

# ASL journal

Issue Seven



KEN SMITH



# EXTRACURRICULAR ACTIVITY



## ASL SCENARIO 122

Scenario Design: Chris Olden



**BUDA, HUNGARY, 25 December 1944:** While the Red Army was hammering at Pest for over six weeks, the inhabitants of Buda were still preparing for Christmas festivities, albeit subdued ones. On Christmas Day, however, they were surprised by the sudden appearance of Russian armored reconnaissance forces at the Janos Hospital, less than two miles from the Royal Palace. A company from the 1st Technical University Battalion was the first unit to clash with the Russians in Buda.

### BOARD CONFIGURATION:



(Only hexrows A-P are playable)

### BALANCE:

- ★ Delete one 43M Zrinyi II.
- ☒ Add an Axis Minor MMG to the Hungarian OB.

**VICTORY CONDITIONS:** The Hungarians win at game end by having more unbroken squad-equivalents in building B2 than the Russians.

### TURN RECORD CHART

★ RUSSIAN Sets Up First [70]	☒	1	2	3	4	5	6	END
☒ HUNGARIAN Moves First [84]								



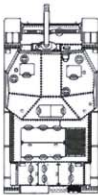
**Elements of the 2nd Ukrainian Front [ELR: 3]** set up on/west of hexrow M, ≤ 4 squads (and any SMC/SW stacked with them) may set up in building B2: {SAN: 3}



4-4-7	9-1	8-1	8-0	6-12	2-6	1-12	? 7 morale	16 11 6 85L 2/4
10				2	2	9	2	



**Elements of the 1st Technical University Battalion [ELR: 3]** set up on/east of hexrow O and/or enter on/after Turn 1 along the east edge: {SAN: 2}



3-4-7	9-1	8-1	7-0	2-7	14 5 2 105
14			2	4	4

### SPECIAL RULES:

1. EC are Wet, with no wind at start. Kindling is NA. Building B2 has an inherent stairwell in every hex and Rooftops (B23.8). All buildings with a printed Stairwell are Two-Story Houses (B23.22). All other buildings are ground level only.
2. The Hungarian MMC broken side Morale Level is 2 higher than printed. The Hungarian HOB Nationality DRM is zero. Hungarian units will not surrender due to a HOB result; they go Berserk instead.
3. Civilian (only) Interrogation (E2.4) is in effect. Hungarians are in a Friendly Country; Russians are in a Hostile Country.

4. No AFV may set up in or enter a hex of building B2.
5. Hungarian AFV are Elite (C8.2).

**AFTERMATH:** Although lacking in training, the college students stopped the Soviets at the Janos Hospital and Schwabian Hill. By the morning of December 26th, however, Budapest was completely surrounded by the forces of the 2nd and 3rd Ukrainian Fronts, which had linked up at Esztergom. The siege of Budapest had begun.

# THE YELNYA BRIDGE



## ASL SCENARIO J102

Scenario Design: Xavier Vitry



**YELNYA, RUSSIA, 13 October 1941:** After the collapse of Soviet forces facing Army Group Center, a handful of Russian units were sent to defend the main communications routes to Moscow—the most critical of which was the Minsk highway which ran south of Borodino. Meanwhile, the 10th Panzer Division regrouped and followed up its main thrust towards Moscow, following the SS “Das Reich” Motorized Division. On 13 October, German forward elements encountered the first Soviet defensive positions near the town of Yelnya where a small stream had to be crossed in order to keep up the pace of the advance.

### BOARD CONFIGURATION:



(Only hexrows D-U are playable)

**VICTORY CONDITIONS:** The Germans win at game end if they Control buildings I5, J4 and K4 or immediately by exiting  $\geq 16$  Exit VP along the north edge ( $\geq 4$  Exit VP must be from Infantry; prisoners do not count).

### BALANCE:

- ★ Replace three 4-2-6 with three 4-4-7.
- ✚ Delete the ATR from the Russian OB.

### TURN RECORD CHART

★ RUSSIAN Sets Up First [0]	✚	1	2	3★	4	5	END
✚ GERMAN Moves First							

Elements of the 32nd Rifle Division [ELR:3] set up north of the stream: {SAN:3}

4-4-7

3

4-2-6

5

2-2-8

9-0

8-1

MMG  
2  
BT 4-10

LMG  
1  
BT 2-6

MTR  
3  
50\* [3-20]

ATR  
1-12

?

7 morale

ART  
M9  
2  
76L

4

**Trench**  
OVR, OBA: +4  
Other: +2

1+3+5

2

Platoon from the Reserve Company enters on Turn 3 along the north edge:

3

Elements of II Battalion, PanzerGrenadier Regiment Germania, 2nd SS Motorized Division [ELR:5] enter on Turn 1 along the south edge: {SAN: 2}

4-2-6

6

5-2-4-8

3

9-1

8-1

LMG  
1  
BT 3-8

DC  
X12  
30-1

3

Panzer Regiment 7, 10th Panzer Division enter on Turn 1 along the south edge:

13

2

50

20L(4)

3/5

14

3

1

Elements of Aufklärungs Abt. enter on Turn 1 on I10 :

\*34  
1  
1  
1

CMG -/5/\*

2

### SPECIAL RULES:

1. EC are moderate, with no wind at start.
2. All roads are Paved.
3. German 5-4-8s/2-3-8s are Assault Engineers (H1.22).
4. AFV crews may not voluntarily Abandon (D5.4) vehicles.
5. German 4-6-8s/2-4-8s and 5-4-8s/2-3-8s are SS, with underlined Morale and broken Morale 1 higher than printed.

**AFTERMATH:** The first attack was launched but broke against a curtain of small arms fire laid down by the Russian troops led by Captain Romanov. The SS troops regrouped and launched a second attack which nearly succeeded until Romanov committed his reserve company in a counterattack. By nightfall the original positions were still in Soviet hands, but the 32nd Rifle Division was beginning to show signs of strain.



# LENIN'S SONS



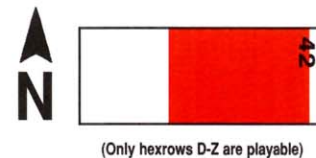
Scenario Design: Xavier Vitry

## ASL SCENARIO J103



**YUDINKI, RUSSIA, 14 October 1941:** To the south of Borodino, the SS Das Reich was committed to several actions aimed at breaking the Soviet lines in order to rush towards the east. The Der Führer Regiment, fighting on the southern flank of the Division, had regrouped and was to seize the village of Yudinki, whose forward defense consisted of some of the finest Russian youth—the Lenin Cadets.

### BOARD CONFIGURATION:



**VICTORY CONDITIONS:** Provided the Russians have amassed  $\leq 16$  CVP, the Germans win at game end if they control  $\geq 8$  building/rubble hexes on/east-of hexrow K.

### BALANCE:


★ In the Victory Conditions change 16 to 13.











⚡ In the Victory Conditions change 8 to 7.






### TURN RECORD CHART

★ RUSSIAN Sets Up First	1	2	3	4	5	6	7	END
⚡ GERMAN Moves First [174]								


★ Elements of II Battalion, Lenin Cadets [ELR: 4] set up on/east-of hexrow U: {SAN:3}














 E 6-2-8	 E 4-5-8	 1 4-4-7	 E 3-2-8	 2-2-8	 10-0	 8-1	 8-0	 1-1-9	 ? 7 morale
2	3	2	2						9

 HMG 3 6-12	 MMG 2 4-10	 LMG 1 2-6	 MTR 3 50* [3-20]	 DC 30-1
	2		2	

⚡ Elements of Pz Gr Regiment Der Führer, Das Reich Division [ELR: 5] set up on/west-of hexrow Y: {SAN:2}



 E 4-2-8	 E 5-2-8	 E 2-3-8	 9-2	 8-1	 8-0	 7-0	 MMG 2 5-12	 LMG 1 3-8	 FT X10 24-1	 DC X12 30-1
10	3							3		2

### SPECIAL RULES:

1. EC are moderate, with no wind at start. Kindling is NA.
2. All buildings are wooden.
3. All Russian units may set up concealed regardless of terrain. The Russian may set up one squad-equivalent HIP along with any SMC/SW stacked with it.
4. German 5-4-8s/2-3-8s and Russian 6-2-8s/3-2-8s are Assault Engineers. (H1.22).

5. German 4-6-8s/2-4-8s and 5-4-8s/2-3-8s are SS, with underlined Morale and broken Morale 1 higher than printed.

**AFTERMATH:** The Lenin Cadets were unable to hold their ground. Despite the good leadership from the Military Academy and extreme bravery in combat, they were forced to withdraw to the village of Artemki, a few miles to the east. Nevertheless, they had inflicted heavy casualties upon the SS who, stopped at Artemki by these same Cadets a few hours later, could not break the Soviet lines this day.



# FLANKING FLAMETHROWERS



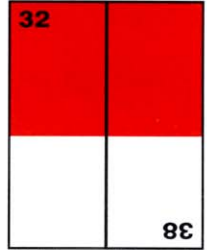
## ASL SCENARIO J104

Scenario Design: Xavier Vitry



**SEMENOVSKAYA, RUSSIA, 15 October 1941:** The landscape south and west of Borodino was covered with snow by first light on 15 October, but the skies were clear. The 32nd Rifle Division was holding its ground against the German onslaught, when some fresh elements of the 86th Schützen Regiment were pushed forward, supported by several tanks from the 7th Panzer Division. They were tasked to break through the Russians lines.

### BOARD CONFIGURATION:



(Only hexrows A-P on board 32 and R-GG on board 38 are playable)

### BALANCE:

- ★ German AFV enter on Turn 2.
- ⚔ Exchange one German 8-1 leader for one German 9-2 leader.

**VICTORY CONDITIONS:** Provided the Germans have  $\geq 3$  unbroken squad equivalents on/east of the 38R6/Z5/GG6 road, the Germans win at game end by amassing more VP than the Russians. Both sides earn CVP normally (prisoners do not count double). The Germans also earn Exit VP for Good Order Infantry units on/east-of the 38R6/Z5/GG6 road at game end.

### TURN RECORD CHART

★ RUSSIAN Sets Up First [0]	1	2	3	4★	5	6		7	END
⚔ GERMAN Moves First [158]									

★ Elements of I and III Battalions, 32nd Rifle Regiment, 32nd Rifle Division [ELR: 3] set up on board 32 in hexes numbered  $\leq 6$  and/or anywhere on board 38: {SAN: 3}



4-5-8	4-4-7	2-2-8	8-1	7-0	6-12	4-10	2-6	50*[3-20]	7 morale	76L
2	6	3					2	2	7	

Elements of the 32nd Flamethrower Company [ELR:5] enter on Turn 4 along the east and/or north edge:

6-2-8	3-2-8	8-1	2-6	24-1
3				2

⚔ Elements of 86th Schützen Regiment and 7th Panzer Regiment, 10th Panzer Division [ELR:3] enter on Turn 1 along the west edge: {SAN: 2}



4 <sup>2</sup> -6-8	4 <sup>1</sup> -6-7	2-4-7	9-1	8-1	8-0	3-8	75* 3/5	50 3/5
8	5		2			4		

### SPECIAL RULES:

1. EC are Wet with no wind at start. Ground Snow is in effect.
2. All buildings are wooden. The Stream is deep, but is neither Frozen nor Frigid. Marsh is Open Ground as per A16.8.
3. The Russian 6-2-8s/3-2-8s are Assault Engineers (H1.22).
4. AFV crews may not voluntarily Abandon (D5.4) vehicles.

**AFTERMATH:** The Russian Army commander threw several support units into the battle, including a regiment of 76mm Guns and a newly arrived flamethrower company. Lelyushenko was seriously wounded directing the formation of the new defense line, but the line held, if only by the least of margins. Lelyushenko's loss was a major blow to the Soviets, as finally they had a General who could stop the Germans. Major General Govorov was appointed to replace the fallen commander.



# BORODINO TRAIN STATION



## ASL SCENARIO J105

Scenario Design: Xavier Vitry



**BORODINO, RUSSIA, 16 October 1941:** The armored spearheads of the 10th Panzer Division had reached an important railway junction on the road to Moscow. Kampfgruppe Hauenschildt, part of the 86th Schützen Regiment, was tasked to hold the Borodino Train Station while the armored elements of the division were to push forward east. But the Russians were determined not to let them!

### BOARD CONFIGURATION:



### BALANCE:

- ☛ Replace three 4-6-7 with three 4-6-8.
- ★ Replace two 5-2-7 with two 6-2-8.

**VICTORY CONDITIONS:** The Russians win at game end if they Control the train station (building U2) and/or the cityhall (building Z2) provided at least 3 unbroken squad-equivalents are south of the road R9-T9-Y7-Z6-FF5-GG6.

### TURN RECORD CHART

☛ GERMAN Sets Up [0]	★ 1	2	3	4	5	6	END
★ RUSSIAN Moves First [0]							

**☛ Elements of Kampfgruppe Hauenschildt, 86th Schützen Regiment, and 7th Panzer Regiment [ELR: 3] set up as indicated: {SAN:3}**

**Within the train station (Bldg U2):** 3

**Within the City Hall (Bldg Z2):** 2

**Anywhere south of the Railroad:** 2 5

**Enter on Turn 1 along the south edge:** 3 2

**★ Elements of II Battalion, 322nd Rifle Regiment, 32th Rifle Division [ELR: 3] enter on Turn 1 on/between R0 and AA1 and/or on Turn 2 along the north edge: {SAN: 2}**

3 6 9 3

### SPECIAL RULES:

1. EC are moderate with no Wind at start.
2. Place overlay RR1 on V3-U4 The Railroad is at Ground Level. All buildings are Ground Level only.
3. Russian 5-2-7s/2-2-7s (and 6-2-8s/3-2-8s) are Assault Engineers (H1.22).
4. AFV crews may not voluntarily Abandon (D5.4) vehicles.

**AFTERMATH:** The Germans were still arriving in the area trying to secure the hamlet when a full battalion from the 322nd Rifle Regiment launched its attack, only a few hours after the fall of the train station. After just a few minutes, the surprised and outnumbered Germans were literally wiped out despite receiving reinforcements at the start of the Russian attack. Despite heavy casualties, the Russians had won the day again slowing down the German advance towards Moscow.



# MARDERS NOT MARTYRS



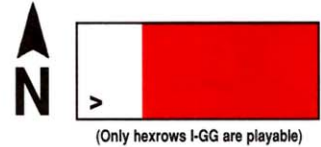
## ASL SCENARIO J106

Scenario Design: Ken Dunn



**ISCHERSKAJA, RUSSIA, 10 September 1942:** German anti-tank units had been recently finding that their ability to destroy Soviet armor had been compromised by a sudden increase in the numbers of tanks that were impervious to their anti-tank guns. Too many recent examples of martyred German soldiers trying to stand their ground against the upgraded Soviet tanks had convinced German authorities to make changes. In late June the 13th Panzer Division finally got an opportunity to refit their mobile Anti-Tank Battalion with the new Marder tank destroyer. This would allow them to finally stand up to the newer versions of the Soviet AFVs with which they were beginning to have to contend. And not a moment too soon; OKW had tasked Army Group A with the capture and exploitation of the vast oilfields near Grozny.

### BOARD CONFIGURATION:



**VICTORY CONDITIONS:** The Russians win immediately upon exiting  $\geq 17$  VP (at least 3 VP must be Infantry) off the west edge. Prisoners do not count.

### BALANCE:



☒ Add a 9-1 Armor Leader to the German OB.








★ In the VC delete "(at least 3VP must be Infantry)".

### TURN RECORD CHART



☒ GERMAN Sets Up First	★	1	2	3	4	5	6	END
★ RUSSIAN Moves First [70]								







**Elements of 1st Panzerjäger Abteilung, 13th Panzer Division and 111th Infantry Division [ELR: 3] setup on/west-of hexrow S: {SAN: 3}**

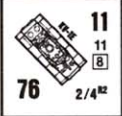
 1 4'-6-7	 9-1	 7-0	 HMG 3 7-16	 LMG 1 3-8	 8-1 1st Sgt	 13 1 75L
5			2			2

**Elements of 151st Rifle Division [ELR: 3] setup on/east-of hexrow X: {SAN: 2}**

 1 4-4-7	 9-1	 8-0	 MMG 2 4-10	 LMG 1 2-6	 MTR 3 50* [3-20]
10			2		

**Elements of Russian Tank Corps enter on Turn 1 along the east edge:**



11 8 76 2/4 <sup>12</sup>
4

### SPECIAL RULES:

1. EC are moderate, with no wind at start. Kindling is NA.

**AFTERMATH:** After three weeks of hard travel through the steppes of European Russia, Army Group A arrived at the front door of Asian Russia. Only the Terek River stood as the last natural barrier to the oil fields. So far lack of fuel had been the most serious problem faced by the advancing units. However, as units of the 111th Infantry Division forced a crossing the Russians reacted by sending armored forces including some of the newer AFVs to stem the tide. While the new German weapons fared well when defending against the massed attacks, events in Stalingrad would divert the supplies and air support needed to continue the attack. This would be the furthest east the Germans would reach.

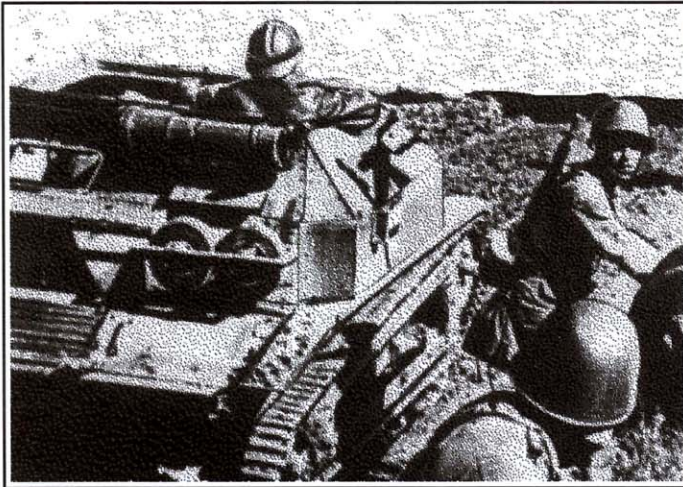


# OPERATION SCHWARZ



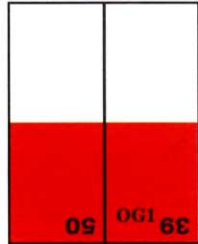
## ASL SCENARIO J107

Scenario Design: Paul Kenny



**CAJNICE, CROATIA, 15 May 1943:** Operation Schwarz was the largest anti-partisan operation yet and also one of the last large-scale operations. The operation was in two parts. Following a two-week action against the Chetnik forces, the Axis turned their attention to Tito's partisans. With over 115,000 Axis soldiers facing only 19,000 men of the Main Operation Group of the Yugoslav National Liberation Army (NOVJ), this was the closest the Axis ever came to eliminating the partisans and securing communications and rear areas in anticipation of the Allied invasion of the Balkans. The operation attempted to encircle and crush the partisan stronghold in the mountainous area between the Cetina and Piva Rivers in southern Bosnia.

### BOARD CONFIGURATION:



(Only hexrows A-P are playable)

### BALANCE:

⊕ Add one 3-3-7 squad to the NOVJ OB.

⊗ Add one 8-0 leader to the Croatsians.

**VICTORY CONDITIONS:** Provided the NOVJ amass  $\leq 19$  CVP, the Croatsians win at game end if they exit  $\geq 11$  Exit VP off the south board edge west of hex 39A4 and they Control all building hexes.

### TURN RECORD CHART

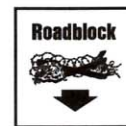
⊕ NOVJ Sets Up First	1	2	3	4	5	6	7	END
⊗ CROATIAN Moves First [72]								



Elements of 1st and 2nd Battalions, 6th Bosnian Brigade, NOVJ [ELR: 5] set up on/south-of hexrow L: {SAN: 5}

3-3-7	6-1	8-1	2 4-11	1 2-8	1-12	<b>Foxhole</b> 5 OVR, OBA: +4 Other: +2
9			2			8

Setup on/south of hexrow F:



Elements of 2nd Battalion, 369th Croatian Legion [ELR: 3] enter on/after Turn 1 along the north edge: {SAN: 2}

1 3-4-7	8-1	7-0	1 2-7	*15 3/-	22 -/4
12			4	2	2

### SPECIAL RULES:

- EC are wet with no wind at start. Kindling is NA.
- All buildings are wooden. All hedges are walls. All orchards are vineyards.
- Place Overlay OG1 on 39B7.
- NOVJ do not suffer captured use penalties for SW, cannot deploy, have Molotov Capability, and may set up 1 squad HIP along with any SW/SMC set up with it.
- Off map terrain exists for off board movement purposes.
- No Quarter (A20.3) is in effect for both sides.

**AFTERMATH:** The 369th Croatian Legion initially advanced into Cajnice on the northeastern side of the encirclement. There they met no resistance as the partisans retreated to the southwest. However, the 2nd Battalion met heavy resistance as they moved onto the heights south of Cajnice. The reconnaissance elements of the Division were able to push through the partisans and reach the town of Trojan three miles south of Cajnice despite taking heavy casualties. This area of the encirclement would see heavy fighting over the next few days as the partisans fought their way northward from the trap.



# DANICA AIR



## ASL SCENARIO J108

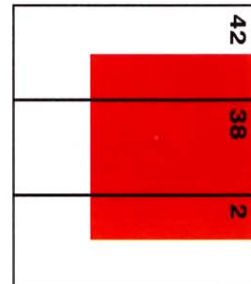
Scenario Design: Steve Swann



**VICTORY CONDITIONS:** The Partisans win at game end if they Control  $\geq 2$  of buildings 38D7, 38E6, 38J8, 38N2 and capture/eliminate  $\geq 3$  Ammo Supply counters.

**KOPRIVNICA, CROATIA, 6 October 1943:** In January 1942 the Croatian Air Force Command issued a call for volunteers to sign up for duty in the Croatian 1st Light Infantry Parachute Company. In December 1942 the first group of about 90 recruits arrived at the Danica factory in Koprivnica. The first armed clash between the Partisans and 1st Croatian Light Parachute Company was made on 3 September 1943, when six Croatian paratroopers were captured by a partisan probe. The biggest battle in this period was when the Croatian Partisan HQ decided to attack the town of Koprivnica. At the same time, the Danica Air Base, defended by the 120-man strong 1st Light Infantry Parachute Company, was attacked.

### BOARD CONFIGURATION:



(Only hexrows A-V on all boards, hexes numbered  $\leq 4$  on board 42, and hexes numbered  $\geq 7$  on board 2 are playable)

### BALANCE:

- ❖ Add a 7-0 leader to the Croatian OB
- ★ Add a 3-3-7 to the Partisan OB.

### TURN RECORD CHART

❖ CROATIAN Sets Up First [98]	★	1	2	3	4	5	6	END
★ PARTISAN Moves First [134]								

**Elements of Croatian 1st Light Infantry Parachute Company:** [ELR: 5] set up concealed regardless of concealment terrain on board 38 on/east of hexrow P. Pillboxes must set up  $\geq 4$  hexes from every other pillbox and may not set up in Runway hexes (see SSR5): {SAN: 4}



4-4-7 10	2-4-7 2	2-2-7 2	9-1 2	8-1 2	MMG 2 BIT 4-10 2	LMG 1 BIT 2-7 2	MTR 3 BIT 50*[2-13] 2	Ammo X12 AH PP 36 5	? 7 morale 8
Trench OVR, OBA: +4 Other: +2 1+3+5 2	Foxhole 5 OVR, OBA: +4 Other: +2 3	Foxhole 1S OVR, OBA: +4 Other: +2 3							

**Elements of the 2nd "Kalmik" Partisan Brigade** [ELR: 4] Prior to set up, divide the Partisan OB into three groups with each group entering a different board edge (SSR 3). Each entering group must contain at least 5 squad MMC, two SW, and one SMC. Entry board edges are north, west and south. {SAN: 3}



4-4-7 4	5-2-7 4	3-3-7 11	2-2-8 2	9-1 2	8-0 2	7-0 2	MMG 2 BIT 4-10 2	LMG 1 BIT 2-6 6	MTR 3 BIT 50*[3-20] 2
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### SPECIAL RULES:

1. EC are Moderate with no wind at start.
2. Grain is in effect. No Quarter is in effect for both sides.
3. Prior to set up, the Partisan player secretly designates which group enters on which board edge.
4. Ammo Supply counters are set up with one in each of the hexes: 38G5, 38G8, 38J6, 38M5, 38M8. They may not move, but are possessed/eliminated as if a SW. In the event that ASL Ammo Supply counters (from Doomed Battalions) are unavailable, use any concealment counter from another nationality.
5. The hexes from 38D9 to 38N4 and from 38E4 to 38M8 are paved runway hexes (B7.3).

6. Two Croatian squad-equivalents (and any SMC/SW stacked with them) may set up using HIP. Croatian MMC have an underlined morale and their broken Morale is 1 higher than printed.

7. Partisan 4-4-7s/2-3-7s and 5-2-7s/2-2-7s do not have Assault Fire, have underlined Morale, and are treated as Partisans in every way.

**AFTERMATH:** The attack started on 6 October 1943 and the paratroopers at Danica were soon surrounded. The Croatian Air Force dropped supplies and ammunition to the surrounded paratroopers, supplying them during the next couple of days. The result of the partisan attack was that the HQ building and much of the parachute equipment were destroyed. The 1st Light Infantry Parachute Company suffered 20 men killed or captured during the Koprivnica battle. Among the captured soldiers was Sergeant Mirko Kudelic, the first Croatian paratrooper, who was later exchanged from partisan captivity and returned back to his unit.



# BREAK FOR HUNGARY

## ASL SCENARIO J109

Scenario Design: Steve Swann



**KOPRIVNICA, CROATIA, 9 November 1943:** After a month of continuous attacks by local partisans, the Croatian paratroopers were running desperately short on supplies, food, and ammunition. By November 8th, Major Dragutin Dolanski, commander of the 1st Croatian Light Parachute Company, determined that they couldn't hold their positions at the Danica Air Base much longer and decided to withdraw through the village of Peteranac and across the Drava River into Hungary.

### BOARD CONFIGURATION:

	42
	38
	2



### BALANCE:

- ❖ Add one 4-4-7 to the Croatian OB.
- ★ Delete the 7-0 leader from the Croatian OB.

**VICTORY CONDITIONS:** The Croatians win immediately by exiting  $\geq 8$  Exit VP (prisoners are NA) off the west edge or at game end by amassing  $\geq 8$  more CVP than the Partisans.

### TURN RECORD CHART

❖ CROATIAN Sets Up and Moves First [87]	1	2	3	4	5	6	7	END
★ PARTISAN [74]								

**Elements of Croatian 1st Light Infantry Parachute Company [ELR: 5]** set up concealed regardless of concealment terrain on board 38 on/east-of hexrow P. Pillboxes must set up  $\geq 4$  hexes from every other pillbox and may not set up in Runway hexes (see SSR 4): {SAN: 2}

9

4-4-7

2-4-7

2-2-7

1-6

8-1

7-0

MMG  
2  
BIT  
4-10

LMG  
1  
BIT  
2-7

MTR  
3  
BIT  
50\* [2-13]

?

