
Squad in woods or large building	HMG	4

DRMs: AFV using Bypass Movement in same hex as firer . . . . - 2; Poor visibility (119.6) affects MGs only . . . . . + 1

### 115.3 LEADER CREATION TABLE

Die Roll	Leader Created		LEADER CREATION DRMS
7 +	None	-1	American, German, British
6	6 + 1	-1	per odds ratio less than 1-1 in Close Combat
4,5	7-0	-1	base unit has morale level of 8 or higher
2,3	8-0	+1	base unit has morale level of 6 or less
1 or less	8-1	+1	per odds ratio greater than 1-1 in Close Combat
		+1	base unit is broken
		+1	Russian, French, Italian, Minor