7 morale

3

10

1+3+5

2

**Trench**  
OVR, OBA: +4  
Other: +2

3

**Foxhole**  
5  
OVR, OBA: +4  
Other: +2

3

**Elements of the 2nd "Kalnik" Partisan Brigade [ELR: 4]** set up outside the Croatian set up area: {SAN: 4}

2

4-4-7

5-2-7

3-3-7

1-2-7

8-0

7-0

MMG  
2  
BIT  
4-10

LMG  
1  
BIT  
2-6

MTR  
3  
BIT  
50\* [3-20]

3

### SPECIAL RULES:

1. EC are Moderate with no wind at start
2. Grain is in effect. Ponds are Frozen.
3. No Quarter is in effect for both sides.
4. The hexes from 38D9 to 38N4 and from 38E4 to 38M8 are paved runway hexes (B7.3).
5. Ammo Shortage (A19.131) is in effect for SW of both sides.
6. Partisan 4-4-7s/2-3-7s and 5-2-7s/2-2-7s retain their printed Strength Factor [EXC: they do not have Assault Fire and their Morale is treated as underlined] and broken morale level, but otherwise are treated as Partisans in every

way. Two Partisan squads (with any SMC/SW stacked with them) may set up using HIP.

7. Croatian MMC have an underlined Morale and their broken Morale is 1 higher than printed.

**AFTERMATH:** Starting out on November 9th, the Croatian Paratroopers fought their way out of the encircling partisan forces at Danica. During the next two weeks they fought a series of clashes on their way to crossing the Drava into Hungary. On November 29th a supply drop was made to the paratrooper camp at Gyekenyes, Hungary. Having regrouped in Hungary, the paratroopers were transferred to Zagreb, only to be disbanded. This was only temporary, however, and the paratroopers were soon reconstituted and indeed expanded.



# THE PRELUDE TO SPRING



## ASL SCENARIO J110

Scenario Design: Ola Nygårds



**South of LAKE BALATON, HUNGARY, 8 December 1944:** East and north of Budapest the Russian front was advancing. To the south, an offensive by the 3rd Ukrainian Front under General Tolbuchin had pushed the German Army Group South to withdraw on a broad area between the Danube and Drava. 2nd Panzer Army had to surrender the cities Pecs and Mohacs on 29 November. The Russian 26th, 27th, and 57th Armies pushed on to reach Lake Balaton. On 8 December, though the sodden ground badly hampered the Russians, the attack started.

### BOARD CONFIGURATION:



17	4	43	
			81

### BALANCE:

✚ Add one 4-6-7 and one LMG to the German reinforcements.

(Only hexrows 17R-GG, 4R-GG, 43R-GG and 18A-P are playable)

★ Add one 9-2 Armor Leader to the Russian OB.

**VICTORY CONDITIONS:** The Russians win immediately upon exiting  $\geq 22$  Exit VP (excluding prisoners) off the west edge, or at game end if they have amassed  $\geq 15$  CVP (prisoners do not count double) more than the Germans (see SSR 5).

### TURN RECORD CHART

✚ GERMAN Sets Up First	1	2	3	4	5	6	7	8	END
★ RUSSIAN Moves First									



Elements of 2 Panzer Army [ELR: 3] set up concealed (regardless of terrain) on board 43 in hexes numbered  $\geq 6$  and/or on board 4: {SAN: 3}

1 4'-6-7	1 2-4-7	2-2-8	9-1	8-0	2 5-12	1 3-8	3 50* [2-13]	?	7 morale	2 75 811
-------------	------------	-------	-----	-----	-----------	----------	-----------------	---	----------	-------------

4

5

Enter on Turn 3 along the west edge of board 17:

1 4'-6-7	1 2-4-7	8-1	1 3-8	+15 1 75LL 3/5/2	13 1 75L 3/5/2
-------------	------------	-----	----------	---------------------	-------------------

2

2



Elements of 3rd Ukrainian Front, 4th Guards Army [ELR: 3] set up on board 18 (see SSR4): {SAN: 2}

E 4-5-8	E 2-4-8	9-2	8-0	7-0	3 8-16	1 2-6	8-1 1st Sgt	13 11 122L 1/4 <sup>2</sup>	15 11 100L 6	16 11 85L 2/4
------------	------------	-----	-----	-----	-----------	----------	----------------	--------------------------------	-----------------	------------------

8

2

3

2

2

### SPECIAL RULES:

- EC are Wet, with no wind at start. Weather is Ground Snow (E3.72).
- All buildings are wooden and have a ground level only.
- The German AT Gun may utilize HIP normally.
- Russian AFV begin their Turn 1 MPH having already expended half their printed MP.
- Russians may not exit before Turn 4.

**AFTERMATH:** The Russian advance could not be stopped and units of the 3rd Ukrainian Front cleared German troops from the southern edge of Lake Balaton and drove on to the outskirts of Szekesfehervar and Nagykanizsa. Within 90 days the German Army would counter-attack over the same ground when Operation *Waldteufel* or "*Fruehlingserwachen (The Awakening Of Spring)*" was launched. Units of the 6th Panzer Army would then have the possibility of revenge in the last major offensive of by the German Army.



# PRUSSIA IN FLAMES



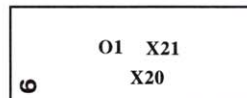
## ASL SCENARIO J111

Scenario Design: Ola Nygårds



**ELBING, EAST PRUSSIA, 28 January 1945:** On January 14th, Rokossovskiy's 2nd Byelorussian Front attacked north and northwest from the Narew bridgehead. The aim was to reach the debouch of Weischel and Danzig. On the 20th Stavka suddenly ordered Rokossovskiy to change the attack in a northeasterly direction into the center of East Prussia. On the right flank, the 3rd Guards Cavalry Corps advanced quickly and took Allenstein at 0300 in the morning of January 22nd. On the left flank, Volkii's 5th Guards Tank Army advanced towards the city of Elbing. Parts of the lead Tank Brigade headed into the city on January 23rd after being mistaken for German tanks. A violent and chaotic engagement arose in the streets of the old city. On the 28th the attack renewed.

### BOARD CONFIGURATION:



### BALANCE:

✚ Add one PSK to the German OB.


★ Remove one MMG from the German OB.











**VICTORY CONDITIONS:** The Russians win at game end if there are no Good Order German MMC in any of the buildings N3, M5, oV6, and oS9.

### TURN RECORD CHART




✚ GERMAN Sets Up First [0]	1	2	3 <sup>✚</sup>	4 <sup>★</sup>	5 <sup>★</sup>	6	7	8	END
★ RUSSIAN Moves First [0]			②	④	⑥				

**Elements of 2nd Army, Army Group Weichsel [ELR: 2] set up on/west of hexrow X [EXC: AT Guns must set up on/west of hexrow T]: {SAN: 4}**










 4-6-8	 2-4-8	 2-2-8	 0-2	 8-0	 2 5-12	 1 3-8	 12-4	 7 morale	 2 75 BT1
6	2				2			9	2

Reinforcements enter along the north edge (see SSR 4):





 4-3-6	 6-1	 13 75L -/-2*
3		

**Elements of lead Tank Brigade, 5th Guards Tank Army [ELR: 4] set up on/east of hexrow Z: {SAN: 3}**



 4-4-7	 2-3-7	 0-1	 8-0	 1 2-6	 13 122L -/-2/4
8				3	4

Enter on Turn 5 along the south and/or west edge:

 5-2-7	 8-1	 DC X10 X12 30-1	 17 76L -/4
3			2

### SPECIAL RULES:

1. EC are Moderate, with no wind at start.
2. Place overlays as follows: O1 on N4; X20 on U6/V6; X21 on R8/S9.
3. Buildings oV6 and oS9 are treated as Two Story Houses (B23.22); i.e. they are not Rowhouses. The Steeple Location in hex oT5 does not exist.
4. Beginning on Turn 3, the German Player must make a reinforcement dr at the start of each friendly RPh. If the dr is ≤ the circled number on the current turn of the Turn Record Track, all German reinforcements must enter that turn.

5. The Germans may use HIP for ≤ 1 squad equivalent (and any SMC/SW set up with it).
6. At the conclusion of German Player Turn 7, all HIP units are placed on board beneath concealment counters.

**AFTERMATH:** The invading Russian troops were again thrown back and the main force of the army continued to the riverbanks of the Frisches Haff lagoon. Elbing and East Prussia were essentially cut off from the Reich but the German 2nd Army under Colonel General Weiss held on to the city. On 10 February the fortified harbor was in Russian hands and on 10 March the city itself was taken.



# PRELUDE TO DYING



## ASL SCENARIO J112

Scenario Design: Steve Swann



**CELJE, SLOVENIA, 8 May 1945:** After months of anti-partisan operations east of Zagreb, the 1st Light Infantry Parachute Battalion had finally returned to its home barracks in the Zagreb neighborhood of Maksimir. The writing had been on the wall for a while, but word had finally come down that Croatian armed forces should head for Austria to surrender to the Western Allies. On May 6th the battalion left Zagreb as the rearguard of a large, mixed-Axis retreating force headed for Dravograd and Austria.

### BOARD CONFIGURATION:

36	41
----	----



**VICTORY CONDITIONS:** The Croats win immediately by exiting  $\geq 20$  Exit VP (Prisoners are NA) off the west edge on/between 36F10 - 36BB10 or at game end by amassing  $\geq 15$  more CVP than the Partisans.

### BALANCE:

- ★ Delete the 7-0 leader from the Croatian OB.
- ❖ In the VC, change the VP numbers from "20" and "15" to "16" and "12" respectively.

### TURN RECORD CHART

★ Simultaneous Set Up. Partisan [70] Place an unused mapboard between set up areas.	❖	1	❖	2	★	3	★	4	5	6	7	8	END
❖ CROATIAN Moves First [108]													

Partisans [ELR: 5] set up concealed regardless of terrain on board 36: {SAN: 4}



4-4-7	3-3-7	2-2-8	9-1	8-0	7-0	MMG 2 4-10	LMG 1 2-6	MTR 3 50*[3-20]	?	Foxhole 5 OVR, OBA: +4 Other: +2
4	9	4				2	2	2	6	6

Enter on Turn 2 on/between 41W1 and 41GG7:

3-3-7	7-0	LMG 1 2-6
-------	-----	-----------------

Enter on Turn 3 on/between 41A7 and 41K1:

3-3-7	8-0	LMG 1 2-6
-------	-----	-----------------

Elements of Croatian 1st Light Infantry Parachute Battalion: [ELR: 4] set up concealed regardless of terrain on board 41 in hexes numbered  $\leq 8$ : {SAN: 3}



4-4-7	5-3-7	2-2-7	9-1	8-1	7-0	MMG 2 4-10	LMG 1 2-7	MTR 3 50*[2-13]	?
6	4	4				2	2	2	7

Enter on Turn 1 within 3 hexes of 41Y1:

4-4-7	5-3-7	8-0	LMG 1 2-7
-------	-------	-----	-----------------

Enter on Turn 2 within 3 hexes of 41I1:

4-4-7	5-3-7	8-1	LMG 1 2-7
-------	-------	-----	-----------------

### SPECIAL RULES:

- EC are Moderate with no wind at start.
- Streams are Dry (B20.41); Marsh are Mudflats (B16.7).
- No Quarter is in effect for both sides.
- Croatian MMC have an underlined Morale and their broken Morale is 1 higher than shown. Contrary to A25.84, the 5-3-7 MMC and their HS are considered Elite. Two Croatian squad equivalents (and any SMC/SW stacked with them) may set up using HIP.

- Partisan 4-4-7s/2-3-7s have an underlined Morale and are treated as Partisans in every way.

**AFTERMATH:** Despite repeated air attacks on the column, the paratroopers stayed together until reaching Celje, halfway to Dravograd. Slovenian partisans had set up blocking positions along the roads to keep the retreating fascists from reaching Austria. Senior Captain Ivan Simek divided the battalion into small groups with orders to infiltrate past Celje and on to Austria. The first elements of the battalions made their way to Dravograd on May 9th and surrendered to the British forces there, but the last paratroopers were not disarmed until May 14th. In accord with the agreements at the Yalta Conference, the British turned over most of the Croats to Tito's forces, who executed many of them as part of the Bleiberg massacre.



# DEBRIEFING

We include here new errata for the *ASL Rulebook* 2nd Edition to join what we previously published in Journals 3, 4, 5, & 6. Also included are errata for Chapters F, H, O, and Z and some miscellaneous scenario errata. A comprehensive list of all the official errata is maintained on our website at:

<http://www.multimanpublishing.com/ASL/aslqa.php>

*Armies of Oblivion* included replacement pages providing a major re-write of the Impulse Movement and Platoon Movement rules in addition to adding much more detailed rules for the Axis Minors and expanding Chapter S Solitaire ASL rules. *Armies of Oblivion* (including the replacement pages) is available for purchase. AoO also included some errata for Chapter A, Chapter E, and Chapter S; those errata are shown below. We also have some errata to the replacement pages and some AoO counters.

The 2005 reprint of the *ASL Rulebook* 2nd Edition updated the dividers to incorporate previously published divider errata, along with new divider errata that we published on our website. Those updated dividers are available for purchase separately, and those new errata for the original *ASL Rulebook* 2nd Edition dividers are shown below. Unfortunately, the revised dividers included in the reprint introduced some new errors, and errata for the revised dividers (as well as some previously undiscovered divider errata) are also shown below. (Special thanks to Ole Bøe and Bruce Probst for their help in developing this errata, and thanks to Scott Jackson for his help with the Q&A.)

## Errata for ASLRB 2nd Edition for Chapters F, H, O, & Z

**A2.3:** in the second sentence, insert “/enter” after “up” (three instances).

**A7.531:** at the end replace “treated as if he were firing” with “marked with an appropriate Fire counter.”

**A8.1:** at the end remove “[EXC: Impulse Movement; 13.6; 25.232; D14.2; E11.2; E11.52.]”. (Previously published in AoO replacement pages.)

**A8.3:** after “A DEFENDING Infantry unit”, add “/(its MG/IFE-weapon)”.

**A9.3:** line 8, delete “(or Prep; E7.5)”.

**A10.533:** line 8, delete “(or in accepting its surrender; 20.21)”

**A10 Comprehensive Rout Example:** in the second paragraph of Rout Phase Russian Player Turn in lines 7-8, replace “be eliminated for Failure to Rout” with “surrender, or be eliminated for Failure to Rout if No Quarter had been in effect”.

**A10 Comprehensive Rout Example:** in the fourth paragraph of Rout Phase Russian Player Turn, replace the second sentence with “It must rout towards building M7 since that building will bring it farther away from all KEUs (in J9, L8 and M9) [10.51].”.

**A11.15:** in the last sentence, add “Melee” after “but all friendly”

**A12.33:** line 11, after “hidden Fortification” add “(including Wire but not Panjis)”.

**A15.1:** at the end of the “\* Treat as Battle Hardening if:” line, add “/on a Pier”.

**A15.1:** at the end of the “† Treat as Battle Hardening if:” line, add: “or if Assaulting/Evacuating side in a Beach Location/on a Pier (G14.32)”.

**A15.2:** line 8, in the EXC after “(C13.31)” add “, ATMM Checks (C13.7)”.

**A15.23:** line 1, replace “fire and carry a” with “use a non-MG”; line 3, replace “a SW” with “a MG (at full FP) or other SW”.

**A15.42:** after “Minimum Move (4.134),” add “Wounds (17.2)”.

**A24.31:** line 4, after “placed” add “(by any means)”.

**A24.31:** lines 5-6, replace “WP on the Area Target Type” with “by ordnance WP”.

**A25.82:** line 2, add “Non-elite” before “Axis Minor”. (Errata to AoO replacement page.)

**A25.82:** line 3, replace “>10” with “≥10”. (Errata to AoO replacement page.)

**B6.3:** lines 3-4, replace “is considered to take place in Open Ground (1.15)” with “and Residual FP attacks are considered to take place in Open Ground (1.15) with a TEM of -1 which is cumulative with other TEM (e.g., AFV/Wreck) and FFMO/FFNAM”.

**B13.3:** line 2, add “[EXC: vs. bypass movement]” after “hex” and before “. All”.

**C.8:** line 5, replace “moving” with “a moving target”.

**C2.29:** lines 9-10, delete “[EXC: as per D6.64]”.

**C5.6:** line 3, replace “or stunned” with “stunned, or marked with a Final/Intensive Fire counter”.

**C7.31 AP To Kill Table (on blue Chapter C divider and on blue-gray QRDC):** in the Unarmored Target line at the bottom of the Table, change “65-77mm” to “65-84mm”.

**C7.7 AFV Destruction Table:** in the “FT/MOL” column in the “= TK#” row add note “A” to the “Elim” entry.

**D1.81:** lines 2-3, delete “either” and delete “or in its own hex”.

**D2.5 ESB DRM Table:** in the “+1” row after “Russian(r)” add “, all Chinese”.

**E1.14:** line 1, before “Non-Stopped”, add “in Motion”.

**E11.2:** line 3, replace “AFV platoon movement (D14.2-.22)” with “Impulse Movement (D14.3)”. (Previously published in AoO replacement pages.)

**E11.52:** line 1, replace “Impulses” with “Impulse Movement (D14.3)”. (Previously published in AoO replacement pages.)

**E11.52:** line 8, after “Human Wave” add “/Armored Assault”. (Previously published in AoO replacement pages.)

**Index:** line 1 of the definition of “FBE” after “Edge;” add “in SASL”.

**Index:** under Sustained Fire, delete “[AFPH Restriction: A4.41, A7.25]”.

**F2.2:** line 3, delete “concealment (2.3)”.

**G18.62:** line 3, before “Dare-Death” add “armed, unpinned”.

**German vehicle Note 61 (SPW 250/9):** the depiction of the counter in Chapter H should have a thin white square around it, indicating it has a Slow Turret Traverse. The actual counter is correct.

**German Vehicle Note 93:** second paragraph, line 14, add “BU” between “fully-tracked” and “AFV”.

**Russian Miscellaneous Additional Vehicle Note 7.1:** the depiction of the counter in Chapter H should have a white oval underneath the MP indicating it is fully-tracked. The actual counter is correct.

**Axis Minor Vehicle Listing PzKpfw IVF1(g):** in the Notes column, delete note “B”.

**O11.4 CG9 GERMAN INFANTRY/AFV RG:** line 3, delete “on/ between A9 and N0, as well as” from the exception.

**O11.6194 Note b):** line 19, before “on-map”, add “unconcealed”.

**Z3.6179 PrB British RG Chart II Lgt Inf Coy:** change the CG Date Max value from “4” to “2”.

## SASL Errata

(Previously published in AoO replacement pages)

- **Allied Minor Generation Table: L2 Squad Type:** The DRM should read “+1 if Mission takes place in Yugoslavia or the PTO”.
- **U.S. PTO Random Event Table: 12-13 Event:** The DRM should be U2 only, and n/a for M2.
- **British Generation Table (non-PTO):** in Table [B6a], column 1941, all Crusader CS and Matilda CS results should include footnote #1.
- **12.871 STARSHELL:** insert “eligible” before “ENEMY unit”.
- **17.45 SHOCK/UNCONFIRMED KILL ( UK):** All Shocked/UK AFV (FRIENDLY and ENEMY) must undergo ≥ one recuperation attempt (C7.42) until the marker is removed or the AFV is eliminated.

## AOO COUNTER ERRATA

- The two-tone Hungarian 1-2-7 Vehicle crews should have an unbroken Morale Level of 6.
- The British *Terrapin Mk 1* counters that are replacements for the original *West of Alamein* counters should show the white double circles behind the MP indicating that the vehicle is classified as a Truck for movement purposes.

## SCENARIO ERRATA

**Scenario BRT2 (China Girl):** in the US AFV setup instructions add “Ocean/Reef” between “in” and “hexes”.

**Scenario BRT3 (Ryan's Orphans):** in SSR 2, in lines 3-6, delete the references to “hut”, “Collapsed (G5.5)” counter, and “Collapsed hut”. Shellholes placed in a bridge hex do not rubble the bridge.

**Scenario J27 (High Tide at Heiligenbeil):** in SSR 3, replace “ordnance” with “Gun/MA”.

**Scenario J28 (Inhumaine):** in SSR 3, line 1, before “counters” add “OB-listed”.

**Scenario J92 (Your Turn Now):** both sides amass VP per the hexes listed in SSR 3; if the Japanese do not earn the listed VP by clearing the set DC, then the Filipinos do. Filipino units do not Disrupt.

## DIVIDER ERRATA

(incorporated into reprinted dividers)

**A11.11 Close Combat Table (under CC FP or DR Modifiers) on the pink divider and on the blue-and-gray QRDC:**

- In the entry that begins “by unpinned Gurkha” add “armed,” before “unpinned” and delete “(unless Ambushed)”.
- In the entry that begins “by Dare-Death MMC” add “armed, unpinned” before “Dare-Death”.

**A15.1 Heat of Battle Table on the pink divider and on the blue-and-gray QRDC:**

- Under \*Treat as Battle Hardening add “ or on a Pier” after “Beach Location”.
- Under +Treat as Battle Hardening add “Assaulting/Evacuating side in a Beach Location or on a Pier (G14.32)”.

**Support Weapons Chart on the pink divider and on the blue-and-gray QRDC:**

- Change note D to “D. Hero fires by adding 1 to MG IFT DR (using full FP) or TH DR”.
- In the “PF, PFK” line, remove note “B” from the “1 IPC(2PP Max) SMC” column. (See Errata below for reprinted pink divider.)



## A12.21 Concealment LOSS/GAIN Table on the pink divider:

- In line 1 of Case A in the EXC, replace "all defenders" with "its target" and in the next line replace "Bypass (A15.42)" with "Bypass (A12.42)".

## C3 To Hit Table on the blue divider and on the blue-gray QRDC:

- Change "\* Gun", "L Gun" and "LL Gun" to "\* weapon", "L weapon" and "LL weapon".

## C5 Firer-Based Hit Determination DRM Table on the blue divider and on the blue-gray QRDC:

- In case A add note "S".
- In Case B add "(+3 if in woods/building/rubble)".
- In Cases C, C1, & C2 add note "L".

## C6 Target-Based Hit Determination DRM Table on the blue divider and on the blue-gray QRDC:

- In Case L after "target" add "/firer".
- In Case M delete note "G".

## C7.34 HE & Flame To Kill Table on the blue divider and on the blue-gray QRDC:

- Change "2, 3, 4; Only TK# Modifiers are:" to "2, 3, 4; Only TK# Modifiers are +1 if Rear Target Facing & :".
- In note 3 add "+1/+2 Elevation adv. (C7.22);".
- In note 4 at end add ";double if CH".

## C7.7 AFV Destruction Table on the blue divider and on the blue-gray QRDC:

- In the "FT/MOL" column in the "= TK#" row add note "A" to the "Elim" entry.

## A24 Smoke Summary chart on the green divider:

- In the two white WP rows, replace "U.S./British" with "U.S./British/Japanese/Chinese"; in the Mild Breeze column of the "WP +2" row, delete note "K". (See Errata below for reprinted green divider.)

## D2.5 Excessive Speed Breakdown DRM Table on the gray divider:

- In the +1 row after "Russian(r)" add ", all Chinese".

## DIVIDER ERRATA (for the reprinted dividers)

### A11.II Close Combat Table on blue/gray QRDC:

- DRM for Gurkha/Japanese vs Infantry should be "-1" not "-2".

### Support Weapons Chart on the pink divider:

- In the "PF, PFK" line, delete note "B" from the "1 IPC(2PP Max) SMC" column.

### A24 Smoke Summary chart on the green divider:

- The fifth (white WP) and sixth (gray WP) rows of this chart should show a "Dispersed +1" counter, not a full-strength "WP NMC +2" counter.

### A24 Smoke Summary chart on the green divider:

- In the fifth row of the chart (White Dispersed WP) replace "U.S./British" with "U.S./British/Japanese/Chinese".

### D2.5 ESB DRM Table on blue-gray QRDC:

- in the "+1" row after "Russian(r)" add ", all Chinese".

### D4.22 Hull Down Maneuver chart:

- on the gray Chapter D divider, add "-1" before "attempt at setup";
- on the blue-gray QRDC, add "-1 attempt at setup".

### A./G. National Capabilities Chart (both original and reprinted ASLRB 2nd Edition dividers):

- The American Army 3-3-7 HS should have its morale underlined.
- The American Army 5-4-6 squad should have its FP underlined.
- The American USMC 6-6-8 squad should not have its Range underlined.

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**Magazine Proofing:** Jonathan Cole, Kevin Kenneally, Jim Mehl, and Brian Pickering.

**Scenario Design and Adaptation:** Xavier Vitry, Steve Swann, Ola Nygård, Ken Dunn, Paul Kenny, Chris Olden.

**Scenario Playtest:** Kurt Gorjanc, Fritz Tichy, Chris Garrett, Thomas Rae, Sumner Clarren, Bret Hildebran, Bill Hayward, Wynn Polnick, Doug Lynes, Todd Wiley, Scott Jackson, Rowland Hill, Michael Koch, Janusz Maxe, Byron Lukowicz, Stefan Pielhau, Ray Kruger, Ole Bøe, Ola Nygård, Daniel Johansson, Forrest Atterberry, John Myers, Jim Mehl, Jonathan Hipp, and Jeff Evich. (Special Thanks to the YouseHouse Irregulars: Kevin Valerien, Ken Dunn, Dan Heistand, Derek Spurlock, and Darren Emge.)

**Questions:** All questions on the Advanced Squad Leader game system must be based on the rules of play (not historical or design matters), on the current rules edition, must be phrased in the form of a yes or no question, and should be accompanied by any appropriate diagram. Postal questions should be submitted to MMP (address above) and will not be answered unless accompanied by a self-addressed and stamped envelope. E-mail questions on *ASL* rules (please, no design or production questions!) may be submitted to [asl\\_qa@multimanpublishing.com](mailto:asl_qa@multimanpublishing.com).

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Cover Art: Ken Smith

Playtest Coordinator: Kevin Valerien



# THE BLUE DEVILS

## Croatian 1st Light Infantry Parachute Battalion in ASL

by Steven Swann

*[The Croatian 1st Light Infantry Parachute Battalion was under the command of the small Croatian Air Force. Originally based at the Koprivnica air base, and later at the barracks in the Zagreb neighborhood of Maksimir, the Croatian paratroopers were used primarily in anti-partisan duties. Three stand-alone scenarios are included here, two that cover the beginning and one the end of activity for the paratroopers. When playing J109 "Break For Hungary" in conjunction with J108 "Danica Air," the pillboxes, trenches, and foxholes from the earlier scenario should set up in the same locations for the later scenario....Eds.]*

The Yugoslavian Royal Air Force started a parachute school in October 1939 under the command of one of its Croatian officers, Dragutin Dolanski. Only two classes graduated—25 students in July 1940 and another 32 students in September 1940. In March 1941, just before the German invasion in April, the 1st Light Infantry Parachute Company (more like a platoon in size) was formed from these graduates, but never saw combat and was disarmed and disbanded along with most of the Yugoslavian armed forces.

With the surrender of Yugoslavian armed forces in April 1941, the Croatian fascists seized their chance and the Independent State of Croatia was born. The Croatian Air Force issued a call in January 1942 for volunteers for paratrooper training in the 1st Light Infantry Parachute Company. All volunteers had to pass a stringent medical exam and a physical fitness test before being accepted into the training program. Those who passed it were sent to the Air Force Training Regiment in Petrovaradin, where they began their basic training. Meanwhile a group of Croatian Home Defense soldiers were modifying the Danica factory in Koprivnica (almost certainly the site of what had been in 1941 the first death camp of the Independent State of Croatia) to function as barracks and training area for the company. They were led by two graduates of the Yugoslavian parachute training, Major Dragutin Dolanski and Sergeant Mirko Kudelic.

In August 1942, Dolanski and Kudelic went to learn German parachute training methods at the parachute school in Wittstock, Germany, returning in October. Sergeant Kudelic made the first Croatian parachute jump as a demonstration from an Avia Fokker

tri-motor on November 26th. The first group of about 90 hand-picked recruits arrived at the Danica factory in December for parachute training, with about 70 passing. Classes continued sporadically after that.

The first unit training jump was made on 19 December 1942 and was marked by tragedy. Two trainees were killed when they failed to open their main or reserve parachutes, causing training jumps to be banned until next April 1943. The Croatian paratroopers completed a large training jump at Borongaj airfield in Zagreb on April 7th. New paratrooper uniforms (one-piece camouflaged overalls) and German heavy equipment containers were introduced on this occasion. The company made another jump at Borongaj on July 6th, when they were inspected by the *Poglavnik* (supreme "leader") himself, Dr. Ante Pavelic. About 45 paratroopers made a tactical jump from three Fokker transports.

The first armed clash between the Partisans and Croatian paratroopers occurred on September 3rd, 1943, with 6 paratroopers being captured by a local partisan band. Soon thereafter the largest battle fought by the Croatian paratroopers began when the Serbian Partisan HQ decided to attack the town of Koprivnica, including an assault on the Danica Air Base, defended by the 1st Light Parachute Company, 120 men strong. The partisan attack began on October 6th and soon the 2nd "Kalmik" Partisan Brigade surrounded the paratroopers. The Croatian Air Force air-dropped supplies and ammunition to the surrounded paratroopers, enabling them to resist the partisan attack, although the HQ building and much of the parachute equipment were destroyed. The company suffered 20 men killed or captured during the Koprivnica battle—including Sergeant Kudelic, who was later exchanged from partisan captivity and returned to his unit.

After a month of continuous attacks by local partisans, the Croatian paratroopers were running desperately short on supplies, food, and ammunition. By November 8th company leaders determined that they could no longer hold their positions at the Danica Air Base. Starting the next day the Croatian paratroopers fought their way through the partisan forces encircling the air base. During the next two weeks the paratroopers engaged in a series of minor clashes from Carda through Peteranac and across the Drava River into

Hungary, where a supply drop was made on November 29th.

After regrouping in Hungary, the company was transferred to Zagreb at the beginning of 1944, where it was temporarily disbanded. Some men were given extended leave, while others deserted to the partisans. The unit soon re-formed, however, and was stationed at Zagreb. In July the parachutists constructed new barracks in neighboring Maksimir but remained subordinated to the 1st Air Force Base in Zagreb, being used mainly for ceremonial duties.

At this time the company expanded into the 1st Light Infantry Parachute Battalion under Major Dolanski. Sergeant Kudelic assumed command of 1st Light Infantry Parachute Company, while Lieutenant Ivan Cafuk commanded 2nd Company. At the end of September 1944 Major Dolanski was transferred to Executive Officer of the 1st Air Force Base in Zagreb, and Major Ljudevit Agic became the new battalion commander with Senior Captain Ivan Simek his Executive Officer. The 3rd and 4th Companies were formed by the end of 1944, and the battalion was then complete and ready for action. Beginning in January 1945, and led by Captain Simek, the battalion engaged in anti-partisan battles east of Zagreb around Resnik and clashed with various partisan bands near the towns of Ivanja Reka, Hruscica, and Obrovo, eventually retaking the latter.

After the Obrovo operation the battalion was combined with the Motorized Brigade to form a battle group under Colonel Miroslav Schlacher, fighting around Sisak and Petrinja, which were under threat of falling into partisan hands. Divided into two detachments, the battalion fought first around Bozjakovina and Klostar Ivanic. It then successfully attacked the partisans in the village of Pracno, inflicting heavy casualties before moving to Petrinja, retaking the village of Madjarevo, and then returning to Pracno.

While returning to Zagreb the battalion received orders to recapture the towns of Cazma and Vrbovec, taking them without opposition. They remained a week in Cazma and then moved to the village of Stefanje, defeating a strong partisan unit there on March 26<sup>th</sup>. They then returned to Cazma, where they joined some Ustashe units and together repulsed a partisan attack the night of March 27<sup>th</sup>. They continued to engage in sporadic clashes with the partisans, combining



with various German and Ustashe forces on an ad-hoc basis, until returning to their home barracks in Maksimir on May 4th.

Word came down that Croatian forces should make their way to Austria, in hopes of joining the Anglo-American allies to continue the war against the Communists in Yugoslavia. The battalion assembled in the courtyard of their barracks under Captain Simek on May 6th, lowered the flag, and started the retreat towards Dravograd, Austria, and the Western Allies. At the village of Crnomerec, now-Colonel Dolanski met his "Plavi Davoli" ("Blue Devils")—as the paratroopers were called due to their blue Air Force walking-out uniforms—and wished them good luck as they formed the rear guard of a long column on the way to Austria.

Repeated air attacks decimated the retreating columns, but the paratroopers kept together until they reached the town of Celje halfway to Dravograd. There Slovenian partisans blocked the roads, preventing the Axis forces from escaping into Austria. With pressure mounting from the newly re-supplied partisans, Captain Simek broke the battalion down into small groups with orders to infiltrate past Celje and on to Dravograd. Battalion elements reached Dravograd on May 9th where they surrendered to British forces, although it was not until May 14th that the last paratroopers were disarmed, making Croatia the last Axis nation to surrender to the Allied armies in Europe.

Pursuant to the Yalta accords, the British Army repatriated most of the Croatian paratroopers to Tito's Partisan Army where many were executed as part of the Bleiberg massacre. Only a few were given amnesty or managed to escape and make their way back to the West.

### Croatian Paratroopers in ASL

Fitting the Croatian paratroopers into ASL became easier with the introduction of the

## Croatian Light Infantry Parachute Company

### Company HQ



### Heavy Weapons Platoon



### 1942-1943 Rifle Platoon (3 per company)



### 1944+ Rifle Platoon (3 per company)



figure 1.

newest ASL module, *Armies of Oblivion*, with its more detailed presentation of Axis Minor troops and the addition of the new 5-3-7 squad. Like paratroop units worldwide, they are considered Elite and should always be represented by Axis Minor 4-4-7s and 5-3-7s. I recommend a base ELR of 4. An SSR should treat squads/HS Morale as underlined (preventing their reduction to lower quality troops) and should increase the broken side Morale of squads/HS by one (but do not increase this again). Following the suggestion in Footnote 39, an SSR should invoke No Quarter against partisans.

Prior to 1944 the Elite 4-4-7 MMC should be used to represent Croatian parachute

infantry. Beginning in 1944, the about one-third of squads in a typical scenario should be 5-3-7s (treated as Elite), representing late-war SMG-equipped paratroopers.

Figure 1 is a recommended parachute infantry company for ASL play. The Croatian Parachute Infantry fought only against partisans and only in the Balkans.

*Continued from page 31*

nerable to an enemy HIP unit, especially when the HIP unit would be Japanese.

The basic gameplan, then, for dealing with enemy HIP capability should basically be threefold: aggressively seek out likely HIP positions, avoid careless moves that could result in significant casualties at the hands of a HIP unit, and most importantly, don't let the presence of a HIP unit inhibit your gameplay or divert you from your major objectives.

### HIP Gnosis

The presence of spectral HIP units on the battlefield definitely adds flavor to ASL scenarios, as well as another level of the "fog of war" that can't be minimized. For the defender, HIP units are valuable defensive tools that sometimes can win a scenario by themselves or turn the tables on the attacker. For the attacker, HIP units are a pesky and sometimes unnerving menace that must be avoided or dealt with. As with most aspects of ASL, knowing what can be done with HIP units and what should be done with them is key to maximizing their usefulness.





# The Commissar Dialectic

or

## It's Our Party And You'll Die If You Have To

by Bruce Probst



"From the army's point of view, they were parasites who could not be subjected to the normal procedures of military discipline. Their approval had to be sought before any military order could be issued. Their displeasure could summon up the representatives of the security organs and the instant arrest of any soldier. They served at every level from the General Staff to the lowliest platoon; and in every unit where they served, they ran party cells whose activist members acted as guardians over the rest of the soldiers. All senior Soviet generals were required to work in the presence of a political officer who shared the same quarters, slept in the same room, and countersigned all orders. ... The political officers, not the soldiers, were the Red Army's true commanders."

*The Oxford Companion to the Second World War*  
(Oxford University Press, 1995)

Feared and hated by their own men, and subject to summary execution upon capture due to the provisions of the infamous "Commissar Order" of the Wehrmacht, Commissars would appear at first to be an obstacle on the historical battlefield ... yet in ASL they can prove to be an essential component of the Russian Order of Battle. In most scenarios they only appear at the discretion of the Russian player, which gives rise to the obvious question: should you use them if you have the option?

First let's review the rules concerning them.



### Commissars (A25.22)

Russians (including Russian Partisans) may use Commissars in scenarios set in October 1942 or earlier. (The ASL Rules touch on this date limitation briefly in Footnote 18 to Chapter O—Red Barricades; it is because on 9 October Stalin issued Decree 307, which removed Commissars from the chain of command and relegated them to advisory positions effective 1 November 1942. This was done specifically to improve Army morale.) Red Chinese units may also use Commissars, with no date restrictions (G18.31). Japanese Leaders (G1.41) act like Commissars for purposes of A25.222-223, and also increase the morale of other Japanese MMC (however, the

other provisions of A25.221 do *not* apply to Japanese Leaders).

There are two types of Commissar: the 9-0 and the 10-0 (*Valor of the Guards* introduces an 8+1 Commissar). A normal 8-0 Leader may be replaced with a 9-0; an 8-1 may be replaced with a 10-0. The only limitations are that you cannot have more than one of each type, and you cannot have more Commissars than other Leader types in the OB. Commissar substitution (even for reinforcements) may only be done during initial setup. Note that Commissars are themselves a type of Leader.

A25.221 tells us where Commissars stand in relation to other troops. (Remember that most of this rule does *not* apply to Japanese Leaders.)

Commissars are always considered superior to all other Leaders; therefore they are always the first unit to take a MC. When a 10-0 and a 9-0 are stacked together (like that is going to happen often) the higher-morale unit goes first. Note that in no other respect is a 10-0 "superior" to a 9-0! As the "superior unit," they are exempt from LLMC/LLTC (a 9-0 will ignore the breaking or death of a 10-0!), and can even cause LLMC/LLTC to other non-Commissar Leaders, *even those with higher morale*.

If the Commissar is unpinned and unbroken, all other Infantry/Cavalry units in the same Location have their morale increased by 1 [EXC: other Commissars and units with morale 10; Japanese Leaders do not increase the morale of other Japanese Leaders (G1.41)]. They prevent the use of other Leaders' DRM for Morale purposes. This means that if you have a 9-0 and a 10-3 stacked together, the 10-3 may use his leadership to direct fire but *not* to assist other units with their own MC/TC.

Broken Commissars *always* use Self-Rally, even when another Leader is present. Commissars never benefit from the Leadership DRM of other Leaders and are not subject to Unit Substitution (a 9-0 will always be a 9-0, a 10-0 a 10-0.)



### A25.222—Rally

A Commissar *must* attempt the Rally of other friendly broken units in the same Location. The good

news is that such units being rallied are immune to DM status (as well as benefiting from the +1 to morale). The bad news is that if the Rally attempt fails, MMC are Replaced (A19.13); squads suffer Casualty Reduction if no lower-quality type of unit is available, e.g., Conscripts or partisans. Leaders are instead eliminated, as are broken crews and any HS that cannot be Replaced [EXC: Red Chinese Commissars do not Replace units that fail to Rally (G18.31)].



### A25.223—Berserk

If a Commissar goes Berserk, all other friendly Infantry in the same Location automatically go Berserk too [EXC: if immune to Heat of Battle].



### A19.12—Disruption

Commissars never suffer from Disruption, they merely break.



### A20.21—Surrender

Broken Commissars never Surrender by the RtPh method.

Other points to note: Commissars may benefit from HOB as other units can, with the exceptions that, since they are immune to Unit Substitution, they cannot Battle Harden to a higher-quality unit (they will go Fanatic instead); nor can they Surrender (they go Berserk instead). They *can* become a Hero. (I had a Heroic, Fanatic 9-0 Commissar once in a game of "The Dead of Winter." Of course, he wounded and died the next time he was shot at!)

### Pros and Cons

The primary benefits of a Commissar are obvious. They are lean, mean Rally machines. An 8-morale unit will rally on a DR of at least 9 (10 if the units are in Rally Bonus terrain, A10.61); at the other extreme, a broken Conscript HS will still rally on a DR of 5 (6 if in Rally terrain). That's a considerable improvement over their normal chance of Rally, *especially* if they would otherwise suffer DM penalties. Note, however, that the Commissars are rather brutal with Conscript units that *don't* Rally; if possible, it would be



better to leave them to self-Rally or to get a -1 or better Leader to look after them. Of course, the usual situation is that such spare Leaders are not typically available to the Russian player.

There are situational exceptions. In *Red Barricades (RB)* for instance, a Commissar is ideal for rallying broken Russian units (even Conscripts) when in Factories, as all units gain the Fanaticism bonus. This means that even the lowly broken Conscript HS will Rally on a DR of 7, which are pretty good odds. Note also that Red Chinese Commissars are a kindler, gentler breed, and are thus eminently suitable for rallying *any* rabble that may come their way (not that we have seen any in action in an official scenario yet).

On no occasion should a Commissar be stacked with any other unbroken Leader (even another Commissar). That morale bonus of 1 is much less important than the risk of the Commissar taking everyone else down with him if he dies or breaks (or goes Berserk!), and he gets in the way of a good Leadership DRM when it comes time to Rally non-DM broken units. Just don't do it!

The only other disadvantage of note is their tendency to go Berserk on a HOB DR, and if they do they *will* take everyone with them. In most defensive scenarios (which are the norm for the Russians at this period of the war) this is likely to lead to a large gap in the Russian lines, although going Berserk is definitely a two-edged sword at even the best of times. However, in most scenarios this is really a pretty low-odds occurrence, and not one I think a Russian player needs to worry about too much.

So what do you lose for making the Commissar substitution? In the case of the 8-0, apparently nothing is lost. The Commissar gains personal morale, improves the morale of everyone stacked with him, and has a better chance of rallying them when they break than otherwise. He won't surrender when things get grim. The only significant disadvantage compared to a normal 8-0 is that (unless you are playing *RB*) you really want to keep him away from the broken Conscripts if at all possible.

The question is not so obvious in the case of the 8-1 however. The jump of 2 in morale is not to be sneezed at, but you lose that rarest of creatures: a good fire-directing Russian leader. Statistically, that -1 DRM on the attack is roughly equivalent to an extra 4 FP or an entire squad in other words. The Russian/Chinese player must ask himself whether he can afford to lose that "free" squad in exchange for the ability to ignore DM. Because in all other respects the 8-1's leadership is equivalent to the Commissar's morale bonus—even better if you consider that a Russian 8-1 won't shoot the broken squads he's stacked with if they fail to Rally.

Remembering that of course every ASL scenario is unique, I would offer the following rules-of-thumb concerning Commissar substitution: a Russian/Partisan 8-0 should *always* be substituted for a 9-0, *unless* you expect to need to rally a *lot* of Conscript units (see below for the exception for *RB*). The best use for a 9-0 is really in the rear, in safe Rally terrain, where he'll look after the screaming cowards that run back to him; however they can also be useful in the front line, preventing the cowering of a crucial MG, for instance. In the case of the Red Chinese, I don't see any

disadvantage whatsoever in making the substitution in *any* situation—the *only* penalty is the possibility of a Berserk stack going on a charge into certain death, and the likelihood of that occurring is small enough to dismiss. The exception to the "don't-rally Conscripts" consideration is *RB*; I would make the substitution at every possible opportunity, and keep the Commissars in the factories, where they'll turn those hordes of Conscripts into troops that will need to be outright eliminated to get them out of the German line of advance.

I would not, in general, recommend the substitution of an 8-1 for a 10-0. In my opinion, you usually give up too much for an increased risk of eliminating your own troops. In *RB*, in particular, that 8-1 you get on the first day might end up being the 10-3 that you use to lead the counterattack on the last day, and in any case you will have no shortage of important firegroups that he could direct, or important non-Conscript stacks for him to Rally. An exception might be a case where you have very few important SW that will need fire direction, but many non-Conscript troops that will need to be rallied, in which case the 10-0 would be best used out of harm's way, as with the 9-0. On the other hand, if the Russians are on the attack, a 10-0 in the front lines is more likely to keep his troops moving forward than an 8-1. As in all things, it's a matter of trade-offs—you have to consider what you lose vs. what you gain in the particular situation that you find yourself in.

So there you have it—the who, what, where, how and why of Commissars. The when is up to you.

## Got OVHS?

### "Got Milk?" Is a Great Start

An Analysis of HS26



by Oliver Giancola

#### Introduction

As noted in the historical booklet in the Operation Veritable Historical Study (OVHS), scenario HS 26 "Got Milk?" gives players a quick picture of the opening Canadian assault on the German-held Milk Factory. After taking it, the Canadians must then defend the factory against one of Panzer Lehr's potent counterattacks.

For these reasons "Got Milk?" makes a great introduction to OVHS and the problems both sides will typically face in the Riley's Road (RR) campaign game. Beyond that, it stands alone on its merits as a meaty, combined-arms 8-turner that forces both players to attack and defend, making it fun and gut wrenching to play.

In some ways, the Germans are in the driver's seat in this scenario. While both sides will have to attack across the open terrain at

#### German Advantages

Initial Defender, 8-Morale Troops

#### German Disadvantages

Initially Outnumbered

some point, the Canadians must do so first. Consequently, they will suffer initially from German fire. If the German 88LL and HMG can take out the Canadian 10-2, Observer, or Fireflies, the Germans will have an easier time later in the scenario.

However, the Germans are vulnerable at start. Their initial force could be described as "light." They have only 6 squads, one gun, and some MG and LATW to oppose 15 squads, 6 tanks, OBA, and a 10-2. Therefore, the initial German defenders should realistically plan on resisting stubbornly both using up time and taking out as many Canadian units as possible.

To put up that resistance, the Germans will be helped by their 8 morale, especially as they (unlike the Canadians) will initially be in stone buildings and entrenchments. On the counterattack, the Germans' 8-morale will



help them cross the relatively open terrain. And whereas the entire German OB has 8-morale troops, only 8 of the Canadian squads have the same benefit.

Adding to their advantages, the Germans have a SAN of 5, vs the Canadian 3, thus making German Sniper attacks more likely. For that reason, it would be a good idea to relocate the Sniper near the 10-2 or Canadian Observer, if a dr 2 presents the opportunity to do so. Both sides have an ELR of 3, which may tend to benefit the Germans, as about half of the Canadian squads have 7 morale and so can downgrade more readily.

While the German AFV look potent, they are likely to face one or two turns of fire from 76LLs before firing back. Those Canadian guns have a BASIC TK# of 23, or 25 if they succeed in getting APDS (D6). That means the Panthers and JgPz will have to sweat out a couple of phases during which the Canadian player can kill them through the front with Original DR ranging from an 11 (turret hit on a Panther with APDS to a 5 (hull hits with AP) at most ranges. Of course, the Canadian armor is no match for the German 75LL and 88LL guns, but the German tanks will have to survive before they can fire. Thus, the Germans should not get cocky with their tanks, as fearsome as they seem.

The rain, if it comes, is largely neutral, potentially affecting both sides positively and negatively. The main effect of rain is that it can kill either side's SMOKE-placing ability. In this regard, rain may tend to hamper the Germans more, because rain is more likely to start by turn 5, given the greater number of chances to roll a 10 or greater by that turn. The Germans might like to use Smoke to cover Lehr's counterattack across the open. However, per SSR RR1, any rain result produces a LV Hindrance even at close ranges. (All RR SSR apply to even non-CG scenarios on the RR map.) Combined with the dusk LV DRM starting on turn 6, the resulting +2 (or greater) DRM can help mitigate the inability to place Smoke. At the same time, of course, such a Hindrance can make it harder to affect the Canadians, who will be in buildings and Entrenchments. At least with Smoke, a player has the potential to put the Hindrance directly on the enemy, retaining an unhindered LOS to other, less dangerous positions that can be reduced by fire. Nevertheless, the rain, dusk, and vehicles can help the Germans close to CC range, where the game may often be won or lost.

## German Defense

Tinkering with the German defense is one of the most enjoyable aspects of this scenario. The defending Germans perhaps have the least to worry about, sitting comfortably as they are on the high ground in solid terrain, shooting up whatever passes below them—at least for the early turns. The defensive challenge comes from making the most of what little you are given, in order to take out (or at the very least, slow down) as many Canadian

units as possible. The defense shown is just one approach to doing so.

The German set up seems largely dictated by the possible Canadian attack routes. Taking the Milk Factory is the end goal, but the Canadians could approach it a number of ways. Due to the Soft Ground's extra MP (RR9), the Germans can expect to have most of the Canadian vehicles in the gun's LOS on Turn 1, if not Turn 2 as well, from a number of positions. Where the gun is placed will determine the rest of the set up.

In hex I10, the gun covers the Canadian right, but the Canadians can soon move out of its LOS, blocked by the hill in R8. However, this position does cover the direct front of the Milk Factory, a likely Canadian approach. Hex AA11 is another possible set-up hex, as it covers another attack route between hexrows V and Z that uses the hedges for cover. But should the Canadians attack on their right, they will be out the gun's LOS west of R8. Furthermore, the hedge and wall bordering U10 and T10 block the gun's view of the front of the factory from AA11. Hex AA11 at least does have an infrequent LOS directly west, down the road. Hex R8 is yet another possible position, one that offers the gun the ability to cover both flanks. However, it seems too eas-

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*“Thus, the Germans  
should not get cocky with  
their tanks, as fearsome  
as they seem.”*

---

ily outflanked there, allowing the Canadians to ready some vehicles to either fire at or move by the gun on its non-engaged side.

Hex R14 is not perfect, because a gun there will have blind spots in front of the factory and just below the crest line of the hill, but such a position covers most Canadian approach hexes with minimal CA changes. Hex R14, unlike the other positions, is out of the range of most of the Canadian infantry, at least early on. This position also seems better suited to cover the inevitable Canadian push over the hill, whether firing on infantry or vehicles. Also, the Germans need to fend off Canadian attempts to move vehicles behind the factory, cutting off rout paths. A Good Order gun in R14 will make the Canadians think twice about such tactics. And should the Canadians make it into the factory, the R14 position allows the gun to fire at them, although the Canadian infantry will then have the gun in their range, too. The Germans could put the gun in a reverse slope position—in R13, for example—to fire only at targets that crest the hill, but this seems to minimize the gun's long-range threat. Wherever it is placed, the gun should be shooting every turn in order to do the most damage before it goes down.

## Possible German Defense

I12: 3x “?”  
L11: 548 (Ground level)  
N11: **238**  
Q9: **6-FP Minefield**  
Q10: 9-1, 548+HMG  
Q12: 8-0, 548 (**under 2S Foxhole**)  
R8: **6-FP Minefield**  
R10: **238+PSK**  
R14: **228+88LL** (CA S14/R13, under Trench; Boresighted U10)  
S8: 2x “?”  
S9: **6-FP Minefield**  
T10: 548+LMG (Ground level)  
V10: 548+LMG (**under 1S Foxhole**)  
Y12: 3x “?”

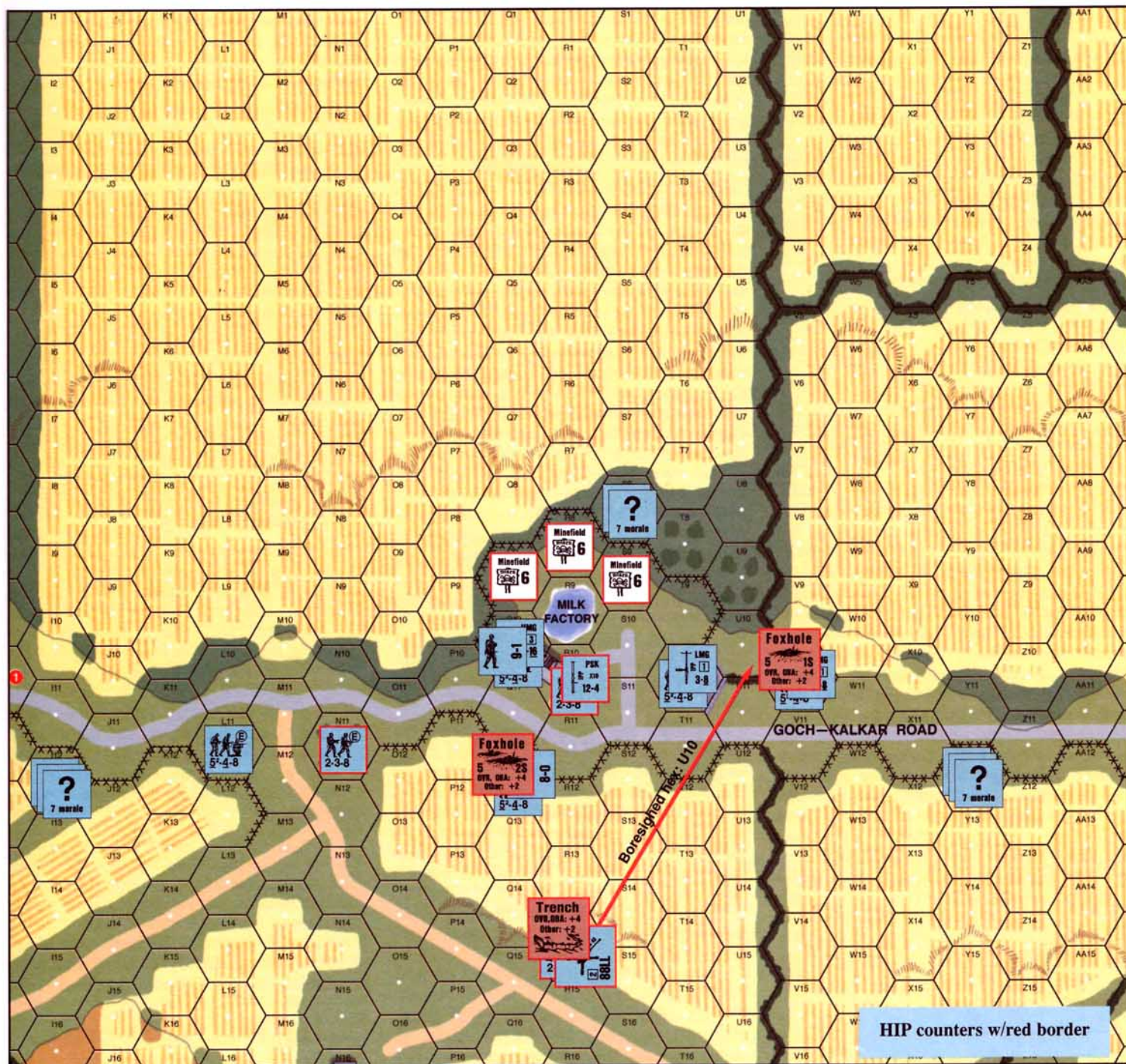
*Note that the mines, Entrenchments, and the Emplaced Gun and its crew all begin hidden. Every non-Dummy, non-HIP unit or stack begins Concealed. Also, SSR5 allows the Dummies to set up in the open. All HIP units are bold.*

The gun seems best placed in the Trench for better cover against the Barrage (+4 vs the +2 of Emplacement). Remember that the Trench (and the gun if not in Concealment Terrain) will have to be placed onboard as soon as a Canadian unit has a LOS to them, although the gun will be concealed. The Canadians are likely to try to swamp the German defense, which will make choosing targets for this one gun difficult. The gun does not have to worry about a tank rushing it on turn 1, and any such threat can be fired upon in the German PFPh. Therefore, the Germans should keep cool and fire upon high-priority targets, namely the Fireflies and 76LL guns, which pose later threats to the tanks of Lehr. The Shermans are also good targets, because their ability to create SMOKE can make problems for the German defense. If it is raining, however, the Gun may chance skipping the Shermans for a turn to shoot at other targets. The Germans will not be able to see what is in the Kangaroos (RR8), but knocking out the ‘Roos offers a good chance (once hit) of eliminating the Canadian PRC inside. Firing on the ‘Roos may even kill the 10-2 or Observer, who should certainly be the prime infantry targets.

As to the rest of the set up, the Canadian player will see a number of Concealed stacks on the map. But as the Canadian units move up the hill and into the LOS of the defenders, the entrenchments will be dead giveaways as to where the real units are. Therefore, the proposed set up attempts to make that surprise factor last as long as possible by forcing the Canadians onto the hill—and into close range with many German units—before they find out what is real.

While it is tempting to put some of the German units on the crest line, there are some disadvantages to doing so. Putting them in open ground, without Entrenchments, will make them vulnerable to the barrage. Even an Entrenched, up-front defense right on the





crest line runs some risks. Usually, after the Canadians unload on turn 1 or 2, they can plaster anything on the hill, especially with the help of their leaders. The German defending force seems too small, too fragile to duke it out with the numerous Canadians for long. And putting the Entrenchments on the crest line could allow the Canadian player to quickly occupy them, providing cover against German fire.

Deception seems like the better tactic. Dummies in S8 or similar location may make a cautious Canadian think twice about charging down the middle, in rows R and Q, which are otherwise blind to a gun in R14. Those Dummies may also draw some Canadian fire in the AFPH and later, which may in turn provoke the German Sniper. Of course, the Canadian may call the German's bluff and run

units down to S8 anyway, forcing the German to declare if that unit is real in order to cause Concealment loss. Such placement thus makes the Canadian guess if the German is gutsy (or crazy) enough to put a real unit there, perhaps even with the PSK. However, such placement is risky, as the Orchard provides no TEM. The factory seems a safer spot for the PSK, as that would cover the dead space that the 88LL cannot see, with better TEM for the HS, and the PSK (as well as PF) can fire without Backblast penalty from the factory. The very fact that the factory *is* safer may trick the Canadian into thinking the PSK is there when it is really in the orchard. A real unit in S8 might allow the Canadians to retain Concealment until an AFV or stack moves adjacent. In similar ways, the German should

play with Concealment to play with the Canadian player's head.

Combining Concealed units with HIP ones—for example, a HIP HS in U9 with a Concealed one or Dummy in S8—may make an even better trap. Unfortunately, Concealment Locations for HIP are few. The buildings and the Orchards are the only places, and none of them seem very surprising. The Germans could place a HIP MMC in the Cellar of T10 or L11, with the idea that they remain there until the Canadian bothers to find them. More realistically, perhaps, the squads fighting in those buildings could move into the Cellars to fire at anyone entering above them and the open terrain adjacent. However, these Cellars are not Fortified, so any Canadians who do survive German fire can freely move downstairs into CC.



The mines add to the Germans' unseen threats. While the proposed set-up puts the mines in the dead zone in front of the factory, placement anywhere along the crest line seems reasonable. Such hexes include T9, U10, V9, W10, and X10. The mines could also be placed below the crest line, in the S8-U9 orchards, for example, so that any unit coming out of them could face being Broken and in the open near (or next to) Germans waiting above. Such unfortunate Canadians would probably also have to Rout back through those same minefields, thus exposing them to multiple mine attacks.

A nasty trick would be to put all 12 mine factors in L11 with a HIP unit in the Cellar. Any Canadian unit entering there would suffer the mine attack, with no TEM for the building. Broken units might think it safe to stay, thus becoming vulnerable to Ambush from the Cellar unit, followed by Hand-to-Hand CC. Or the broken units might rout into the Cellar and surrender or be eliminated for Failure to Rout. Even if they play it "safe" and rout out of the building they must take another 12 FP mine attack. Obviously, any German unit in that hex would be inclined to stay rather than undergo a 12 FP attack, but such placement may make the Canadians hesitate, forcing them to first to blast the Germans out and then to clear the mines. A similar ploy could work in T10, making it difficult for the Canadians to dig the Germans out of that victory building—although perhaps difficult for Germans to take back later. The Germans could also exchange some OB-given mines for AT-mines. Possible locations include dead-zones hexes such as I10, J10, Q9, and R8, among others. The Germans could even put some mines on the paved road itself. They would be unseen until a Canadian unit has a LOS to the mines' Location. Even when fully revealed, such road mines would make the Canadians think twice about a sudden move down the road, or force a move over the Barbed-Wire Fences. However, note that the fully-tracked vehicles that make up most of the Canadian OB would Bog only on a DR of 12 when crossing the wire. The halftracks, even with Towed guns, Bog only on an 11 or 12. Eventually, road mines could force infantry units to expose themselves by spending a MF in clearing them. Such a minesweeper succeeds only if it was not pinned or worse in the attempt. And even if that unit does succeed, the mines remain a hazard until the end of "the MPH" to vehicles that may wish to charge through (B28.53).

Whether they use HIP or not, the 9-1 and HMG are key components of the defense. Putting them in the Milk Factory seems like the best (though most obvious) place. In that position, they could skulk back to R10 on some turns. Since they cannot reach a woods or building hex from this position in one RtPh, the 9-1 and MMC (but not the HMG) could rout back to the Foxhole in Q12, and later to the Trench. Another option is to start the HMG and leader in R14. That position offers the HMG the same strengths it does for the gun, allowing units there to see almost the entire map and to continue firing after the fac-

tory is occupied. But putting both the HMG, 9-1, and gun there seems to be putting all the German eggs in one basket. For this reason, if the German player does choose to locate the gun elsewhere, R14 seems like an ideal alternate to the factory for the HMG and leader, with a foxhole protecting them.

From R14 or a nearby hex, the 9-1 stack could also move back to N16. From there, the 548 and HMG could hit both hexes of the factory with 8 FP, or 12 FP if the Germans add a 548 and LMG. From N16 (or R14, for that matter), the 9-1 can dominate much of the battlefield's open terrain and serve as an anchor for the upcoming counterattack. To hide the 9-1's true location, the Germans might use Dummies to create a fake 9-1 stack in the factory. Or, the Germans could put Dummies in the Trench, moving them back to N16 as if the real thing, in the hopes of fooling the Canadians into believing that the factory is weakly defended.

### German Counterattack

Sooner or later the Canadians will take the Milk Factory and the German reinforcements will have to counterattack. Ideally, some of the at-start forces will have survived after first softening up the Canadians. Much of the German counterattack will depend on how well the defense has gone, and where the surviving Canadians are. But some general points can be made.

Typically, and perhaps obviously, the Germans will attack just east or west of the hedge that runs down row U. Not only does the hedge provide some cover to units hugging it, but it also usually blocks LOS from Canadian units located to either side of it. To the east of that hedge, Z16 and AA16 are possible places to bring in counterattacking tanks. To the west, I16, J15, K16, and L16 make for ideal places to position tanks. As they move into such hills, they should also attempt to go hull down. They should not be CE, especially if the 10-2 is still around or if the Canadians have strong infantry stacks. The Canadian OBA is another likely threat. Under 100 mm OBA, the 4 German tanks can suffer a Shock, Immobilization or worse on a 5 or less. Therefore, the German will often want to spread out.

With these considerations in mind, one approach would be to have the tanks and a fire group hit the factory from the N16/hill area, while another force moves east of the hedge to V12. If the Canadian player has spread his anti-tank defense to evenly cover both sides of the row U hedge, the German counterattacking force could concentrate on one side to overwhelm the Canadian defense. Theoretically, the German infantry can Assault Move and Advance from their entry hexes across the playing area to the victory buildings, if they choose a straight path across the map. Such a group, possibly six or seven hexes across, could also form a long multi-Location FG as they advance, possibly with each squad under an AFV. However, this may be a little too concentrated to be safe as long

as the British OBA is a threat. Whichever way they attack, the German infantry will be vulnerable to the OBA in the open, so the Observer will be a critical target.

The FlaK wagon should be effective at suppressing the guns, Observer, and infantry, if it can survive the Canadian anti-tank fire. To allow the FlaK wagon to get into position, the German may have to risk exposing the tanks to draw the fire of the Canadian tanks and anti-tank guns. Otherwise, one place to park the FlaK wagon until needed is J16. However, it may still be vulnerable to OBA attacks in this Location if the Canadian Observer can see other units on the crest.

While the FlaK wagon can generate 20-FP attacks, so too can a firegroup of two half-track AAMG and two squads with LMG. Directed by -1 leaders in the tracks, and with the squads moving as Infantry, this group poses a potent striking force. The Germans could also keep HS in the halftracks to dash forward, unload, and grab Victory buildings as the opportunity for this or other sudden moves present themselves.

The German counterattack will benefit from the +1 dusk LV and from the Mist LV if it is raining. If it is not raining, Smoke will be important. Only the PzKpfw IV can shoot Smoke rounds, but it has a good chance of getting it, needing a 9 or less (benefiting from the C8.2 increase in its Depletion Number for being Elite per RR5). Otherwise, the Germans will have to rely on the tanks' Smoke dischargers, the vehicle crews, and the infantry to place Smoke. It may not matter, given that it may be raining. Of course, all of the German vehicles can create a wreck blaze, even in rain.

While it seems a shame to sacrifice a Panther in this way, the German may have to take those chances in the last turns. The German vehicles can readily reach the buildings in one movement phase, even with the Soft Ground. The vehicles could surge ahead of the advancing infantry, covering them with a combination of sD Smoke, vehicular/wreck

### TIPS FROM THE TRENCHES

If your defense depends on placing a Residual FP counter in a particular hex, make sure you have enough initial FP to overcome the column shifts required when your opponent lays down some Smoke between you and your target. Remember that Smoke in the firer's hex or along the LOS reduces the Residual FP by a column for each DRM; Smoke in the target hex does not reduce the Residual FP but does modify its attack.





TEM/Hindrance, Bounding Fire, and even wreck blaze Smoke. It may be appropriate, therefore, to rush some positions with a vehicle either to freeze those units with TPBF target selection limits or—should such a move fail—at least hinder the LOS with an in-hex Blazing wreck. Halftracks are ideal for such moves, especially late in the game.

### Canadian Advantages

Initial Numbers, 10-2, OBA, SMOKE, Secondary Defenders

### Canadian Disadvantages

Initial Vulnerability, Limited Defensive Terrain, Time

The title of this scenario may be written especially for the Canadian player. Whether you prefer cow's milk, soymilk, milk of magnesia, or some other kind of "milk," you may want to have it handy to settle your stomach during the opening attack.

Exactly how many Canadians die in the opening turns will depend a lot on how lucky the Germans get with ROF weapons. Fortunately, the Canadians have enough men and machines to take some losses and still establish themselves firmly in the Milk Factory. And there are ways to approach the German defense to help minimize the losses.

### Canadian Attack

The first thing the Canadian player will need to think about—preferably before the gaming session—is the Creeping Barrage. In doing so, it would be a good idea to review the Creeping Barrage rules (E12.7) before play. That can also help a player prepare for the CG.

The barrage will attack any occupied hexes with 16-FP factors along its 9-hex length, against troops who benefit from +3 and +4 terrain and 8 morale. So, the barrage attacks will need Original DR  $\leq 7$  to have a chance of breaking the Germans, who will have good odds of surviving or recovering. However, the barrage may not hit every German position, because accuracy must be rolled with every 2-hex correction (E12.74). For all these reasons, the Canadians cannot rely on the barrage for its destructive effect.

Instead, it may be better to think of the barrage as a light Smoke barrier, providing a +2 FFE Hindrance DRM (E12.75). With the initial draw pile at 9 Black and 2 Red, and with the initial Pre-Registered FFE accurate on a dr 1-4, the Canadians have good odds that the first FFE will be on time and in place on the first Player Turn. Rain, which would reduce the FFE Hindrance to +1 while substituting its own LV Hindrance (minimum of +1 per RR1), is not likely right away. The barrage, therefore, seems best used to hinder the Germans as much as possible. Any German units that do break as a result of the barrage are a fortuitous extra.

The Canadians cannot predict where the gun will be placed but can be sure the German defense will center on the factory. This Creeping Barrage setup attempts to hit that central position. Such placement could also help cover a likely Canadian approach along the hedges in rows V-Z. It also allows the Canadians to move into hexes just below the crest line, which may be out of LOS of the gun.

How fast the barrage moves is a harder facet to predict and plan. It will move an average of 2 hexes, depending on the accuracy of the involuntary Correction. Given the shallowness of the Canadian attack—the Canadians will generally stop at the factory—the barrage does not need to move fast (every PFP should do). And if the barrage does linger on the German positions, it will have greater chances of breaking (perhaps even double-breaking) German units. A barrage sitting on top of or behind the German positions will also make it harder for them to skulk or relocate. The Canadians could try to place the barrage further north so that it does not lift until Game End, hoping to form a wall in front of the German reinforcements. But doing could also slow down the Canadian approach to the factory, creating a barrier to their own attack. By committing to the Creeping Barrage for the entire game, such a tactic sacrifices the flexibility that the Observer can provide later with regular 100 mm OBA fire missions after the barrage has lifted (E12.771).

With its +2 Hindrance DRM, the barrage is likely to determine the Canadians' approach. Note that the Canadians do not all have to enter on turn 1. While sending only HS or other scouts on the first turn is an option, it does not seem time efficient. The Canadians will need time to clear out the factory and establish their defense before the German reinforcements enter. The guns, too, will need time to get into position before the German tanks enter. And because the Soft Ground will slow everyone down, the Canadians will need to enter most of their force on turn 1. Doing so will also help the Canadians maximize their initial numerical superiority to overwhelm the German defenses.

However, the Canadians do not want to lose the Fireflies and the 76LL guns too soon. These units will be needed to engage the German armor later. The radio and the 7-0 can also help fend off the counterattack. Losing any of these units will make it harder for the Canadians to clinch the win.

The Sherman Vs are great for helping the infantry and Kangaroos. Remember that some may enter on foot and the Kangaroos should take advantage of the Cloaking Boxes per RR8. The Shermans should maneuver to spots that are out of the LOS of the gun, but from which they can either engage enemy infantry (preferably out of PF and PSK range), or place SMOKE to help the infantry advance. For example, against the proposed set up, Shermans could maneuver to Q8 and R7. From there they can fire SMOKE into the adjacent hexes next to the factory, so that friendly infantry can Assault Move into the

### Possible Canadian Creeping Barrage Setup

Pre-Registered hex: U10

Barrage: V10-T10

Aiming hex: U16

Correct FFE: PFP only

Lift: after 5 Game Turns

SMOKE Concealed. The Shermans can also use their Smoke dischargers to produce the same effect. And if the tanks die, they should do so in places where their wrecks can provide cover for the following legs. The Shermans could stop and try to engage the gun, perhaps all 4 doing so at once, from different positions outside of the gun's CA. But given that the 88LL will likely have its DFPh and later PFP to fire first, the Shermans may not survive to accomplish this end. Another tactic is to use one tank to rush the gun while others fire at it, perhaps with SMOKE. A tank in the gun's hex would force TPBF limits on it, allowing infantry to close in or other tanks to knock it out.

The Fireflies do not have the same SMOKE-making potential as the other Shermans, and they should not be squandered too soon in rushing the buildings. However, should the gun's position allow for it, the Fireflies could stand off and shell enemy infantry, or at least move on map to save a turn's worth of movement. And don't forget that all the 75mm Shermans are eligible for Gyros (RR7), which can especially boost their lethality later on when flanking the bigger German tanks.

The M5 half-tracks make the obvious prime movers for the guns. They will usually spend 3 MP per hex (COT + 1MP for Towing + 1MP for Soft Ground), and they will need every MP to get the guns into position. However, the Canadians could load a halftrack with a squad and a half. In three movement phases they could threaten R14, for example, by depositing the infantry adjacent to the gun, perhaps covered by a vehicular smoke grenade. Such a halftrack can force the gun (if still in action by turn 3) to deal with the threat. And a Kangaroo, with a Towing number of -4, could pull the 76LL, carry its ammo and crew, and still have 9 PP remaining for the Observer, the radio, and the extra crew.

The 10-2 is an important piece for the Canadians. If it survives the gun's fire, this leader can certainly help create some openings for the Canadians, perhaps by taking out the crew itself, with the leader's modifier canceling the Gun's Entrenchment or Emplacement TEM. As covered below, his leadership will also be a big help on the defense. He can make such a difference that it might seem worth keeping him off map for later entry, but he is too important to cracking the German defense early to be wasted like that.

The accompanying proposed attack captures these thoughts. How the attack develops



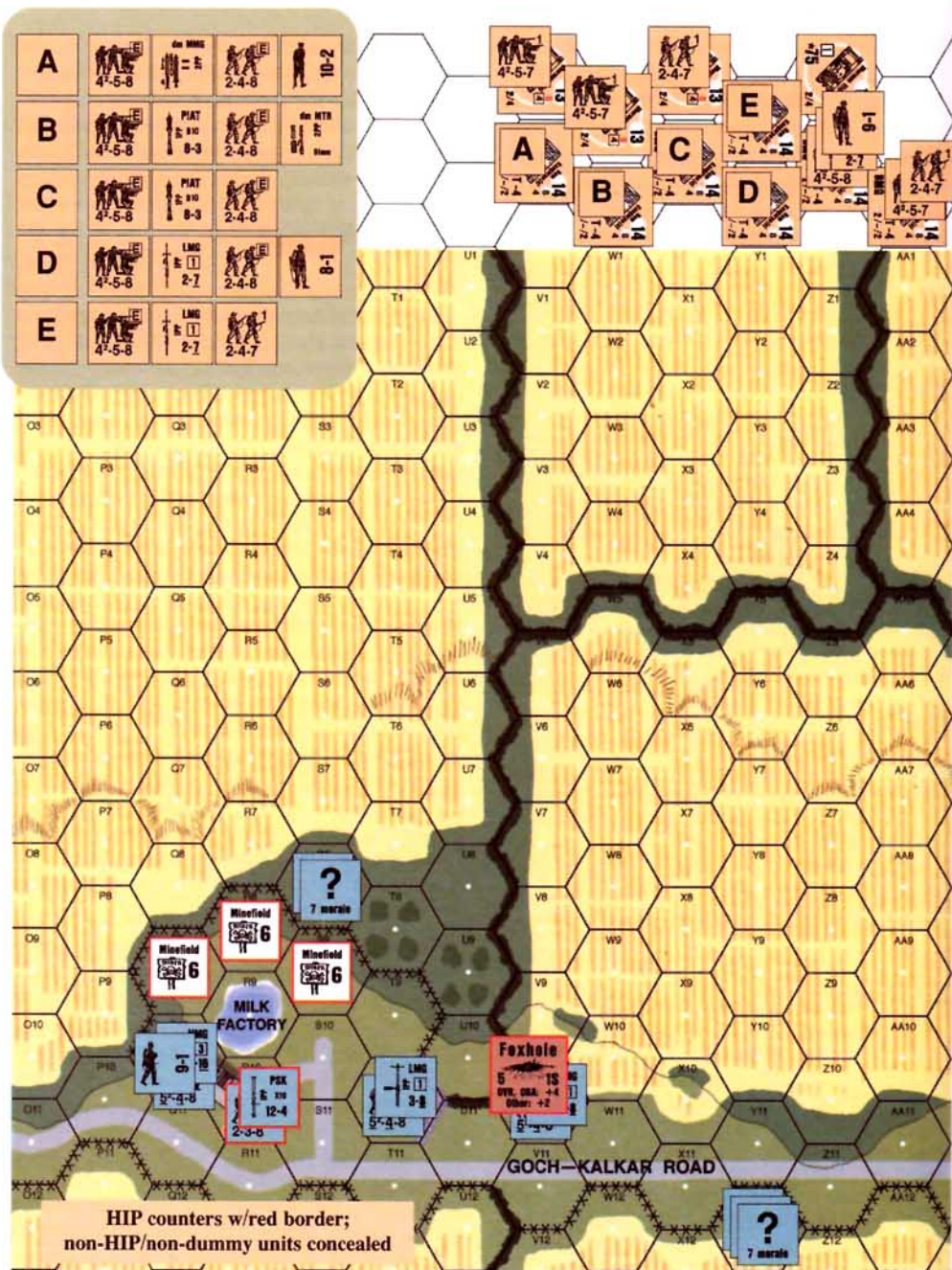
depends on the gun's setup, which will not be known at first. The Germans can generally count on the gun killing an average of one vehicle per fire phase. The Canadians must keep all vehicles in Motion and try to move out of the gun's CA, as appropriate. The Canadians should use the orchards and barrage Hindrances, and roll for Smoke whenever possible.

Alternately, the Canadians may keep some vehicles offboard and enter them in waves. However, such an approach allows the gun to fire with a fresh ROF at a whole new batch of targets in every MPH.

The infantry could move under the cover of vehicles, much like as described for the German counterattack. Armored Assaulting with the Kangaroos, for example, is a possibility. Also, a Canadian HS with a dismantled MTR could sneak on board while the 88LL engages juicier targets. From V4, the assembled MTR can attempt to place Smoke in the gun's Location. The MTR can also help smoke the crestline to aid the infantry's advance. The extra 228 is probably intended for the MMG, to mirror the use of such crews in the CG. The Canadian player can follow this practice, but the extra crews seems like a good back-up for the guns, which will be much more important to countering the tanks of Lehr.

The proposed attack is just one example and is meant to help you visualize and create your own. Alternately, the Shermans could move first, hoping to fire their Smoke dischargers to cover the advance, but this may reduce the effectiveness of Canadian fire. Or the flank Kangaroos could move first to reveal the gun and any visible Entrenchments, as well as generally make a nuisance of themselves in the German rear.

When planning your attack, it would be wise to consider some of the likely German TH#, especially from the 88LL. For example, assuming a range of 7-12 hexes and movement behind the Barrage, the Kangaroos are slightly harder to hit than infantry on foot. To hit a Kangaroo at that range would require an Original DR  $\leq 4$  (Modified Base TH of 9, with a total of +5 DRM: Hindrance + moving + Target Size). To hit infantry would require an Original DR  $\leq 6$  (Base 7, DRM for Hindrance + FFNAM), or a 5 if using Armored Assault. To hit a Sherman with Riders under similar circumstances would require  $\leq 6$ —the same as to hit infantry moving on foot. Therefore, the proposed attack puts every infantry unit in or on vehicles, in order to minimize their chances of being hit while maximizing speed. Putting the best units in the Kangaroos also has the advantage of hiding the 10-2 and other leaders. Of course, PRC have a 50-50 chance of dying in a Kangaroo (assuming the 88LL doesn't burn it), and Riders are vulnerable to breaking when Bailing Out, whereas infantry on foot might pass their MC and can Rally back if they fail. Despite that, my preference is to keep the Canadians as PRC to cross all of that open ground quickly and with the smallest chances of being broken. And the 88 is



only one weapon. Others are better against Infantry than against PRC.

### Canadian Defense

Once the Canadians get into the buildings, then the tables will be turned. The Germans will be the ones crossing open ground, facing deadly fire from tanks, guns, and high-morale troops in stone buildings. Worse, the Germans may even have to face a 10-2 and 100 mm OBA.

The OBA will be key, with its 20-FP missions dropping on troops in Open Ground and on open-topped vehicles. While the barrage is chugging forward, the Observer can come forward once the factory is occupied. The 7-0 will be the most likely candidate to man the radio, although his morale can make him vulnerable. It will be important, therefore, to bring him in Concealed and keep him that way for as long as possible. The OBA could have such a big effect that another leader may

need to operate it. Harassing Fire is a definite option, attacking the 19 hexes within two hexes of the FFE marker with 6 FP (1/3 of normal), which can effectively block movement and break some units in the open.

Besides directing fire, the 10-2 can help quickly dig a Foxhole or two behind the Milk Factory, if there's time. A Foxhole in Q9 might make a nice place to rally. A Foxhole in S9 could serve the same purpose, as well as providing a spot for the Observer to call down fire on slow-moving Germans. Vehicles—such as a half-track in Q9 or R7—may also serve as terrain to which broken units can rout. Such Foxholes and vehicles will provide some depth to the Canadian defense, because cover (beyond the buildings themselves) is sorely lacking. The 10-2 can also help Rally broken units back there, while the -1 leaders defend the factory (or vice versa).

To counter the German tanks, the 76LL guns and Fireflies will be essential. From I11, R10, U10, and AA11, these units can cover the



### Possible Canadian Attack

All CA are south-west except where noted; "V-1" signifies the first offboard hex adjacent to VI, "V-2" the second such hex, and so on. All infantry units are PRC.

#### Turn 1

- I-1: Kangaroo (457, 247) CA: SE
- V-1: Kangaroo (10-2, 458, dm MMG, 248)
- V-2: Sherman V (457)
- W-1: Kangaroo (458, PIAT, 248, dm Lt. Mtr)
- W-2: Sherman V (457)
- X-1: Kangaroo (458+PIAT, 248)
- X-2: Sherman V (247)
- Y-1: Kangaroo (8-1, 458+LMG, 248)
- Y-2: Kangaroo (458+LMG, 247)
- Z-1: Kangaroo (9-1, 458+LMG)
- Z-2: Sherman V
- AA-1: Kangaroo (457, 247)

#### Turn 2 or later

- Sherman IIC (8-1 Armor Leader)
- Sherman IIC (247)
- M5 (Towed 76LL; 228, 247, 7-0+Radio)
- M5 (Towed 76LL; 2x 228)

map. While setting up a CA-limited weapon in a building is usually a no-no, the factory in R11 can help protect the gun crew, which will cannot benefit from Emplacement. Also, the gun can cover the ridgeline if it faces R11/Q11. The challenge will be in getting all these pieces in position before the German reinforcements enter.

Assuming they move straight up the hexrows, it will take 3 turns for the guns to get into position in U10 or R10: two movement phases to get into the hex, one more to unhook (2/3 the vehicle's MP, due to the guns' circled M#), and another fire phase to unlimber. For example, if the guns enter on Canadian Turn 3, they can get into position on their Turn 5 and then unlimber as the Germans enter. The guns could enter on turn 4, but then they will be targets for the German tanks. If the guns have to enter late, it may be best to unhook them right away on the board edge, so that they can fire on German AFV in the N16 hill area or those moving around the rear of the factory to cut off rout paths.

All of this means that the other Canadian units will most likely have to neutralize the 88LL and occupy the factory by turn 4. The Canadians simply do not have time to dawdle and should charge the hill on Turn 1. SMOKE and the tanks can help the infantry come to grips with the Germans in turns 2-4. By turn 5, the Canadians will need to have their defense ready to repel Lehr.

### Conclusion

The multiple attack and defense options for both sides give this scenario high replayability. Players can figure out their perfect defense, attack, and counterattack, thus adding variety to each playing. "Got Milk?" offers an introduction to OVHS and a readily playable summary of the campaign in 8 turns.

*[Oliver wrote this at the same time as two other fine articles that we published in Journal #5, but we didn't have room for it there or in Journal #6. We are glad to finally be able to bring it to you here. ...Eds.]*

Green Meanies Now! Yes, Armies of Oblivion was released earlier this year, and no one is happier than we are. A lot of time and hard work went into completing that module, and reaction has been very favorable. And now AoO is truly complete, with the publication herein of the missing 12th scenario, 122 "Extracurricular Activity." We had always intended this to be part of AoO proper, but the scenario "The Sixth Blow" took up both sides of a scenario card, and we had to drop something from the module. Another refugee from AoO also finds a home here, "Operation Schwarz." Most of the scenarios in AoO were pretty meaty, so these two shorter scenarios should be welcome additions.

In the same arena we have an article and three scenarios from Steve Swann surrounding the Croatian paratroopers versus partisans. One of the scenarios also uses the new 5-3-7 multi-man counter from AoO.

You may have noticed the inclusion here of mapboard v. For those of you who have yet to get one of the Starter Kits or Beyond Valor 3rd Edition, we want to introduce the new style, hard-stock mapboards that we have begun using. The ten boards in BV3 are already done in this style, and all of our new and reprinted boards will be in this style. Including the mapboard here also gives us a

## A Word From The Editors

chance to present a cool new scenario that was designed using mapboard v, "Marders Not Martyrs." We are currently taking preorders for the complete set of re-done ASL mapboards.

You may also have noticed a certain pull to the east in the scenario mix in this Journal. We had intended to focus on East Front scenarios this time around, but we never planned that all of the scenarios would feature Germans or Axis Minors vs. Russians or partisans. We were just lucky to get a slew of cool scenarios from Steve, Ola Nygårds, and Xavier Vitry. We do have a nice set of Pete Shelling "Bulge" scenarios that we are looking forward to using next time.

With AoO in the stores, our next big task is laying out Valor of the Guards, Tom Morin's magnum opus on the fighting surrounding the central railway station in Stalingrad. This baby has been under development almost as long as AoO, and the results are a magnificent piece of research crafted into a finely-tuned simulation. No wonder it hit 1,000 preorders in under a week and is even now headed for

2,000 preorders. We are also taking preorders for Blood Reef: Tarawa Gamers Guide, a stand-alone magazine intended to illustrate play, give tactical advice, and provide a brief summary and chronology of the historical battle. We think this will bring renewed interest to BRT, although we don't have any immediate plans to reprint it. Speaking of reprints, they will be figuring prominently in our thoughts over the next year. We are currently taking preorders for a reprint of Doomed Battalions, which will also include the contents of The Last Hurrah. Before long we expect to have the desert module West of Alamein up for preorder. We are also looking at reprints of Croix de Guerre and of Code of Bushido, the latter probably combined with Gung Ho!

Playtesting is under way for several action packs featuring new boards and is almost complete for A Few Returned, Mark Pitcavage's action pack featuring the Italians in Russia, with reprints (in the new style) of boards 24, 42, & 43. Plus there are the usual historical modules lurking just over the horizon. Some of these include, in no particular order: Sword and Fire (Manila); Ortona: Little Stalingrad; Red October (Stalingrad); and Festung Budapest (Budapest 1945). Then there is the Finnish module, Hakka Päälle,

*Continued on page 47*



# HUNGRY HUNGRY HIPpies

## The Theory and Practice of Hidden Initial Placement

By Mark Pitcavage

*Yesterday upon the stair  
I met a man who wasn't there.  
He wasn't there again today.  
I wish that man would go away.*  
—Hughes Mearns

Play ASL for any length of time and you certainly will encounter men who aren't there—or at least, who weren't there until a second ago, when they appeared out of nowhere, armed and loaded for bear. The hidden initial placement (HIP) rules provide ASL with some of its most hair-raising moments—few players haven't dreamed of achieving the ideal HIP ambush, winning a scenario by suddenly springing a deadly trap against an unwary foe.

Yet more ASL players have dreams than memories of such occasions. This is due partly to the fact that HIP is only one element of a complex game system and does not dominate the battlefield. But it is also true that many ASL players do not put sufficient thought into how to place and use HIP resources. There exists conventional wisdom on the subject, such as the oft-expressed piece of advice not to HIP a unit a player will almost certainly reveal right away. But beyond the platitudes, what are the real possibilities of HIP? What are the best ways to maximize its use? That is what this article explores.

To use HIP effectively, three basic questions must be answered: 1) What units should be HIP? 2) Where should HIP units be placed? and 3) When should they be revealed? However, these questions are situation dependent, and the answers will vary depending on what HIP strategy is adopted (see below). Two basic rules tenets of HIP should always be kept in mind, however, no matter what the situation or strategy. The first is that there should always be a specific rationale for each HIP unit. What that purpose is, however, can vary considerably depending on the nature of the scenario and the desires of the player. HIP units can be used in a variety of ways.

The second tenet is less obvious. In some cases, the real power of HIP is as a *potential* threat rather than an actual threat. Once a HIP unit is revealed, much of its threat is gone. However, until it is revealed, the attacker must always take it into account. It's like fac-

ing someone with a bow and a single arrow. While that bow is pointed at you, you must always pay it attention. However, once the arrow has been loosed, hit or miss, its threat is gone. Inexperienced players deal with facing HIP units more poorly than experienced players do. Because they cannot yet adequately assess the real threat value of a HIP unit, inexperienced players tend to overreact and become too conservative. Experienced players are more likely to take HIP in stride.

### Shooting from the HIP

Typically, there are two broad postures for HIP units. Such units can be placed strategically, i.e., to achieve goals directly related to the victory conditions, or tactically, i.e., to achieve combat-related goals and thus indirectly pave the way to victory.

### Strategic HIP

Strategic HIP involves using HIP units to maintain/regain (or, more rarely, to obtain) control of objectives and thus achieve victory (for scenarios with casualty-related victory conditions, see tactical HIP below). By its nature, this is the most passive use of HIP, mandating that the HIP units remain hidden as long as possible.

A simple example illustrates how strategic HIP works. Imagine a scenario where the attacker must control ten buildings to win. The defender defends the buildings, but also places a HIP squad in the upper level of one of them. If the attacker fails to uncover the HIP squad, when the scenario is over, the defender will have won—one of the buildings that the attacker thought he had captured is actually still controlled by the defender, thanks to the HIP squad.

Strategic HIP works best against inexperienced players, who are less likely to take this use of HIP into account in the first place. Experienced players will realize this possibility from the get-go, although even veteran players can forget in the "heat of battle." Against players who are not fooled, the HIP unit still causes the attacker to devote resources to finding the HIP unit, whether by searching, mopping up, or simply running a half-squad through all applicable locations.

The question for the defender is whether this diversion of attacker resources is adequate compensation for the "loss" of the HIP unit for the majority of the scenario (since it will be hiding rather than fighting).

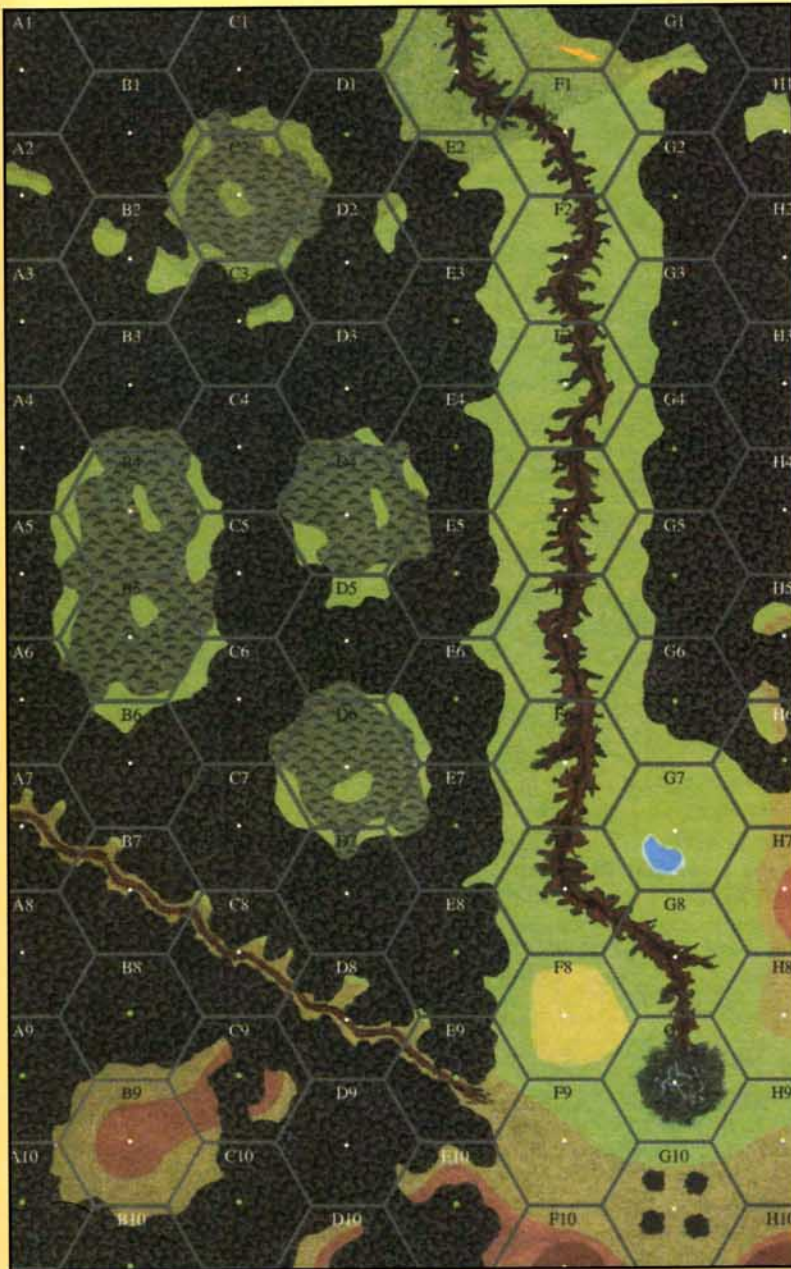
The most common variation on this stratagem is to use a HIP unit not to maintain control of a location but rather to regain control of a previously lost victory location. In such cases, the defender places his HIP unit within reach of an objective rather than in it. Typically the objective is a location the attacker has long since moved past. For example, on the defender's last turn of a scenario, he loses HIP for a squad and moves it into a victory location previously captured by the attacker. Ideally, that will have been the last turn of the scenario, and the defender has just won, or, if the attacker has a turn remaining, he will be unable to get back to the building and recapture it.

Regaining control has an advantage over maintaining control because with the latter option, there are distinct, finite limitations on HIP (i.e., the victory locations themselves), and it is often easy for the attacker to determine, or at least narrow down, where the HIP unit might be. With the former option, the HIP unit can be almost anywhere and, if it is cleverly placed, the attacker has very little chance of discovering the HIP unit before it makes its move. To combat this tactic, the attacker must ensure that either the locations he's captured are guarded in some way, or that he has a force which can reach and retake any locations lost—again, at the very least, a diversion of resources.

How should HIP units be placed for these sorts of strategic goals? There are two main approaches: forward vs. rear placement. Forward placement involves HIPping a unit relatively close to the initial front lines.

Forward placement is inherently risky, especially against an experienced player. If the attacker plays carefully, he stands a good chance of uncovering the HIP unit, which not only defeats the strategic purpose of the HIP unit, but uncovers that unit so early in the progress of a scenario that it will essentially forfeit its ability to divert any of the attacker's resources. These are serious consequences of failure. On the other hand, forward placement has an almost unique ability to virtually guarantee scenario victory if the attacker is care-





## Strategic HIP Example

**Scenario:** A115 "Blockbusters"

**Map:** Nhpum Ga

**Victory Conditions:** "The Americans win at game end if all hexes within the American setup area and all hexes on/adjacent to Hex Grain A7-G10 contain no unbroken Japanese MMC."

**Japanese Setup:** On/between hexrows A and D within three hexes of Hex Grain A7-C8.

**American Setup:** On/between hexrows H and J.

Scenario A115 has unusual victory conditions; the Americans must not only clear the Japanese from a road area, but must also protect their own setup area. This last condition is easily unnoticed or forgotten. The Japanese player can take advantage of it blatantly, by sending a force into the American setup area, forcing the Americans to divert some of their own forces to clear the area. Or the Japanese player can use his inherent HIP abilities for a more subtle stratagem—placing a HIP unit (with a Japanese leader) somewhere in the upper-left corner of his setup area. While the main body of Japanese forces conducts a fighting withdrawal to the lower-right, ideally drawing the Americans with them, the HIP force sits tight until the end of the scenario—at which points it unHIPS and races to the American setup area on the other side of the gully. If all has gone according to plan (don't show your opponent this article!), the Americans will be out of place and unable to effectively respond. The Japanese win. One risk for the Japanese player is that the Americans may blunder into the HIP unit earlier in the scenario.

less. Once the battle has swept well beyond that area of the map, it may be difficult or impossible for an attacker to return to that location before the scenario ends. In some situations, the attacker may actually "lose" the scenario on the very first turn without ever having realized it. The defender can simply play out the scenario and hope the attacker does not have a brainstorm. Still, forward placement is usually not the best option against experienced players.

Rear placement, on the other hand, is more viable. In such circumstances, the defender HIPs a unit in or near one of the most remote or rearward victory locations. What the defender is essentially counting on is one or more of three things: 1) during the course of the scenario, the attacker will have forgotten about checking for HIP units; 2) by the end of the scenario, the attacker will have been so depleted that he may be faced with two or more possible locations for HIP units but won't have the resources (in troops or time) to

check all of them; or 3) by the end of the scenario, the attacker will have been so depleted that, although he may be able to uncover the HIP unit, he will not be able to defeat it. Note that with a rearward placement, the defender's HIP unit is encountering the enemy at its weakest, rather than at its strongest.

### Tactical HIP

Although HIP units can be used strategically to win a scenario, as outlined above, players will use HIP units far more often to achieve tactical goals. The purpose of tactical HIP is almost always to cause casualties (men and/or vehicles). In this way, the HIP unit indirectly aids victory by degrading the opponent's ability to accomplish his objectives. A spectacularly successful HIP ambush can sometimes even "close the door" on a scenario all by itself. Imagine a stack of three squads blundering onto a HIP Japanese unit in the advance phase. The Japanese unit achieves ambush, wipes out the three squads,

and then in the ensuing prep phase causes an adjacent stack of three squads to break. This is an extreme example, but it illustrates the swing in fortunes that even a single HIP unit can initiate.

By its very nature, tactical HIP almost always involves an "ambush-like" aspect to it. However, there are a variety of ways that HIP units can be placed to cause enemy casualties. Most fall into one of four broad categories. I will call them 1) the Sparkly Lure; 2) the Little Friend; 3) the Kamikaze; and 4) the Poison Pill.

### The Sparkly Lure

The Sparkly Lure involves deception, the use of HIP units to make a strong position look weak. As the defender, you naturally will want the attacker to go up against a well-guarded portion of your defense, not a poorly guarded one. However, to the extent that he can see your units, an attacker can determine what your best and worst guarded areas are,



and plan accordingly. Sparkly Lures make areas look weaker than they actually are, so that the attacker will be lured to attack that spot—which is actually well-defended.

With Sparkly Lure achieving an “ambush” style attack with good fire modifiers is nice, but essentially gravy. The real goal is achieved simply by having the attacker attack in force there rather than at some other point in your line. Sparkly Lure can often be the exception to the conventional wisdom that one should not HIP “kill stacks” (deadly combinations of units, weapons, and leaders). The reason for this is that the conventional wisdom is based on the notion that if one quickly unHIPS, then one has lost all of the *potential* threat posed by having HIP units in the first place. However, with the Sparkly Lure, the main goal is to make a strong position look weak, and certainly a “missing” kill stack will make a position look weaker than it actually is.

### The Little Friend

Little Friends are HIP units that contribute to the defense of a position key to your overall aims. The goal of a Little Friend is dual: to cause “ambush” casualties (“Say hello to my little friend!”), then subsequently to use the unit to help defend the position. Little Friends are most useful in city fighting. For example, a defender might leave a “corner” of a building seemingly approachable to the attacker (no known defending units have LOS to hexes adjacent to the corner hex), but actually guarded by a HIP unit. If an attacking unit or stack steps out into the street on its way into the building, the HIP unit can reveal itself with a -2 DRM point-blank attack on the moving unit still in the street. Subsequently, our Little Friend functions normally in defense of the building.

The Little Friend can similarly be used to target enemy armor. This can be especially useful guarding against an AFV entering the hex of your kill stack in order to prevent it from firing out. A HIP Little Friend might be able to destroy the AFV using Street Fighting or a LATW.

Kill stacks can be used as Little Friends, but it is often not a good idea. First, since the defensive position is important, the kill stack would likely be used to better effect in directly defending it. Second, a Little Friend will often not be in an ideal spot for future good shots—its position is unlikely to be both a commanding position and an ambush suitable position at the same time.

### The Kamikaze

The Kamikaze is the “pure ambush” HIP, situating a HIP unit in a location purely and solely for the purpose of causing enemy casualties. The location may have nothing to do with the scenario victory condition or overall goals—it may be an out of the way brush hex. The subsequent survival of the HIP unit is not important (if it survives, all the better, but it is “expendable”). What is key is simply getting

## Kamikaze Placement Example

### Board: 41

Scenarios where the attacker must move considerable distances often offer the best opportunities for Kamikaze HIP. Imagine a scenario where the attacker must move through this section of Board 41 en route to some further objective. The terrain itself is very constrictive, forcing the attacker to use roads if he wishes to move at all quickly. Depending on which direction the attacker is likely to come from, the stone buildings in Y5, X6, W5, and V6 all offer excellent Kamikaze placement opportunities, because they each cover road intersections and are likely to have an enemy unit (or better yet, stack) move adjacent. Note that HIP units in W5 or V6 may have to declare Wall Advantage when they reveal themselves, or else forfeit that protection to the moving attacker.

a choice shot at a juicy target. If it fails to cause casualties in that first attack, the Kamikaze has probably failed altogether.

Kamikaze positions are often isolated and don't necessarily contribute to other aspects of the all around defense. Many players HIP AT Guns in Kamikaze positions, reasoning that the subsequent loss of the Gun (or subsequent irrelevance of its position to the scenario) will be more than compensated for by the successful destruction of one or more enemy AFVs. However, whenever possible, even Kamikaze placements should be integrated into an overall defense scheme. Kill stacks should never be placed in Kamikaze positions, because the defender will need to use that firepower many times, instead of just once or twice. A single squad can be an effective Kamikaze all by itself, generating a firepower attack that will range from 6 (-2) to 16 (-2) all by itself, depending on the squad type.

A variation on the standard Kamikaze is the ambush Kamikaze. This is typically used by Japanese players in PTO scenarios, and is often enhanced by the ability of stealthy units (not manning a Gun) in jungle/kunai/bamboo to remain HIP even when an enemy unit enters their hex (G.4). The goal of the ambush Kamikaze is to use a throwaway HIP Japanese unit (such as a first line half-squad) to destroy enemy units in close combat. Typically, a Japanese player will place such a unit HIP in a location that the attacker is likely to end his advance phase in during his first or second turn (after that, it becomes too difficult to predict where an attacker may end a turn). During the close combat phase, the Japanese defender unHIPS and engages in close combat with a significant ambush differential (e.g.; Defender -2 concealment, -1 Stealthy; Attacker +1 advancing into jungle, perhaps +1 CX). Even a Japanese half squad engaging an American infantry squad at 1-4 odds has a good chance of eliminating it if it achieves ambush (58% of casualty reduction or better); in fact, even if it ambushed *three* CX'ed American squads, it could still attack them all and cause casualties 28% of the time.

### The Poison Pill

Very different from the above three uses of HIP is the Poison Pill technique, which involves HIPping a unit in a location that will be bypassed by the flow of combat. At some later point in the scenario, the Poison Pill unit

will unHIP so that it can wreak havoc in the enemy's rear: cutting off rout paths, advancing into close combat against adjacent broken enemy units, DM'ing enemy units, pouncing on lone leaders, and so forth. Japanese units probably employ the Poison Pill more than any other nationality, because there are numerous PTO scenarios for which this technique is suited and because Japanese defenders always get some HIP. Even a lone Japanese half squad behind enemy lines can cause a great deal of damage and consternation.

Two main dangers threaten the success of the Poison Pill. First, such units are always vulnerable to being accidentally stumbled upon. The defender must be able to find a location for them that is unlikely to be entered by the enemy, but is still close enough to the action that it can easily do harm. Stealthy units in jungle/kunai/bamboo are a little more immune to this particular problem. The second danger is that if the attacker keeps his rear area “tidy,” the HIP unit may be able to do only limited damage.

### HIP Pockets

Just as important as deciding *how* to use HIP units is the question of *which* units to HIP. Obviously, scenario limits will play a role in this decision (a player who is allowed two HIP squads, for example, has more options than a player allowed only one), but the defender still has many options.

### To Half Squad or Not to Half Squad?

One of the first issues to decide is whether to HIP by squads or half squads. Most scenarios allow HIP by “squad/equivalents” and, even in those that don't, a defender with deployment capability can still HIP by half squad (some scenarios may specify one HIP unit or one HIP MMC).

HIPing by half squad gives the defender more flexibility in deployment, at a sacrifice in firepower. The half squad option is very useful if the defender wishes to use strategic HIP, because it means that two different locations can be defended (or threatened) by a HIP unit. It is less useful in tactical placements because half-squads are so much weaker. A one-FP HS does not pose much of an ambush threat. The two exceptions are a Japanese half



squad employing the ambush Kamikaze technique or a half squad armed with an LATW.

One variation is to HIP two half squads in the same location. This might be done by the Japanese player, but needn't be limited to that nationality. This tactic provides ambush Kamikaze HIP units with more options. For example, perhaps a concealed enemy unit moves adjacent to the HIP stack. In his own turn, the defender would like to engage in close combat against that concealed unit, so he unHIPS one half squad and uses it to strip concealment from the enemy unit (ideally moving into a different hex first, so that the enemy unit won't reveal the remaining HIP unit with a fire attack into the hex the first unit was "bumped" back into). Then in the advance phase, the remaining HIP unit advances concealed into the now-revealed enemy's location.

### *The Invisible Man*

The above trick can also be done with a HIP MMC/SMC combination, which leads naturally to the next question: when should a leader be HIP? In many cases, players should be cautious about HIPping leaders, because that leader will be unable to perform any other functions (such as directing fire or rallying broken units) for as long as it remains HIP. However, in some situations a leader can be beneficial. For ambush Kamikazes, a leader (if it has a beneficial modifier) may help with ambush. In strategic HIP options, a leader stacked with a HIP unit can increase its mobility considerably, allowing it a greater range in terms of threatening enemy control of victory locations (a perfect use of a 6+1 leader). And in those situations where a player does find it advantageous to HIP a kill stack, a good leader can make it more powerful.

For the Japanese, one other SMC HIP possibility is the Tank-Hunter Hero (THH). In 1944-45, the Japanese player may set up some or all of his available THH (in 1945 he gets one THH for every two squads). The disadvantage to a HIP THH is that if vehicles don't come his way, he won't be able to go after them. However, the advantages are numerous. First, the Japanese player need never roll for these THH; they are automatically available. Second, no Japanese unit need lose concealment in order to activate one. Third, because they are HIP, they can be placed in spots threatening to tanks but untenable as defensive positions for infantry (such as swamp, kunai, or palm tree hexes). But the advantages of HIP THH extend beyond their threat to enemy armor—and in fact, they may be placed even in scenarios where there is no enemy armor.

What are these advantages? Imagine a 1945 scenario with 12 Japanese squads. This means up to six HIP THH, in addition to the normal Japanese HIP allowances. There are two main non-anti-tank uses for HIP THH. The first is as miniature ambush Kamikazes. Any THH revealed by movement is immediately eliminated. However, if an enemy unit advances into a THH's hex (or, in jungle/kunai/bamboo

terrain, if it ends its movement in such a hex, since the THH can remain HIP in such circumstances), close combat will ensue. The THH is concealed and stealthy, and the attacker may well be CX or have a +1 ambush drm for advancing into a jungle/kunai hex. The THH has a good chance to achieve ambush and obtain a 1-4 or 1-6 (-2) HtH CC attack against the enemy unit. That is a nice "free" attack. Unfortunately, THH are considered unarmed for most purposes (G1.4231) and so cannot deny Control of a Location, hex, or building.

### *Concealed Carry*

Support weapons can usually also be HIP along with a unit. This is not advised for strategic HIP—it essentially means that the SW will not play a role during the entire scenario. However, SW come in handy in many tactical HIP situations. MGs are often useful companions for Sparkly Lures and Little Friends—there is nothing like a squad with a MG to shore up a defensive position. LATW such as a BAZ or PSK are perfect weapons for kamikaze half-squads, because they can be used to form anti-armor teams. In those rela-

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*“The biggest fear most players have about Gun placement is placing one's Gun in a location that turns out to have no bearing on the game.”*

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tively rare scenarios where the defender has access to FTs or DCs, both SW can be profitably HIP. The -1 fire modifier against units carrying FTs is not too important when the unit is invisible. Similarly, there are few things so scary as a HIP unit with a DC revealing itself next to one of your stacks. If the unit is on the second level of a building, it may simply drop the DC on your head; otherwise, it can place the DC using assault movement.

### *Heavy Metal*

Guns are among the most commonly HIP units in ASL, because any emplaced Gun can start the game HIP and if in concealment terrain can remain HIP even in enemy LOS. The biggest question with HIP Guns is where to place them. There are both "offensive" and "defensive" considerations for Gun placement.

Offensive considerations focus on a Gun's ability to destroy enemy targets. First and foremost in importance is a wide field of

view. To destroy a target, a Gun must be able to see it. For these reasons, locations that allow good observation possibilities assume a greater importance. So too does height advantage that would allow a Gun crew to see over intervening obstacles. A player must always keep in mind, however, that anything his units can see can see them back, once they are revealed.

One alternative to a wide field of view is a narrower field of view that is likely to be crossed by the enemy. A Gun, for example, might be situated to cover a key road intersection. Of course, experienced players are usually aware of such possibilities, and will often avoid roads and intersections for this very reason. Consequently, it is important for the defender to determine the most likely alternatives to road movement—and to make sure those alternatives are also covered.

Another consideration is forward vs. rear placement. Some players prefer to place their Guns relatively forward, reasoning that the sooner their Guns can have an effect in the scenario, the greater that effect will be (because those casualties will be gone for the remainder of the scenario, in contrast to casualties that occur only after those units have had five or six turns in which to act). The chief disadvantage to such a placement is that those Guns are unlikely to be supported by (or, in turn, to support) the rest of the defense. They are more or less out on their own. In addition, Guns placed forward run a greater risk of being "stumbled upon" by enemy units. Forward placement is strongest in relatively open terrain, when a Gun is likely to be able to get several shots on targets before they go to ground or before the Gun is eliminated.

Other players prefer more rearward Gun placements. Such placements are usually more integrated with the overall defense, and may be harder to eliminate because of supporting units. However, there are disadvantages, too, to this sort of placement. It generally means that the Guns will not come into play until later in the scenario, which reduces their potential usefulness (and this correspondingly puts a greater burden on one's other units). Such placements also generally have narrower fields of view (unless they are placed on rearward hills) and run the risk of encountering fewer targets.

The biggest fear most players have about Gun placement is placing one's Gun in a location that turns out to have no bearing on the game. Although no one can eliminate this possibility entirely, it can be reduced. When this happens to inexperienced players, it usually happens because they try to figure out what the other player *might* do (i.e., where he might move his armor, for instance), even though they have not yet developed an instinctive feel for it. Inexperienced players might find it advisable to concentrate instead on what the other player *must* do, and place their Guns accordingly. This will generally result in a conservative placement (usually rearward and close to key defensive positions), but at least it will minimize the risk that the Gun is totally out of position.



Players must also take the terrain in the placement hex into consideration. Guns will often be HIP in concealment locations (in order to be able to retain HIP once an enemy unit comes into LOS), but different types of concealment terrain may have very different effects on a Gun. Typically, players must weigh firing penalties, defensive benefits, and firing flexibility. The firing penalties apply to woods (jungle/bamboo)/building/rubble hexes, and include the doubling of the Case A (firing outside CA) modifier and the consequent locking of its CA for the rest of the phase (C5.1). These are very serious penalties and mean that Guns placed in such terrain are very inflexible. In contrast, a Gun placed in, say, an orchard hex, is much more flexible in its firing opportunities, able to fire in any direction without doubled CA penalties. Sometimes a Location that is not Concealment Terrain may be so key (providing a great field of fire or protecting a critical hex) that the Defender does not mind putting his Gun onboard (concealed) as soon as a Good Order enemy unit within 16 hexes has LOS.

There are two types of defensive benefits. The first is TEM: Pillbox, stone building, and rubble TEM are better than the +2 TEM granted for emplacement. This may be attractive to some players. The second is accessibility and this is generally much more important. Accessibility is the ability of enemy units to reach your Gun location. For example, orchard/palm tree hexes are the most accessible concealment hexes of all, costing only one MP/MF to enter. In contrast, buildings and woods/jungle are much less accessible to enemy units (especially vehicles). Rubble hexes are less accessible still, while bamboo hexes may reign supreme in this regard, although there is a catch. Guns cannot be emplaced in bamboo, although they may still be HIP, which means that a Gun will only have the +1 TEM of bamboo (or -1 vs. HE) rather than the +2 TEM for emplacement).

Accessibility is important because Guns are not very easy to take out, especially for vehicles. For example, a stationary buttoned-up German tank firing at a concealed, emplaced AT Gun at an eight hex range often needs a '2' to hit. Consequently, to have an effect on a

Gun, enemy units often need to get close (for vehicles, to overrun or to engage in a PB MG attack; for infantry, to get a good firepower attack or engage in close combat). Accessibility is also important because the more accessible a hex is, the easier it is for the enemy to move a unit into that hex and thus reveal your hidden unit there. A Gun in an orchard hex can easily be overrun by an enemy vehicle, while infantry can enter the hex with no effort; brush/grain/kunai are not much better. Woods and buildings may deter vehicles, but are still easily enterable by infantry. Rubble is difficult for both vehicles and infantry to enter easily.

Players should also keep in mind that accessibility need not be determined by the terrain in a hex, but can be determined by the terrain around a hex. If cliffs or deep streams or other natural (or manmade) obstacles prevent or hinder movement in/adjacent to a hex, then the position is correspondingly stronger. A HIP Gun situated in a grain hex behind a deep stream has a good defensive position. It is unlikely to involuntarily lose HIP, and once it reveals itself, it will be able to fire flexibly.

One last tactic for HIP Guns is to use them in an offshoot of the Poison Pill tactic. Typically, this is done when the Guns in question are not able to penetrate the frontal armor of enemy AFVs. The solution is to place the Guns (often with a rearward-pointing CA) in positions that the enemy player is likely to move past. The Guns will then fire at the rear of the enemy vehicle. Obviously, this is a very risky tactic, as the Guns will be out of position for virtually any other purpose and they will also run a significant risk of being inadvertently exposed by enemy units moving through the battlefield. On the other hand, there are no ideal options when enemy armor is that strong.

### *HIPpie the Love Bug*

Vehicles cannot ordinarily be HIP, but a few scenarios do allow this. Most considerations for HIP Guns apply equally to HIP vehicles. However, because vehicles are mobile, they have more flexibility in their deployment than Guns (for example, a HIP vehicle can always lose HIP and move to the other side of the battlefield if it turns out that no enemy units are likely to come its way). Another way they differ from Guns is that they can't be emplaced. Consequently, to the defensive-minded player, terrain that provides TEM (such as buildings and woods) may appear more valuable for vehicles. In most circumstances (and when allowable by terrain), AFV crews may as well begin CE, in order to maximize their firing ability when they reveal themselves.

### Sneaky HIP Tricks

#### *HIP Camouflage*

HIP camouflage is the unusual technique of hiding something that is already hidden. While this may seem by some to be gilding

the lily, HIP camouflage is often important. The reason for this is that experienced players may be able to intuit likely places where enemy units may be HIP and can direct fire at those locations or send a half-squad to scout them out. HIP camouflage consists of a range of options designed to suggest that the hex in question is *not* the location of a HIP unit.

If the idea of hiding something already hidden isn't contradictory enough, the solution is even more so. You camouflage something that is hidden by putting something visible there. Even experienced players looking for likely HIP locations instinctively look at *vacant* hexes, not occupied ones. Of course, a defender using HIP camouflage does run the risk of being too clever for his own good. Your opponent may fire on that unit and get a result—which will also cause your HIP unit to be revealed.

One solution is to *start* a visible unit in the same hex as a HIP unit, then quickly move it away from that hex, in the hopes that your opponent will consciously or subconsciously dismiss that initial location as a possible HIP hex. Your opponent may not be fooled, however, or may even forget that there was once a unit there

A variation to having a real stack start in the HIP unit's hex is to have a dummy stack start there and move away. For the extremely devious, another possibility is to have the dummy stack actually remain in the same hex as the HIP unit, but make it known to the opponent that it is a dummy stack (even possibly "inadvertently" revealing it). Your opponent will be unlikely to waste his fire on a dummy stack, and yet will not be inclined to suspect that a HIP unit might also be there.

Another sneaky tactic is to HIP two units in the same hex (such as two half squads), then lose HIP for *one* of them and move it away. Your opponent is unlikely to think that there is *another* HIP unit in the *same* hex. The drawback to this tactic is the amount of resources it costs (specifically, giving away a HIP unit). This means that there will be many times where the trick is not worth the price. At other times, however, it may be just what the doctor ordered (it may be best suited to campaign games, where HIP capability may be purchased).

#### *We Don't Need No Stinking Badges*

In certain situations, it may pay to forego HIP altogether. Once more the goal is to mislead the enemy. If your opponent is carefully counting units and counters, he will probably be surprised when *all* your OB (minus a few "?" counters) is onboard. He may be convinced that your concealed squad *must* be a Dummy stack because all your other units are known and he "knows" you have a HIP squad.

#### Hunting HIPpos

If you have HIP units, all well and good, but what if you are *facing* an enemy with HIP

*Continued on page 31*

### TIPS FROM THE TRENCHES

For HIP Guns in solitaire play, one suggestion we have heard is to come up with three or four possible HIP positions for each Gun. When the "right" time comes for a given Location to attack, randomly determine if there is a Gun there or not. Surprise!





*Continued from page 18*

units? How do you minimize your risks? Obviously, understanding how an opponent is likely to use HIP in a particular scenario will help you determine likely places for HIP units. But there are also ways to actively seek out and reveal HIP units.

At this point it may be worthwhile to repeat a comment made at the beginning of this article: experienced players are more likely to take HIP in stride. The reason this is so is because they tend to be alert to potential HIP locations, realistic about potential HIP threats, and energetic in uncovering HIP locations before those HIP units can do harm.

How does one recognize potential HIP locations? One of the best ways is simply to apply the principles discussed above about placing HIP units. For example, a player who is concerned about a possible HIP AT Gun should pay close attention to orchard, grain and brush hexes with wide fields of fire, or that are adjacent to key locations or that can dominate a section of road. Those are also good spots for a HIP half squad with an LATW. Concealment terrain on the top of a hill could also hide an AT Gun. Does an enemy's flank look ridiculously weak? Perhaps it is a trap, and there is a HIP unit there.

Still, although players should try to recognize possible HIP locations, they cannot let their play be dominated by such concerns. If a player adopts an overcautious approach because his opponent has a HIP capability, then his opponent has already gained a significant advantage without ever having revealed or used his HIP unit.

One of the best ways for players to be cognizant of danger, yet avoid inappropriate passivity, is to use scout units such as half squads to test the waters. For experienced players, half squads are often invaluable and have many uses; if a scenario features HIP, one of the goals of some of those half squads should be to try to flush out the HIP units by running into likely locations (A12.15). Obviously, if a HIP unit is there, it will be revealed, but an opponent may also reveal the presence of a nearby HIP unit by reacting to the half squad. For example, if enemy units fire at a probing half squad (especially if a second unit takes a shot after a first unit's fire is ineffective), then the enemy may be trying to prevent that half squad from completing its movement—which would reveal a HIP unit. In so firing, the enemy has given away the HIP unit's position just as if the HIP unit itself had fired. Stealthy units in jungle/kunai/bamboo won't necessarily be revealed by the enemy entering their Location, and bypass movement into a woods or building hex won't reveal HIP units there.

One other way to reveal HIP units is through Area Fire; a result will cause any units in that hex to lose both HIP and "?". Strangely, revelation through fire is often mishandled by both inexperienced and veteran players. Inexperienced players often fire wildly at empty hexes, even when they have better targets available, whereas veteran players will often neglect to use Area Fire at all, even when they have no better use for their fire. A

good rule of thumb is the following: assuming a low SAN, advancing fire can be profitably used against possible HIP locations assuming they have no visible targets to fire at. This is particularly true for units with assault fire. A U.S. first line squad firing in the AFPh at a non-adjacent woods hex using Area Fire can still generate a 2 (+1) attack, which has a not unreasonable chance of revealing a HIP unit within.

Other techniques, such as Mopping Up and Searching can also reveal HIP units. Probably the more useful of the two is Searching, an underrated and underused technique. The costs are few, while the results can be valuable. One of the advantages of Searching is that a unit can move then search (as opposed to Mopping Up, which will occupy the unit for an entire turn). The U.S. player has another way to reveal HIP units during the movement phase—WP smoke grenades. Because successful placement will cause an MC against any units in the placement hex, it will reveal any HIP units (as well as hinder their fire and force them to take a MC). The disadvantages are the relatively high movement costs (2MP as opposed to 1MP for searching, and the relatively low chances of success).

In addition to revealing HIP units, players can also minimize dangerous consequences to themselves. Some measures they can take involve avoiding elementary mistakes such as

moving in large stacks. Although many ASLers consider this stricture to be Rule Number One, it is frequently broken, especially by experienced players. Why? Because it conflicts with Rule Number Two, which is to "move, not fire." ASL players are taught to emphasize maneuver rather than fire—but rapid maneuver is not possible without using leaders to enhance movement, and this can only be done by moving in stacks. However, moving in stacks is especially dangerous in scenarios featuring HIP units (ASL Scenario 1, "Fighting Withdrawal," can provide a good object lesson in this regard; the Finns must move aggressively, but in so doing, they potentially make themselves vulnerable to HIP Soviet units).

Players should also avoid "obvious" approaches. If a particular location looks extremely attractive as a jumping off point for a subsequent assault on an enemy position, then the location should be "scouted" out before more critical units approach it. For your AFVs, consider using unlikely approaches, rather than those most likely to be covered by a HIP AT Gun.

Certain conditions should also be avoided. In the jungle it is often dangerous to be CX (because of its penalties for ambush/CC), but it is especially dangerous to have a CX unit or stack of units end a turn where it may be vul-

*Continued on page 5*

## Flushing HIP Units Example

**Scenario:** A25 "Cold Crocodiles"

**Maps:** 24, 23 (the valley on map 24 does not exist)

**HIP Units:** The German player may HIP one squad (and all SMC/SW stacked with it) and two 88LL AT Guns.

**British Reinforcements:** Four squads (plus one leader and one LMG) and two Crocodiles.

**Entry Area:** "West" edge of Board 24.

In "Cold Crocodiles," the British get as reinforcements two Crocodile tanks, whose powerful flamethrowers can be key to winning the scenario. Consequently, getting those units safely on board and in action is important to the British player—and destroying them is equally vital to the German player.

**German perspective:** The British tanks can enter anywhere on the west edge, but the German player thinks the British would like to enter on the northern map section, as it provides more outflanking possibilities, so he wants to HIP one of his 88LL AT Guns in this area. Two possibilities are F7 and I7, both of which have good fields of fire. The German player HIPs his Gun in I7, which has less onerous CA change penalties. Was this a good decision?

**British Perspective:** The British do want to enter in the northwest, but they also desperately want to avoid losing any Crocodiles. Consequently, they are extremely cautious about a HIP AT Gun. Both F7 and I7 are immediately obvious possibilities. The British player sets up offboard with his tanks near K10 and with one squad deployed. Before he moves any tanks, he can scout both F7 and I7 by trying to move half squads into them. There is nothing the German player can do about this. He might have started a unit nearby, say J6 or even J8, to try to kill any pesky British half squads, but even this would have telegraphed the nearby presence of a HIP Gun. If the British infantry does, in fact, uncover the AT Gun, the tanks can use offboard movement to move south to the vicinity of O10 and enter there, out of the LOS of the AT Gun. The German HIP was just too obvious.





# Tommy Atkins at War Revisited

## A Deeper Look at the British in ASL

### Part II

By Charles Markuss

[This is the second half of this detailed article that began in *Journal 6*.]

#### Ordnance

British ordnance was the same mixture of the Good, the Bad and the Ugly found in all armies, but pre-war development of artillery had suffered from financial stringency, large stocks of 1918-vintage equipment, and the excessive influence of those officers responsible for colonial defence. The latter, for example, delayed the introduction of HE to replace the traditional and inferior shrapnel despite a consensus of technical opinion against them. From the early 1920s there was a growing emphasis on anti-tank artillery and even new field or medium-calibre guns had to be capable of 'self-protection' from hostile armour, at the expense of inter-war research in heavy artillery, since it was deemed to be surplus to requirements thanks to (empty) promises of air support. The few designs of any new ordnance type that were sanctioned had very long development times due to the financial climate, so bulk production before 1936 was impossible. The 25-pdr field gun, for instance, was first mooted in 1925 but no detailed specification emerged until 1936 and production only began in February 1940.

When war seemed inevitable this process became more frantic, to the extent that the 5.5" gun/howitzer (based on a January 1939 General Staff requirement) was ready for trials the same year but the first carriages were too light to take the weapon and production of a stronger, welded, version was not cleared until April 1941. Haste therefore brought unexpected delays and, due to the high safety factors insisted on by Parliament, British ordnance tended to be cumbersome by foreign standards, especially its weight. Some safety tolerances were, however, relaxed during the war to speed production, conserve scarce materials and boost ballistic performance, but balanced against this was the need to use inferior metals in British shells for strategic reasons, necessitating thicker shell walls at the expense of the explosive filling; the resultant weight increase also partly explains the poor range of British mortars. Moreover, the use of lower grade steel for shells and a TNT shortage in 1941-1942 made it necessary to use the cheaper and inferior amatol (TNT and ammonium nitrate) in shells, with a reduced *blast* effect, though amatol gave better *fragmentation* in such low-grade steel projectiles. This compromised the effectiveness of the 25-pdr in partic-

ular. The British agonised throughout the war over using either smokeless or flash-less propellant for their anti-tank and field guns; although the latter increased barrel life and reduced muzzle blast and hence dust, flash-less propellant also produced more smoke to hinder observation. From December 1941 to October 1942 it went out of favour for anti-tank guns and when re-instated the priority for use in 25-pdr ammunition was lowered. As a further example of the improvised nature of the BEF, at least one artillery battery in France in 1940 had only training ammunition.

The 2-pdr anti-tank gun and its tank-mounted equivalent are often singled out for odium because they failed to penetrate German face-hardened armour at certain ranges (between 300 and 1200 yards, and sometimes over 1800 yards) but this was due to the uncapped AP ammunition rather than due to any inherent weakness in the gun itself. By the time that APCBC ammunition (which did not shatter on impact like AP had) was available, February 1943 for the 2-pdr (April 1943 for the 6-pdr, and August 1943 for the 17-pdr), German armour thickness had increased to the extent that the 2-pdr was fit only for recce vehicles or for use against Japan. The technique for making small-calibre APCBC was not available and demanded more research and the delay in producing this more effective ammunition again exemplifies the pre-war British contempt for technologists and the preference for quantity over quality. Due to production problems even uncapped 2-pdr AP shot was scarce during the 1940 French campaign. In fairness to the British, the USA had similar problems until 75mm M61 APCBC became available, because the older M72 AP 75mm shot supplied for the M3 Lee/Grant in the desert also shattered against German armour, and was rarely effective above 500 yards. Even worse, no AFV (Technical) Branch to examine captured vehicles was set up by GHQ Middle East until November 1941, so that when the British captured a German PzKfw IV as early as April 1941, nobody bothered to inspect it until March 1942—when its face-hardened armour was finally discovered. The US 37mm had, theoretically, less penetration than the 2-pdr but at least had an APC projectile that coped better with the impact of a hit, hence the latter received a higher 'TK' number in ASL. However, some British Lee/Grant crews apparently did not use the 37mm at all, considering it a waste of money, and relied entirely on the 75mm gun.

There is no official explanation for the absence of 2-pdr HE for so long, but the reasons are not elusive. With so much pre-war doctrine in the hands of military theorists with little practical experience of tactical or technical problems, it appears that MGs alone were expected to suffice in dealing with enemy anti-tank guns and other 'soft' targets—Liddell-Hart wrote about such guns being "smothered" by one-man tankettes armed with MGs. This unfounded optimism and the obsession with countering the threat of the tank conspired to give the 2-pdr only AP shot (to defeat as much armour as possible) even though an HE round had been developed as early as 1935; it was also more than mere coincidence that this emphasis on anti-tank capability came at the very time that the guns themselves, together with the responsibility for anti-tank defence in the British army, passed from the infantry to the artillery between 1938 and 1940. Even when HE was finally issued there were still problems because the small explosive filling gave such poor lethality, and this probably also explains why the British did not issue 37mm HE in the desert campaign. The following table, showing the explosive content of various HE ammunition expressed in whole, or fractions of, pounds illustrates the point:

Nationality	Caliber	Weight
US	37mm	.085
British	2-pdr	.15
British	6-pdr	.44
US	75mm	1.47
British	17-pdr	1.375†
US	76mm	.86
British	87.6mm 25-pdr	1.125
German	88mm	2.19
US	90mm	2.43-2.67††
US	105mm	4.8
		† later 1.882 'high capacity'
		†† later 2.04

Later in the war, light armour mounting the by then puny 2-pdr MA presented crews with the difficult choice of either retaining the 'Littlejohn Adapter'—rashly described by its manufacturers as "Britain's real answer to the Tiger [tank]"(!)—for firing APCNR squeeze-shot (which has been omitted from ASL in the interests of simplicity), or removing the Adapter so that HE could be fired, since the latter could not be squeezed down in diameter like the AP shot. As it was hardly sensible to unbutton and remove the Adapter each time HE was required, some recce troops retained the Adapter on one armoured car and left it off the other, while others simply fired APCNR without the Adapter despite the inferior AP performance of this non-squeezed, larger diameter, shot.

To complete the picture of the 2-pdr, the anti-tank gun was harder to conceal than its



nearest equivalent—the 37mm PaK 35/36—although it had 360° traverse, and it was complicated and difficult to mass-produce (taking 2,682 man-hours to produce compared to the 6-pdr's 1293 and 17-pdr's 2726). Its weight also impaired man-handling, but then anti-tank guns survive by concealment, not mobility, and in the hands of resolute crews its small size enabled it to destroy enemy AFVs with daring close-range flank or rear shots (provided it could be deployed in suitable terrain). This was how the 2-pdr was supposed to have been used, and the ANZACS were especially good at these tactics—one account in North Africa describing how a fearless, concealed, soldier would jam a short piece of railway line into the sprocket of a German tank and, as the ham-strung *Panzer* slued round, the 2-pdr would fire at the vulnerable side armour. The 2-pdr saw out the Pacific battles as an anti-tank gun because it could deal with any Japanese AFV frontally, and was easier to man-handle in difficult terrain than its larger successor, though 'officially' it should have been phased-out to ease the logistical burden. Those formations unable to hang onto them used the 3.7-in. howitzer with HEAT ammunition in hilly terrain where the newer but clumsier and less popular 6-pdr could not go.

The story of the 6-pdr is one of delay caused by the urgent need to replace the 509 2-pdrs lost in France, rather than disrupt existing production and introduce a new gun at a critical time. Moreover the first versions had barrels 16" shorter than intended because British lathes were old and small; this situation was only rectified when newer lathes from the USA were installed—another example of British technical weakness. It eventually arrived in the desert not a moment too soon to counter then new German AFVs but, again, HE ammunition only came later and its lethality was poor compared to the 75mm HE round as well as being scarcer. There were also problems with HE prematures recorded in British documents dated as late as April 1944—due mainly to the incompatibility of certain HE fuses with 6-pdr tubes fitted with muzzle-brakes. That said, the 6-pdr proved more useful in destroying Japanese bunkers than its smaller and otherwise more popular 40mm calibre stable-mate, and in the PTO the 6-pdr was fitted with castor-wheels to ease man-handling in rough terrain. Against Japanese bunkers it was found that the gun was effective at 75-300 yards using AP to first enlarge the embrasure, and then 10-50 HE rounds to neutralise the enemy inside.

With APDS ammunition this gun had at least a chance against the frontal armour of some of the later German AFVs at close range, though core separation from the sabot made it less accurate than APCBC, and British reports indicated that it tended to hit a target 2 to 3 feet higher up than predicted. Moreover, the discarded sabot pieces were hazardous to any unprotected personnel within the line of trajectory (see under 17-pdr). This prompted the writer to suggest a special rule in ASL, which would have required all 'human' counters to undergo a MC if they were in close proximity to the LOS of an APDS shot, but this was

rejected in the interests of simplicity. DS munitions (albeit not for AP use) were actually pioneered in France by Monsieur Brandt of mortar fame to increase the range of projectiles, and perfected for anti-tank use by Permitter and Coppock in the UK just after 6-pdr APCR had been produced, rendering the latter (found to be ballistically unstable) redundant. Germany experimented with discarding sabot ammunition too, but mainly for AA use, and her chronic tungsten shortages would have prevented the production of APDS in any case. The USA also received 57mm APDS from the British, and the US 1<sup>st</sup> Army fired 6302 rounds between June and July 1944, and 11,428 by VE Day; it was much rarer in Italy but was issued to US 5<sup>th</sup> Army troops there in December 1944 with just 180 rounds used by the war's end.

The 17-pdr is a success story—almost. Available in good time (for a change) to deal with the later German AFVs, it has come to be regarded by some historians as some sort of wonder-weapon in the British and Commonwealth arsenal. Yet combat experience and various Anglo-US firing trials showed that with 'conventional' ammunition (i.e. APCBC) it "frequently" failed to penetrate the Panther's glacis plate armour even at 300 yards, while the desert veteran and South African cricket celebrity Robert Crisp (author of the engrossing *Brazen Chariots*, in which he recounted his brief and eventful time commanding Stuart tanks) noted that the 17-pdr needed three good hits on a Panther's hull front to ensure penetration as most rounds merely scuffed the surface. A British study of German tanks destroyed up to 31<sup>st</sup> August 1944 in Normandy concluded that only 12.5% of hits by the 17-pdr on the Panther's glacis plate penetrated, compared to 50% of hits on the mantlet or turret front. This was very sobering, given that something between 30% and 70% of all Panthers built from about mid-1944 had poorer-quality, more brittle, armour in the first place, according to *World War Two Ballistics: Armor and Gunnery*, by Lorrin Rexford Bird & Robert D. Livingston (Lorrin incidentally was the creator of ASL's 'TK' system). Small wonder then that in ASL the 76LL with conventional ammunition only gets a 'TK' on the Panther's hull front with a '5' or less, barring a CH, a penetration by the barest of margins.

Nor was the introduction of 17-pdr APDS ammunition the end of the problem as this ammunition constituted a hazard to personnel in the line of fire; the 17-pdr's sabot pieces travelled about 250 yards at an angle of about 6 degrees from the muzzle and were lethal at all but extreme range, whereas the sabot base plate only hit the ground at 600 yards and was lethal well beyond this distance. Not only were many of the early batches ballistically substandard, but accuracy when firing these projectiles fell in trials against static targets from an average of 87% with APCBC to only 53% with APDS, while British tests with Sherman Fireflies showed that 'scatter' with APDS was 70% higher than APCBC, partly because it was difficult to spot the tracer of the APDS when buttoned-up so that fire cor-

rection was hampered, and probably also because the original pattern of muzzle-brake (as on the 6-pdr) did not allow clean separation of the sabot pieces. Other trials indicated that at 400 yards APC gave a 90.5% chance of a hit on a standard target, whereas APDS gave only 56.6%, and at 1500 yards APC gave 25.4% compared to just 7.1% for APDS. The issue of APDS ammunition was usually on a scale of about five to ten rounds per tank, depending upon availability, and was obviously accompanied by orders to conserve it, though reports indicate that it was often 'wasted' on targets that APCBC could just as easily have destroyed. Because of this accuracy problem, the US army considered fitting their much more accurate 76mm APCR rounds into British 17-pdr cases in anticipation of also receiving Sherman Fireflies. According to a British munitions expert and author, Ian Hogg, APDS ammunition itself was unsuitable for the rifling of US guns. As an aside, 76mm APCR was first issued (to troops of 3<sup>rd</sup> US Armoured Division and 746<sup>th</sup> Tank Battalion) on 11<sup>th</sup> September 1944, but apparently tungsten shortages meant that each crew had on average less than two APCR rounds each before March 1945; similarly the first 1000 rounds of 90mm APCR were not received until 1<sup>st</sup> March 1945, so the ASL allocations are over-generous.

To close discussion of the 17-pdr, HE ammunition was, as with the 6-pdr, overlooked for over a year and, as with all high-velocity weapons, its explosive effect was inferior to low-velocity weapons of identical calibre since the shell walls had to be stronger (i.e. thicker) to resist the greater forces imposed at the expense of the explosive filling. There were reports of a "considerable percentage" failing to explode, even in 1945. Other woes included HE prematures from certain patterns of fuses, and spent cartridge case ejection failures caused by the later, lower-velocity, 'high capacity' HE rounds issued in October 1944 producing insufficient recoil to work the extractor properly. The towed anti-tank gun was also a beast of a gun to conceal and man-handle, to the extent that a prototype motorised version, (similar to the post-war Soviet 85mm gun) was made albeit not put into production.

One fact often overlooked by many authors when explaining why the guns of the western Allies were less effective against German armour is that the former initially made comparatively little use of HE bursting charges in AP munitions, probably because any cavity bored out for the explosive weakens the projectile, making it lighter and thus degrading performance slightly, and because the HE fuses often failed to work under the shock and damage of impact. The British had abandoned bursting charges when their 47mm 3-pdr and its APHE were taken out of service before the war. The Germans and Soviets made much more use of HE fillings, which did far more damage after penetration than the otherwise inert solid AP, APC, APCBC, APCR, APCNR, or APDS rounds would. The few western Allied exceptions to this rule were the 75mm M61 'APC' (actually APCBC/HE) rounds



fired by British and US 75mm guns and late batches of M62 'APC' (actually APCBC/HE-T) for the US 76mm gun and 90mm M82 APCBC/HE-T, but even here the first batches of 75mm M61 were delivered inert for want of a fuse. Moreover, when it finally had one the British initially removed the explosive from the 75mm rounds and substituted inert material to (marginally) boost AP performance. As a temporary expedient, when it was found that the initial uncapped M72 AP round for the Grant's 75mm gun had problems piercing German face-hardened armour, the British adopted an idea by the Australian Major Northy to modify captured German APCBC/HE ammunition from the 75mm L/24 (ASL 75\*) tank gun and fire it back at its owners. With the help of US Major Jarrett this was achieved by machining-down the thicker German rotating bands on special slow-turning lathes (to prevent the fuses from arming) and about 15,000 rounds of this '75mm AP-Composite' were thus produced. The combination of the piercing cap, ballistic cap and the HE filling made the round far more effective than contemporary Allied munitions. On the other hand, the solid and inert British shot was more effective against German spaced armour, as used on the PzKfw III gun mantlet and driver's plate, since an HE bursting charge often prevented the penetration of the inner plate.

Other British guns of excellent quality included the celebrated 25-pdr, which made a passable anti-tank gun in the desert for want of anything better. Its special turntable, an ingenious feature, permitted rapid traverse by a single crewman and greatly enhanced its anti-tank capabilities as did the fitting of a modified open (as opposed to dial) sight for use in poor light in January 1942. But the 60-second set up and 3-minute limber-up times and low rate of fire (due to two-piece ammunition) were all inferior to 'pure' anti-tank guns, however creditable for a field gun. The AP allocation was, however, officially low; 8 (later 12) rounds for the towed gun in 1941 and 11 for the Bishop and 18 for the Sexton. This anti-tank capability owes its origins to a decision made in 1938 that all 25-pdrs of the divisional artillery were to be primarily responsible for their own anti-tank defence, and experience in France showed that one field regiment's 18/25-pdrs "was consistently successful" against German tanks "so long as it withheld its fire until the enemy was within 600 yards and conserved its AP shot". This was asking a lot with just 8 rounds per gun, as the gun's curved trajectory rendered it less accurate in the anti-tank role, while the high silhouette usually denied it sufficient cover in the desert to remain undetected long enough for close ranges shots where hits were more likely to be obtained. It also lacked killing power against fortifications when firing indirect compared to 105mm artillery, primarily because its good range as a field gun came at the expense of shell weight.

The 4.5-in. and 5.5-in. gun/howitzers were also excellent weapons when their (common) carriage had been perfected, although their reputation suffered a short set-back when pre-

matures caused many burst barrels (attributed to worn gun-tubes, erosion in the bore and dirty or otherwise defective ammunition) The 5.5-in. gun in Burma was especially prone to prematures when firing the heavier (100 lb) of its two shells. In Burma sometimes the British removed 24" of the 5.5-in. barrel and, with a delayed action capped HE round, used them for direct fire over open sights against Japanese bunkers to devastating effect. Apparently an average of 15(!) shots was needed to destroy a bunker. However, one veteran confessed that he never liked the 5.5-in. gun because crews were "expected to fling it in and out of action as if it were a field gun." Speaking of Japanese bunkers, combat experience showed that both the 25-pdr and 3.7-in. AA (of which more below) were both effective against them in the direct fire role with fused HE at 600 yards, and could be 'softened up' first, to break up the outer shell of logs, with 25-pdr AP.

The 3.7-in. AA gun, first mooted in 1920 but not produced until 1938, was one of the best AA guns of its day and a lost opportunity to field a more powerful British version of the famous and deadly German 88mm Flak 18 or 36, albeit a less mobile one. On rare occasions it was used against Axis armour in France and the desert, and was issued with steel AP shot for self-defence against tanks, though lacking the correct sights and crew arrangement for a true dual-purpose role. Significantly, the official British War Office report on wartime artillery performance tends to mention only small-calibre AA guns used in the anti-tank role, though there is reference to the 3.7-in. gun being used successfully to harass Axis road traffic during the siege of Tobruk, and for counter-battery fire. This led to low-angle range tables being issued in May 1942. According to the official history of the Mediterranean campaign, 60 3.7-in. guns were fitted with sights for the ground role in April 1942, for the Battle of Gazala. The gun's air-burst capability cost Japanese troops dear at the hands of Heavy AA batteries in Burma, when it was re-deployed in the ground support role there, one unit being known as 'The Twelve Mile Snipers'. In the ETO its air-burst capability was also very effective against German mortars and other ground targets. The obsolete 3-in. 20 cwt AA gun of Great War vintage was also a potentially excellent anti-tank gun, but never used in anger. The larger British guns were not particularly good or new, save the Anglo-US 7.2-in. howitzer Mk VI, which arrived only late in the war.

The British were also poorly equipped in SP artillery because development had ceased in the early 1930s in favour of conventional towed weapons, thanks to poorly defined doctrines and conservatism. The 18-pdr SP 'Birch' gun, developed between 1925 and 1928, for example, was a potentially sound basis for later SP weapons but with funds lacking and a gulf emerging between the tank and artillery factions of the British army, the Royal Artillery refused to adopt it after arguments over ownership. Moreover, to artillery men it looked too much like a tank, and "if

such a thing were taken on, Gunners would have to dress themselves in dungarees, cover themselves in grease and develop new smells", as well as give up their beloved horses. The tank faction, convinced that the tank would prevail on the battlefield without any outside help, rejected the very notion of artillery support, and so gave the project no backing. Although the un-armoured 2-pdr *portee* had been successful in Greece, where the terrain was suitable for hit-and-run tactics as at Proasterion Ridge, in the desert both the 2-pdr and 6-pdr *portees*, were found to be horribly vulnerable as crews tended to misuse them as tanks, with predictable results. Eventually firing *en portee* was discouraged, particularly in the case of the more conspicuous 6-pdr version, and when so used as many crewmen as possible would dismount, since the impact of a direct hit would throw the gun backwards and kill or injure everyone in its path.

The high-sided and ponderous Deacon and the crude Bishop were clumsy and inefficient improvisations; the latter was so cramped that the rear doors had to be kept open in hot weather to provide ventilation while firing. The Priest, while welcome as a useful and versatile addition to the British arsenal at Second Alamein, fired non-standard ammunition and suffered from a short barrel life and vulnerable recoil gear, which also wore out rapidly. This led directly to development of the Sexton. While more efficient, with a better firing range, more ammunition and superior internal layout than the Priest, the Sexton was under-gunned for its size and weight, while the Archer got a mixed reception; M10 crews in Italy disliked its thin armour, rear-ward facing gun and limited traverse, describing it as "quite useless" albeit after only initial impressions, though a post-war British report stated that crews liked its low silhouette and few maintenance demands, while the open top and rear-facing gun removed the temptation to misuse it as a tank, an aggressive role for such an egg-shell armed with a sledge-hammer that British anti-tank doctrine discouraged. This was a British *Panzerjäger*—a hit and-run ambush weapon, but given that the British army had to adopt an increasingly offensive role to take the war to the enemy and recapture and liberate lost territory, and then invade Germany, heavily-armoured assault vehicles like the Soviet ISU series or the German *Jagdpanzer* vehicles were sorely missed.

### Artillery organisation and doctrine

The Germans had taught the British much about artillery doctrine in the Great War, and by the end of this conflict British artillery was very skilled at laying-down 'creeping' barrages to support the infantry and in executing counter-battery fire. Unfortunately amid the complacency of victory many of the lessons of the war were then forgotten and had to be re-learned. In 1944 British counter-mortar units, used so successfully in the desert and Italy, were disbanded for 'Overlord' to conserve manpower and only reinstated in August



1944 after experience showed that German mortars had inflicted 70% of all British casualties. But the main flaw in British artillery practice was an organisational blunder imposed in 1938 (by bureaucrats, not soldiers) whereby field artillery regiments were reorganised into two batteries of 12 guns apiece, instead of the traditional four batteries of 6 guns each, in the interests of 'economy' and technical convenience regardless of tactical considerations. The idea came from an Indian army practice called 'linking' whereby the fire of two adjacent batteries could be controlled from one point, temporarily, until more conventional 'survey' (plotting and calculation) was completed. A new system based on permanent 'linking' and scrapping all the survey work promised significant economies, without the traditional but lengthy and involved method of scientific gun control. It was argued that 'survey' methods were too slow for modern warfare and simple, old-fashioned observed fire would give better results than trigonometry. However, because the basic role of these regiments was to support the infantry brigades containing three battalions there were problems dividing two batteries into three without disrupting administration and fire control. This defect of anonymous parenthood was only remedied after Dunkirk by changing to three 8-gun batteries; it was felt that 12-gun batteries were too large a target for German dive-bombers even when divided into two 6-gun 'troops', so 8-gun batteries were split into two troops of 4 guns each. But this could not be done overnight; one source claims that the two-battery TO&E lingered on until 1942 in the desert.

As to personnel, the British artillery probably contained the cream of the available intake of the land forces, and from 1926 onwards the promotion ladder for a British artillery officer demanded not only technical competence but was also dependent on passing difficult technical examinations after very thorough training, resulting in far higher standards than found in the officer colleges for the infantry and other branches of the army. Junior artillery officers were thus often better qualified than their seniors, though standards did decline as shortages took effect. In their artillery at least the British were numerically as well as qualitatively superior to even their German counterparts.

If British ordnance was of mixed quality it was well handled most of the time, although anti-tank guns were rarely used as imaginatively as German weapons. Ironically, the tactic of luring enemy tanks onto a hidden screen of anti-tank guns was first used by the truck-mounted Central India Horse against the Italians and then by the wily British and Commonwealth defenders in Tobruk in April 1941 after which they appear to have forgotten the trick for far too long—a much chastened Rommel did not. With a shortage of heavy artillery for most of the war, and with the RAF indifferent (if not hostile) towards tactical air support in the first half of the war (despite the lessons of 1917-18) due to an obsession with their bombing crusade against

Germany, there was an over-reliance on field artillery for both fire support and anti-tank work initially. Not only was it over-worked, it was too thinly spread to provide more than token support well into the desert campaign and even during the liberation of Europe there were complaints that British artillery lacked killing power against dug-in defenders.

Once suitable time fuses became available in November 1941 the British adopted the German method of using air bursts to range their artillery to improve accuracy. Time fuses had been dropped in 1935 when shrapnel was abolished and were deemed to be too complicated for less well-trained, conscripted, personnel. However, demands for such fuses in 25-pdr HE ammunition were not made until March 1940, and it was late 1943 before the supply became satisfactory. Official preference for the use of delayed action fuses to deal with entrenched enemy personnel followed in October 1943. Luckily the 3.7" AA gun could be used in this role, as stated above, until other guns received time fuses. Even with such fuses, in Normandy whereas two

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*"To simulate this level of firepower in ASL would utterly destroy playability, but the OBA rules do now give the British the edge over other nationalities, and rightly so."*

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German air-bursts were normally needed to find a target, the British used only one gun per 8-gun battery to do the ranging and if the officer was not particularly skilled 20 rounds might be needed to find the range to a target, which by then might well be long gone.

The main problem for the British was how to retain effective control in fast-moving mobile warfare and quickly direct fire to where it was needed, and they solved this brilliantly. Based on the Indian 'linking' system but on a larger scale, not only the adjacent batteries in the same regiment shot as one, but other units would add their firepower too. The use of forward observers was combined with radio communication to revolutionise fire control, but from December 1942 the British put senior rather than mere junior officers up front with infantry commanders as well as observers to make the rapid decisions necessary and issue appropriate *orders* for the supportive firepower of an entire corps if necessary, without having to make time-consuming *requests* through the normal command chain. But even then, junior officers could supply fire corrections by radio. The simple and ingenious system was devised by Colonel H.J. Parham who commanded a field regiment in

Belgium in 1940 where he used it unofficially and experimentally against German armour; ordering all his batteries to fire 10 rounds per gun without taking any ranging shots into a wood full of *Panzers* engaged in refuelling. With Parham's help Brigadier S. Kirkham then devised a simple drill enabling the forward observer to have control of the regiment's firepower in 3 to 4 minutes, compared to the 30minute delay of the inter-war years. Although the system demanded good radio links it enabled every gun in range to quickly smother even a small target with what was effectively a shotgun approach, speed, and weight of bombardment to provide hammerblows in emergencies mattered more than accuracy.

After a near-disaster during a demonstration for the top brass this centralised fire control system was approved and used for the first time at the battle of Second Alamein, and came into general use in 1943, by which time British artillery was no longer thinly-spread in 'Jock column' battle-groups but concentrated at divisional level or above. Known as the 'U' system ('Uncle' in radio language) it did not replace 'survey' methods or normal ranging and fire-plan techniques; 'Uncle' was reserved for emergencies or targets of opportunity. A call for regimental support (24 guns against an 'Uncle' target) could be answered in just 60 seconds, and divisional support (72 guns against a 'Mike' target) in 3 minutes, once the system was perfected, and even heavier fire concentrations included 'Yoke' for Army Group Royal Artillery (AGRA) level, 'Victor' for Corps level fire by 150-250 guns, and 'William' for Army level (according to one author probably only used once in Italy). In Normandy, a German artillery battery would be bombarded with an average of 20 *tons* of shells to silence it, while at Kohima in Burma a month or so earlier that year the British fired 11,500 shells in just 2 days at a time when Japanese mountain guns had an allowance of only 6 rounds per day. To simulate this level of firepower in ASL would utterly destroy playability, but the OBA rules do now give the British the edge over other nationalities, and rightly so. By comparison Soviet artillery methods resembled those of the British in 1916-1918, with the bulk of the artillery, especially the heavier calibres, controlled more clumsily *en masse* at higher levels.

The British system was the most advanced in the world at the time and superior to even German techniques, and the US army was quick to adopt it, although their forward observers remained junior in rank. Not only that, but British artillery was usually better-supplied with ammunition than US artillery by a factor of about two, in keeping with Britain's 'concentration' on a narrow front compared to the US 'broad front' strategy. This was probably just as well, because experience in Italy and Normandy demonstrated (not surprisingly) that accurate fire was far more effective than hasty and excessive fire concentration, which, if not properly controlled, could in many cases easily degenerate into an abuse of the system - leading to unjust



## The British 3-inch Mortar

In the course of working on Chapter H for the Korean War module that is currently being designed, Kenneth Katz found that the new book "Infantry Mortars of World War II" from the New Vanguard series by Osprey Publishing described the British 3-inch mortar as actually being 3.2 inches in caliber, or 81mm. Ace researchers Charles Markuss and Shaun Carter were immediately on the case. Standard sources that had been used to develop British Chapter H in modules West of Alamein and For King and Country indicated that the 3-inch mortar had a caliber of 3 inches, or 76.2mm. Charles and Shaun were not going to be satisfied by standard sources, however, despite the fact that technical accuracy in Osprey books is highly dependent on the individual author and how much care he takes.

Charles dove into the user manuals that he has in his extensive library. Shaun actually measured a 3-inch mortar at the Small Arms School Corps museum in Warminster and interviewed retired Infantry Major John Oldfield who had used the weapon in Korea. Both avenues confirmed the same finding: the actual caliber of the 3-inch mortar is 3.21 inches, or 81mm, and during World War Two the British eventually provided a special, more pointed, firing pin to allow the mortar to fire captured Italian and German 81mm mortar ammunition. Comparisons of the explosive filling of the World War Two ammunition for the 3-inch mortar with that of other nations' mortars indicates that (while the range might have been unimpressive) the British rounds were as lethal as any.

All this suggests that the British OML 3-in. mortar, assigned a Caliber Size of 76mm in ASL (British Ordnance Note 2), the vehicle-mounted versions (Carrier, 3-in. Mortar and IP Carrier, 3-in. Mortar—British Vehicle Notes 67 and 71), and the Chinese version (Chinese Ordnance Note 4) should in fact have a Caliber Size of 81mm. Players should consider using the 80mm column of the Infantry Fire Table and HE TK Table when using these weapons and when using British OBA modules identified as 70+mm. It is only a one-column shift, but maximizing your available firepower is assuredly a part of ASL. We hope to issue erratized counters at the next opportunity.

tifiably-high ammunition expenditure. To give just one example, it took 25,500 shells to kill just 17 German defenders at Crisot on 26<sup>th</sup> June 1944. That said, its effects on the enemy can be gauged by the fact that German veterans from the eastern front were awed by the heavy casualties inflicted by British artillery in Italy, complaining that 60% of losses were from this cause. So rapid and heavy was the British shelling that many German prisoners in NW Europe were convinced that the 25-pdr (firing at up to 17 rounds per minute) had power-loading or was belt-fed.

## Armour

Although all nations produced their share of expensive junk (the inevitable fate of all weapons systems eventually) for most of the war British tank design was a national scandal. Britain's Chief Technical Liaison Officer to US Army Ordnance, G. MacLeod Ross, later wrote "...little of the labour and materials expended on the 25,000 British-built tanks helped to win the war." A contemporary authority on British tanks of World War Two observed that "...anyone who attempts to chronicle the development of British tanks in an entirely positive way should really move over to writing novels... [As] ...any researcher is likely to develop a jaundiced view." Without the US tank arsenal to fall back on, the Empire would never have struck back for even at 2nd Alamein US-made tanks, material and fuel made a decisive contribution. The growing dominance of US-built tanks can be shown by the fact that by 1944 up to 32 British regiments in NW Europe had Shermans, 12 had Churchills or AVREs, and 9 had Cromwells. In 1945 the equivalent figures were 25 (minimum), 11, and 8—while another 4 eventually had Comets. Nor is this the whole story for it ignores the Stuarts found in all RHQs, or the fact that most tanks used in Italy or the PTO were US-built, and that three Churchill units in the ETO were disbanded before VE-Day after heavy losses. Moreover, many British-built tanks used components made in the USA. British tank losses illustrate this further, for although the British only used US built tanks in the second half of the war, of the 15,844 tanks lost by British and Commonwealth forces up to 30<sup>th</sup> June 1945 from all causes (including losses at sea and scrapping) in all theatres, at least 7020 (44.3%) were US-built, and this figure excludes Lee/Grants lost in North Africa after 23<sup>rd</sup> December 1942 and Lee/Grants lost in Burma, whose losses could not be determined by this writer. Put another way, although no US built tanks saw action until November 1941 fully 29.7% (1258 of 4235) of the British tanks lost between the start of the war and 23<sup>rd</sup> December 1942 were US built.

The reasons for the British tank fiasco are many and varied, and can only be discussed briefly here.

Firstly, as the pioneer of the tank and victors of the Great War Britain had rested on her laurels and allowed her tank producing infrastructure to decay in the locust years between the wars; little equipment was still being made by specialist firms and only one privately-owned (i.e. non-government controlled) tank manufacturer, Vickers-Armstrong, remained since AFVs—especially tanks—were non-commercial propositions in peacetime. Consequently neither prestige nor money was to be made by designing or producing them and the business, such as it was, attracted little design talent. Thus, when rearmament began many heavy engineering and automotive concerns became designer / producers to restore the lost capacity despite their inherent unsuitability. Most had inadequate design facilities and fairly idle plant of patchy

quality. Anyone, the assumption went, could design and build tanks and contracts were often awarded on the basis of how to lift ailing companies out of the economic doldrums into which they had sunk in the Depression. The automotive industry in Britain, for example, could in no way be compared to its US counterpart; it was smaller, less efficient and traditionally more concerned with aesthetics than significant technical innovation, while heavy engineering firms such as shipyards and railway workshops had little if any experience of vehicle mass-production.

Secondly, with pre-war research and development severely curtailed financially, there was a deliberate preference for light tanks and armoured cars, individually cheaper both to build and operate, at the expense of more combat-worthy vehicles. The former were also easier to transport and ideal for colonial 'peace-keeping', so they got priority. As few Britons relished or expected involvement in a European war, heavier tanks to cross the trenches, shellholes, and wire of another (static) Great War were given relatively scant attention.

Thirdly, there was a vicious spiral of demand caused by the dearth of pre-war prototypes and the lack of a coherent design policy, coupled with an over-reliance on the French army and its industrial base in Britain's rather hurried war plans. When France fell the British haste to rearm became so frantic that quantity was allowed to totally suppress quality for a critical period. This led to the mass-production of untried designs like the Covenanter, the Crusader, and the Churchill, all of which were effectively still prototypes; their components performed well enough in bench-tests but not under combat conditions when assembled together. The deficiency was particularly acute in power units and, for a shorter period, transmissions (the heart of any AFV); until the arrival of the GMC diesel and the Rolls-Royce Meteor, under-powered commercial engines had to suffice. Because optimistic rearmament forecasts could not be met, technological corners were cut, with lamentable results. Some 1771 (sources vary) Covenanters were built, a machine best described as 'junk' (as we shall see later).

Fourthly, there was muddled direction and conflicting requirements. At first there was hesitancy in choosing between French-type heavy tanks and the light, more agile, German machines. Only the defeat of France finally crystallised official opinion in favour of the latter to meet most future requirements. To compound matters, the responsibility for the development and production of tanks passed from the War Office to the new Ministry of Supply shortly before the war began, depriving the soldiers at a stroke of all technical advice and control of specification policy. Consequently, the soldiers could now ask only for what the Ministry of Supply could (and would) deliver, a reversal of previous and normal practice. The Tank Board, created to help formulate policy and liaise between the War Office and Ministry of Supply, had only pow-



ers of recommendation (if even consulted at all) and its ever-changing members had, mostly, little interest in or knowledge of tank design. It can be dismissed as "an AFV discussion group" or at best little more than a rubber-stamping body. Only user criticism and the bitter experiences of the battlefield gradually freed tank R&D from the jealous clutches of the Ministry of Supply and re-established the War Office's old position, but it was 1943 before any real progress was made and more battle-worthy tanks appeared in significant numbers. With weak overall control of requirements, with most tank producers unskilled at adapting or redesigning existing models, and with the obsession for quantity at any price well into 1941, there was a considerable delay in converting user criticism or requests for improvements into reality, and this was never properly resolved.

For an industrialist or bureaucrat, far from the bloody realities of the battlefield, it was anathema to introduce improvements just when production of the current model had been placed into high gear, and the US tank-building industry displayed a similar reluctance. The large number of Churchill and Cromwell Marks is not so much a chronology of steady improvements as a long series of vehicles belatedly 'reworked' up to approximately acceptable standards of mobility, reliability, gun-power and protection, and the Crusader probably suffered from this more than any other British tank. The lower usage numbers for AFV-produced smoke on the earlier Churchill and Valentine marks reflects the patchy execution of these and other retrospective modifications, about which no complete records appear to have survived. The rather conservative approach to design and production of tanks meant that new features like sloped and welded armour were adopted much later than in most other countries, even though the latter had been developed as early as 1930 because almost all builders and the army itself lacked enthusiasm when even less complex steels had long been wrongly deemed "un-weldable" and often lacked the expertise, the trained welders or the equipment.

Only when reports were received between 1935 and 1937 of armour being welded in Australia, France and Germany were the British stirred into beginning trials, drawing on Australian experience. Even then, one post-war report states that "the 'big stick' had to be brought in" before one firm would accept a contract to build armoured cars with welded armour. In 1937 the prototype A10 heavy cruiser had been built with a well-sloped hull front marred only by a vertical driver's visor, but the War Office then reconsidered and demanded that a hull machine gun be fitted - in keeping with the tank's infantry support role, so the tank went into production with a vertical hull front, creating an unfortunate precedent. Certainly the poorly-sloped hull front of the Comet (like on its predecessors, used in order to provide decent sights for the hull machine gun) beggars understanding so late in the war, and one wonders if British designers ever knew that

vehicles like the T-34 or Panther even existed; the Soviets obligingly shipped a sample of their medium tank to the UK in the early war years but British designers did not take the hint. Similarly, despite user criticism of this feature, the British also persisted with the polygonal, and angular, shaped turrets with steeply-sloped sides on vehicles like the A13 Mk II, Covenanter, Crusader and Grant which compromised ballistic protection by providing excellent shot-traps along the area above the turret-ring largely merely to increase the internal space slightly.

Fifthly, tank design was hampered by, initially, severe AFV size and weight restrictions. The latter were based on the available engineering equipment (of 1918 vintage, prior to the introduction of the excellent pre-fabricated Bailey Bridge which gave a generous clearance of 11' 4" and a weight capacity up to 70 tons) that was only slowly replaced and could only accommodate light AFVs. When it came to size, the AFVs had to be rail-transportable because the very dense British railway network had considerable over-capacity and promised quicker, cheaper, and easier transportation than the contemporary less developed road network. Unfortunately, however, Britain (still) pays the price as the pioneer of railways with very tight height and, especially, width restrictions through bridges, tunnels and between multiple tracks—limiting the width of tanks and hence their turret rings so that problems arose when up-gunning became imperative. Whereas the western European 'loading gauge' (i.e., permissible width) is 10' 4", and North America's is 10' 9", in Britain it is only 8' 10" overall, and mostly 9' maximum, even though all these areas save Spain and Ireland share the same rail track gauge of 4' 8.5".

Thus Churchill tanks with their side air-intakes removed could just be accommodated, as could the taller Grants and Shermans on special low-slung flat wagons, but even when the width restriction was relaxed to 9' 6" at the cost of some disruption to two-way rail traffic on selected routes, the Cromwell and Comet could not unless equipment protruding beyond their tracks was first removed, despite their narrow turret rings. That the Sherman could combine a larger turret ring with a width suitable for British rail transportation speaks volumes for US designers. Ironically, in practice the rail transportation of tanks was largely confined to machines leaving the factory for overseas or storage, and those already adopted by formations usually went by road on tank transporters for greater flexibility and convenience, and from March 1942 road movement became the rule for all new tanks, except during the D-Day build-up. Freed of these unnecessary restrictions, the British produced the 11' wide Centurion, a copy of the Panther (albeit slower) which just missed war time service but, progressively up-gunned and up-armoured outclassed all opposition for the next two decades.

Sixthly, firepower was of less concern to the tank builders than to the soldiers manning them; production statistics mattered more to

just about everyone else and the gun became almost an after-thought. Thus, a lack of foresight rendered the earlier tanks, especially, incapable of being quickly and easily up-gunned. For example, the turret rings (which determined the size and power of the main armament) in the Matilda II and Valentine were only 50" in diameter, 54.25" in the Churchill, 55.5" in the Crusader, 57.2" in the Cromwell, 64" in the Comet, 66.75" in the Challenger, but a generous 69" in the Sherman, up to 70" in Australia's home-grown Sentinel, and 74" in the Centurion I. Even worse, when the soldiers 'out-flanked' the Ministry of Supply and by what amounted to illegal financial dealings got extra 6-pdrs produced for tank use there were no vehicles immediately available to mount them because the only serious contender, the Valentine, had been re-designed prior to production with a smaller turret. The original turret was probably unacceptable (no one knows the official reason why) because the 2-pdr barrel overhung the hull front, a feature that most contemporary designers except the Soviets avoided at all costs. The Churchill was originally conceived as a mounting for various weapons, including the 6-pdr, but this was not permitted until 1941, resulting in a year's delay in improving the gun-power at heavy cost in lives and machines. When the 6-pdr was, eventually, first squeezed into the Valentine turret the only MG fitted inside was a locally produced improvisation. Using a shortened empty 6-pdr cartridge-case with a hole bored in it, a .3" Browning was inserted and aimed with the 6-pdr gun sight, a similar improvisation to the MG fired from inside the early German Tiger-Elephant SP gun. Although the British gadget worked well, it was less than ideal.

Moreover, the ever-changing specifications usually put gun-power low on the list of priorities; until 1942 the roles of tanks and anti-tank guns were to defeat enemy armour, hence the issue of only solid AP shot. But the folly of this over-specialist doctrine was obvious by late 1941 from desert experiences, and a flood of requests for HE to deal with enemy anti-tank guns followed. As good AP and HE performance are, to some extent, mutually-exclusive much argument and official soul-searching followed before the British embraced the 'dual-purpose' US 75mm weapon as standard a year later. Official requirements in February 1943 called for the majority of tanks to carry his gun but by May 1943 this was lowered to only 30%, with 50% of tanks having 6-pdrs or 17-pdrs, and the rest Close Support (henceforth CS) howitzers. By May 1944, however, the proportions had been changed again to 65%, 25%, and 10%, respectively. Montgomery's unfortunate signature on a telegram stating, "...the 75mm gun is all we require" was, alas, taken too literally. In effect this was a rather euphoric over-reaction to the Bad Ol' 'AP shot' days, and the Bad Ol' 'dual purpose' days followed.

Having finally produced the Comet, British designers were then instructed to develop a version with a reduced diameter 57" turret ring to mount the less potent 6-pdr, 75mm or



95mm CS guns already carried in the Cromwell, but fortunately this retrograde step remained only a paper project. More alarming, the fighting in Tunisia and then Europe gradually revealed the need for good AP performance - but many Churchill tank units had already been issued with kits to convert their machines from 6-pdr to 75mm guns because official thinking prior to D-Day and then initial (and optimistic) reports of the fighting after D-Day concluded that only 75mm guns, and no 6-pdrs, were required in them. It was intended to cease supply of 6-pdr Churchills to units in Normandy as Mk VII production gradually came on stream and replaced losses, and at the same time thus also cease to supply 6-pdr APDS ammunition. On 30<sup>th</sup> June only 125 Churchill tanks in Normandy had 75mm guns out of 858 vehicles available (492 in service, the rest in reserve) but 386 75mm conversion kits had already been issued. Thereafter 6-pdr Churchill tanks steadily declined in numbers and the few left were used in the role of *ersatz* tank-killers to support the 75mm and 95mm versions on the basis of one per three-tank troop. As if the fighting there had not yet rammed the lesson home, there were also arguments about whether the new Centurion should mount a 17-pdr or the less potent 'dual-purpose' 77mm version.

Seventhly, inter-departmental rivalry (at times the War Office and the Ministry of Supply were not even on speaking terms), non-co-operation, stupidity or official inertia and plain 'bad luck' also played their part. A few examples are worth mention. The Cromwell could have been in service by 1942 but for the fact that Leyland Motors, who accepted 'parentage' of the project, argued "tenaciously" in a prolonged dispute for the installation of their modified version of the obsolete US Liberty engine, rather than the superior Meteor. When the Meteor was finally selected, this adaptation of the famous Merlin engine was causing Rolls Royce problems so in December 1942 the industrialists agreed, over lunch, to exchange their respective engine programmes. Although this enabled Rolls Royce to retain their aero-engine specialism, and Rover their tank engines, the resultant chaos that this arrangement brought kept the Cromwell out of the war until Normandy. Not only that, but having developed the Meteor from the Merlin, Rover found that the RAF got priority in receiving engines, so production of Meteors had to wait until the RAF "was glutted" with Merlins. To add insult to injury, Rolls Royce had first been asked to produce a 600 hp tank engine way back in 1933 but had done nothing until 1940. The introduction of the Comet was also delayed because the Challenger was given priority over it and because of prolonged arguments over the choice of main armament (contenders included the US 75mm (!), US 76mm, 17-pdr and, eventually, its 77mm variant), over whether the hull should be welded or not and about other "irritating changes to the specifications". A similar fate befell the Centurion; the need for such a tank was acknowledged in the summer of 1942 but

thanks to a government ban on any new projects that would not be ready to enter service before 1944 no authority to proceed was given until July 1943. So the tank that could have been in service two years earlier finally appeared just after the war in Europe ended, delayed even further over disputes concerning the main and secondary armament.

Apart from the Centurion, the best tank the allies never had was probably the Sentinel. This Australian design of late 1941 was the right tank in the wrong place at the wrong time and so made way for other inferior British and US designs that—in the PTO at least—were adequate. The Sentinel was an excellent design with considerable potential, low-slung, with a high top speed and capable in the last version (thanks to an enlargement of the turret ring from 54", then 64" and finally 70") of mounting the 17-pdr gun. Using cast armour extensively, it was a considerable technical (pioneering) achievement for a nation with only limited industrial capacity, and deserved a better fate. Quarantined on the Australian mainland, the British would have done well to swallow their national pride and adopt and develop the design instead of the Cromwell but then the 'professional' British designers thought that they knew best (forgetting that an 'amateur' built Noah's Ark while the 'professionals' built the *Titanic*).

If the Sentinel's qualities were wasted through a lack of interest and a perceived glut of Shermans (more on this delusion later), resources in Britain were squandered on the inferior British version of the American 75mm gun; based on a re-bored 6-pdr it had numerous teething-troubles (some inherited from the 6-pdr) and special firing trials were held as late as October 1944 after user criticism. Troops preferred the US version, especially the mounting, side-opening breech for faster loading and the electric firing system. Another example of needless waste in production capacity was the "diabolical" and "troublesome" two-wheeled un-sprung *Rota-trailer*, designed to extend the range and combat duration of tanks in North Africa. But the fuel carried in its hollow wheels leaked out and the ammunition carried in the box between them was shaken around (or soaked by incoming rain water) until useless. Towing the trailers badly affected the tanks' performance and made driving on wet roads difficult and dangerous, especially when reversing. Despite appeals to stop using up valuable shipping space by sending any more *Rota-trailers*, they kept arriving—only to be quickly and unceremoniously dumped by tank units eager to be rid of them as soon as possible. An 'improved' version was also produced for the Cromwell, but thankfully never used.

The AEC armoured cars were also white elephants, and can be regarded as Winston Churchill's folly. A post-war British technical report admits that "As far as is known the AEC never played an important part in the struggle and...hardly ever went into action". Produced initially because of Churchill's personal intervention, only the crisis in British tank armament in 1942 kept it in production

since it could be adapted to take the 6-pdr gun, but once the Sherman arrived official interest in it evaporated. Documents suggest that the AEC I was not issued to units (experimental vehicles excepted) until January 1943 and were only really useful for pulling other vehicles out of sand as unofficial recovery vehicles. Nonetheless 629 vehicles in three versions were built, but only two armoured car units landed with them in NW Europe with just 8 apiece, while the other two used M3 75mm half-tracks. They appear to have been quickly discarded after the breakout, though a third unit had them until VE Day, according to photographic evidence. In Italy, although there is a vague reference to AEC IIs being used there, details are scanty. In any case, and the superior cross-country performance of the M3 75mm half-track was valued more. The best thing that can be said about the AEC armoured cars is that their engines were exceptionally reliable, going 10,000 miles before overhaul compared to about 6,000 for other British and US armoured cars (though equalled by the White Scout Car).

Then there was the problem of how to mount the 17-pdr in a tank. Far-sighted and desperate soldiers finally got this mounted in the obsolete Sherman as a temporary solution, but the bureaucrats had been asked to do this as early as July 1942, so that although the British army eventually got more than the 2100 initially requested they often arrived piecemeal only shortly before D-Day; but in Normandy the 8<sup>th</sup> Hussars, 13/18<sup>th</sup> Hussars and probably 2<sup>nd</sup> Northants Yeomanry went into action without any at first, though most units had one per troop, or 20-25% of regimental strength, rising to at least 50% (often more) by VE Day. The Challenger was a poor and unpopular substitute due to its inferior armour and a tendency to shed its tracks thanks to an unfortunate combination of rear sprockets, excessive track and hull length and its Christie suspension (which dispensed with return rollers—a fault avoided on the Comet). Another drawback was its poor ammunition stowage, for it carried only 42-48 rounds for the 17-pdr whereas the Firefly had up to 78 (though some units in Italy removed the 14-15 round front hull stowage bin in the Firefly to improve maintenance access and carry an additional crewman, and because in some tanks these rounds were inaccessible from inside anyway). The stowage in the Challenger was the exact opposite; 31 rounds were in the hull front, three in the hull sides and just 14 readily available in odd corners of the turret, and while the tank's second loader was a help in feeding the gun, its rate of fire was not surprisingly too low to warrant a '1' ROF value in ASL, unlike the Firefly. As for the de-rated '77mm' 17-pdr in the Comet, its AP performance was seriously compromised by the absence of APDS ammunition in wartime; small quantities were manufactured from early 1945 onwards but there is no evidence that it was ever issued. It was some consolation that the gun's accuracy and its HE round were both superb, and that fortunately by the time Comet was in service, German AFV targets were comparatively rare.



Eighthly, and last, the British engaged in over-experimentation and the production of 'dead-end' designs that wasted resources, the former activity in part due to the unpleasant experiences caused by the mass-production of tanks straight off the drawing-board earlier in the war. Examples of this wastage included the Tetrarch and similar Harry Hopkins, TOG I and II (an enlarged version of the French Char B, only even uglier), the Cavalier, Centaur, Valiant (the end of the Valentine line with a hull front like the Soviet IS 3 but the usual 'pea-shooter' 75mm armament in a two-man turret), the SP 95mm Alecto, the Challenger, Avenger (a lower-slung Challenger with no other worthwhile improvements), Tortoise (a super-heavy 3.7-in. SP gun with the mobility of Fort Knox), Nellie (a 131-ton trench-digging machine, the Amphibious Tank 1—an ungainly cross between an LVT and a Covenanter tank, and the Black Prince (a widened Churchill with 17-pdr gun). None of these gave the British army a battle-worthy AFV like the Soviet T-34 family. With hindsight it is easy to criticise of course, but no British tank that saw action in the war combined such good qualities as the Soviet *Schneekönig* ('Snow King', its German nickname).

The Matilda II, for example, was a contemporary vehicle and Britain's best tank when war began. It is true that it had good armour and for a short time was superior to any German tank, but even here the British erred. Inadequate testing had fostered the delusion that it could resist the German 88mm FlaK gun above 440 yards range, whereas it was actually vulnerable at over 2000 yards. This was finally and tragically demonstrated in 1941 when Matilda IIs were confidently sent in against dug-in 88mm guns—at 'Battleaxe' 99 of 104 Matildas deployed were lost. The tank's small turret ring prevented up-gunning with a more versatile weapon to execute its infantry-support role and even the CS versions were more smoke-layers than HE weapons since the HE round was of poor quality and also scarce. This left only the inadequate CMG to deal with 'soft' targets out to 800 yards at most. The turret ring was also badly protected against 'splash' from incoming projectiles, rendering it very prone to jamming. Nor was the Matilda designed for the rigours of mobile warfare, but as a slow-moving assault tank to be used for short periods only between lengthy spells of maintenance and preparation; its steering clutches were nowhere near rugged enough although this was less of a problem in open desert terrain than on roads. It also had high ground pressure and was not particularly reliable, though its pre-Dunkirk tank crews, mechanically better trained than their followers, did much to save its reputation. Matildas were also difficult to mass-produce owing to the many armour castings utilised and were probably the most expensive British tanks to see combat in the war. This was not exactly good value.

The British AFVs have low rates of fire in ASL not just because their small turret rings made for cramped interiors, but also because

doctrine called for radios to be fixed in the turret rear and for the main armament to be fitted well into the turret to help balance it for the purpose of power traverse (more on this later) and for the gun to be housed well inside the turret to help balance it for the purpose of free gun elevation. This all conspired to reduce internal space. In addition, British tank interiors were criticised in a post-war report for being far too cluttered with stowage. Moreover, official doctrine emphasised accuracy and ammunition conservation and crew safety, all of which kept rates of fire low. Inadequate field testing meant that while rapid gun-laying was theoretically possible through the use of the special shoulder-rests that gave free elevation for tank gunners operating 2-pdr and some 6-pdr weapons, the device was actually very tiring to use and detrimental to performance. Worse, the misalignment of the gun-sights in 2-pdr armed tanks was only discovered after nearly two years of fighting, causing the shot to fall short and nullifying any hope of a first-round hit. Ironically, it was an ex-artillery officer who discovered this defect but he then had to overcome official resistance to even admitting a problem existed, let alone implementing a solution. British wartime gun mountings had a poor reputation for reliability; poor design meant that the recoil of the gun tended to disturb the elevation setting on 2-pdr and 6-pdr guns, and a post-war report states that this was aggravated by slipshod workmanship and poor materials, particularly in the early Crusader, which needed field modifications to 2-pdr and 6-pdr guns before the recoil systems worked properly. Initially the British practised firing on the move, hence the demand for free elevation, but German tanks in the desert (which fired while stationary), soon showed this to be a waste of ammunition, tanks and their crews since accuracy was so poor. The British appear to have made little if any use of the unpopular and "imperfect" gyro-stabilisers fitted to their US-built AFVs except in Italy to a limited extent, but said that this equipment was excellent for producing spraying fire, indicating a lack of faith in its ability to improve gun accuracy.

In ASL the overall reliability of British AFVs is justifiably scored lower than US vehicles; even when improved types like the Valentine, the de-bugged Churchill and Cromwell arrived, they still demanded lengthier maintenance than the Sherman (the latter described by one Korean war veteran as "the perfect conscript's weapon"). One major problem concerned the accessibility of components for inspection, maintenance, or replacement, particularly in the Crusader. So unreliable was this tank that commanders in the desert had to plan operations on the basis of a 25% reserve to allow for those out of action in the workshops, and as late as March 1943 over half of 8<sup>th</sup> Army's 717 Crusaders were unserviceable. In contrast, the mechanical reliability of the (in this respect) superb Czech LT vz 38 chassis and the US vehicles in general are better than the British and Soviet AFVs in ASL with good reason; the LT vz 38 needed just 30 minutes of maintenance each

day, and the Sherman about an hour (though it often got by on less). In comparison the Crusader, Grant and Valentine needed about 3.25 hours. But the real 'prima donnas' among Allied tanks were the Covenanter, the Churchill and the early Soviet KV 1s; the British tanks needed 4 hours of daily attention if mechanical tantrums were to be avoided, while the latter's engine needed lubrication after only 1-2 hours' running. That is not to say that US vehicles were free from mechanical woes, particularly the transmissions on early Grants and Shermans, some patterns of tank tracks and the transmissions in the early Staghound armoured cars, but US industry was far better at implementing speedy remedies.

Thanks to British amateurism in technical matters, the mechanical reliability of British tanks was very poor and in 1940 75% of British tanks left in France were lost through mechanical break-down; in the early desert battles it was still 60%, compared to losses through break-downs AND ditching of 60-63% at the battle of Cambrai in 1917. The lack of tank transporters until 1942 to cut-down non-tactical movement also conspired to increase wear-and-tear, as did the nightly routine withdrawals from the battlefield. Experience in the desert and Greece also showed that the tracks of the early and often worn-out British cruisers were too fragile, and sharp turns could easily snap them, and to minimise tracks breakages speed had to be limited to 10-12 mph, whereas the elated British crews of new Stuart tanks failed to snap the tracks despite deliberate attempts to do so in tests. The early Churchill's battle debut was considerably delayed due to the evil reputation that it had gained for poor reliability even in the cooler UK climate, and there was great (with hindsight, unjustified) reluctance at first to send it to the desert, even after running trials there with two samples had gone well. The Crusader's inherent mechanical weaknesses were worsened by often poor workmanship, while two British tanks in particular—the wretched Covenanter and the Light Tanks Mark I to VI shared an unfortunate tendency to 'reverse-steer' (i.e. turn in the opposite direction to that desired) in certain conditions, although it was not unknown on the other steering systems used prior to the Crusader's. The Light Tanks were also dangerously top-heavy, but then so was the Sherman (especially the 76mm version). If the Covenanter's compressed air steering and braking system ran out of air while running down-hill it could have potentially catastrophic consequences, while the turret lid's safety-catch was unreliable and likely to decapitate the commander or at least rob him of some fingers. Ventilation was also a problem and the badly positioned cooling system roasted the crew, especially the driver. None of the foregoing can have done much to inspire crew confidence. Later designs were not necessarily free from problems either; both the Challenger and Comet suffered from front idler assembly failures, and the Comet also from final drive gear failures, to the extent



that many Comets had spare Cromwell final drive gears substituted to cure the problem.

Other factors contributed to British woes, including a total lack of standardisation. On the eve of war Britain had two types of light tank, five types of cruiser, three infantry tanks either in production or development using six different suspension types, seven different engines, four different transmissions plus numerous different track systems which demanded a huge variety of spare parts, repair and maintenance requirements and driving techniques. By 1942 there were even more, with 16 different types in service, but of which just 3 were of US origin. Worse, the supply of spare parts was often chaotic, and not soundly based on running trials but on the basis of analogy with other vehicles with quite different characteristics. Even in 1944 the British had a plethora of tank types mixed within units, or operating in the same theatre. This quartermaster's nightmare cannot have helped reliability, especially as British manufacturing techniques were often poor with a 'craft' approach that mass-produced parts to only crude tolerances before relying on hand-finishing to make the parts fit.

Attention to detail was also a major problem. As a country that boasted an Empire covering one-third of the world's land surface, British logistics were generally excellent if sometimes improvised but important lessons were forgotten for a time. Tanks were often moved around dockyards under their own power with empty radiators, to the detriment of the Crusader's delicate cooling system in particular. Worse, while US tanks sent overseas were thoroughly water-proofed, British tanks arriving in the desert were often in a shocking state after being stowed as deck cargo with no attempt made to protect them from the elements, or in holds without being properly secured against movement (hence collision) in rough weather. A post-war report stated that up to early 1942 tanks arrived with many damaged parts due to careless stowage, the ingress of water or the growth of rust and mould, and items like tool kits had often been stolen. Of 111 Crusaders landed, 78 needed 30-60 man-hours of repair work each, and 14 needed over 100 man-hours, all 24 Valentines in a batch needed an average of 80 hours, and two between 80 and 250 hours, while of 11 Matildas received four needed at least 200-250 hours, five 250-400 hours, and 2 more than 400 hours. The cause was attributed to difficulties in ship loading during bombing attacks, and the long 5-month sea journeys during which the vehicles could not be given any attention. A marked improvement soon occurred, after Churchill's personal intervention, from April 1942. Even then, British tanks were still shipped to the desert in UK camouflage paint, and without desert-pattern fittings like dust filters to try and confuse imaginary enemy agents as to their real destination. This obsession with secrecy then demanded considerable effort by desert workshop staff to refit and repaint the vehicles for desert conditions. A report concluded that the Crusader's air filters were placed in the worst position possible to keep out dust, and to

escape damage from enemy fire, and by way of a later example, the Challenger could not be used on D-Day because no deep-wading gear had been produced for it and the long guns prevented conversion of Challengers (or Fireflies) to DD status. Fortunately the Firefly at least was given deep-wading equipment.

Another example of this weakness is the use of the leaky British 'flimsy' 4-gallon gasoline container. Produced by a local firm in Egypt, this was a ghastly product compared to the leak-proof German 'jerry-can'. Calculations showed that on a 250 mile journey between 25% and 33% of the fuel being transported to the front would be lost. One veteran commenting on the desert war said of the 'flimsy' (and British logistics):

*"The general waste was fantastic. I have seen a petrol lorry loaded with these disposable petrol cans with petrol running off the tail board as if a tap had been turned on. Danger of fire, particularly in shelling, was great. Usually there was a lorry to be seen somewhere on fire".*

The combination of the 'flimsy' and the poor range of the early Stuart tank were particularly unfortunate for British crewmen. However, just to show that wastefulness was not merely a British trait, in NW Europe by early September 1944 half of roughly 22 million (!) jerry-cans shipped there by US forces to carry fuel had been lost through careless handling.

Speaking of fire, the later British tanks burned more slowly when penetrated than German or US tanks (even allowing for the fact that the Germans made more use of explosive-loaded AP ammunition than the British), giving their crews more time to bale-out. This was attributed to British trials in the desert in 1941 with wrecked tanks filled with fuel and ammunition from which the British took steps to improve ammunition stowage to reduce the hazards from fire. The British also filled the Crusader's auxiliary external fuel tanks with water, reducing the fire hazard and creating a useful reserve of this rather precious commodity in the desert, while Crusader IIIs were also fitted with 'home-made' steel ammo bins to reduce the risk of fires from hot splinters if the armour was penetrated. The crews in early Crusaders especially tended to fight with open hatches to make escape easier, and the extra (side) escape hatches on Churchills were especially welcome too. British studies revealed that between 80% and 100% of Shermans caught fire when hit (compared to only 50% of Comets and about 60% of Churchills) and the British wryly named their Shermans 'Ronsons' after the cigarette-lighter manufacturer whose slogan was "lights first time", while the dry-humoured Germans called them 'Tommy-cookers'. Yet a late-war analysis of an admittedly small sample of 333 destroyed British tanks and 769 injured crewmen revealed that despite the Sherman's evil reputation for catching fire more quickly than tanks like the Churchill (typically claimed to

be between 3 and 5 seconds for the Sherman, and 10 for the Churchill) it apparently made little impact on the overall statistics for crewmen suffering burns in this study (see further discussion below).

However, leaving burn casualties aside for a moment, another study of 3710 destroyed British tanks did indicate that Sherman crews fared worse overall than men in other knocked out tanks. Of those tanks lost to mines, in Shermans 24.6% of their crews suffered casualties (wounded or killed), though Stuart crew casualties were even higher at 34.6%, while the figure for Churchill crewmen was only 14.7%, and for Matilda, Valentine Grant and Cromwell crews lumped together 17.4%. AT guns inflicted casualties on 41.4% of crewmen in destroyed Shermans, 29.8% of Stuart crews, 34.4% of Matilda/Valentine/Grant/Cromwell crews, 38.5% of Crusader crews, but oddly enough fully 45% of Churchill crews. This anomaly is not explained, though it could be due to a reluctance of AT guns crews to engage the thick-skinned Churchills from the front, and rely instead on more devastating side or even rear shots. Among losses due to enemy tanks, 41.7% of Crusader crews suffered casualties, (unusually again) as many as 46.7% of Churchill crews, 51.7% of Stuart crews, but a grim 60.5% of Sherman crews. For losses to SP guns, 30% of Churchill crews became casualties, compared to 54.3% of Sherman crews. Finally, SCATW inflicted casualties on only 14.7% of Churchill crews, but on 44.7% of Sherman crewmen. To put these into perspective, and illustrate how varying terrain features affected tank losses, of 1734 destroyed British tanks examined in North Africa, 19.5% were lost to mines, 40.3% to AT guns, 38.2% to enemy tanks and 2% to other causes. In Italy, of 671 wrecks examined, fully 30% fell victim to mines, 16% to AT guns, only 12% to enemy tanks but 26% to SP guns, 9% to SCATW and 7% to other causes. In NW Europe of 1305 wrecks examined, 22.1% were mine victims, 22.7% fell to AT guns, just 14.5% to enemy tanks, 24.4% to SP guns, 14.2% to SCATW and 2.1% to other causes. One conclusion that British experts came to was that very few hits on Sherman tanks by German AP shot failed to penetrate, and that there were many complaints that the armour had low resistance, even to .3" or .5" Browning MG rounds. But more telling perhaps, the report admitted that "it is at present the practice to recondition for service partially-brewed up tanks whose quality of armour might often be low," due of course to the fires softening the plates. British 'economy' again?

In the late-war study already mentioned, examination of British wrecks revealed that 50% of *Panzerfaust* hits were on the turret, as against 30% for other weapons, and that 50-60% of all hits penetrated. 38% of crew casualties were fatal, with an average of 1.4 deaths from armour-piercing shot, and 1.3 from hollow-charge weapons. 25% of all casualties were burns, with no apparent difference between Sherman crews or any others, and certainly the statistics for Churchill tank crew casualties were no better than those for the



## TIPS FROM THE TRENCHES

Don't let your opponent Intensive Fire his Gun if it is marked with a Final Fire counter (whether from firing in the MPH or in the DFPh). Both A3.4 and A8.4 are pretty clear that units marked Final Fire cannot fire in the DFPh. This is even clearer with the errata to C5.6 that we are publishing in this issue.



Sherman, however much superstitious crewman might have thought otherwise. Wet stowage Shermans might have increased crew confidence but comprised only 7.7% of those supplied to Britain, and not all of these saw action. Moreover, a post-war British report stated that wet-stowage Shermans used in the Mediterranean theatre were no less combustible than dry-stowage types, and attributed this to the fact that the Sherman IIA carried most ammunition low in the hull rather than in the more exposed panniers located above track level used in other dry-stowage types. Most fires were blamed on poor ammunition stowage discipline by crews, as many British, US, and German vehicles carried far more ammunition than had been authorised. Certainly the 1<sup>st</sup> Battalion Coldstream Guards, part of 5<sup>th</sup> Guards Armoured Division, suffered only 5% 'brew-ups' during 'Operation Bluecoat', and attributed this to a policy of not carrying any ammunition outside the armoured stowage bins in their dry stowage Shermans. Both British and German analysis revealed that while the fitting of spare track plates to augment a vehicle's own armour might boost morale, it made little difference to overall protection, and on vertical or near-vertical armour could actually compromise it. But the British at least did not waste time trying to convince superstitious and sceptical crews of this fact, who could not help but notice that whereas the Germans usually added *appliqué* steel or concrete armour when up-grading their older AFVs, most British vehicles were incapable of bearing—officially at least—this extra weight. Certainly two independent British studies concluded that the *appliqué* added to the side of Sherman tanks to give extra protection to the ammunition bins brought no improvement and at certain impact angles sometimes even acted as a shot-trap.

There were, of course, more deserving 'home-grown' scapegoats than the Sherman when it came to poor 'crew-friendliness', and

many of the horribly-vulnerable Light Tank Mk VICs went to France in 1940 largely without armament, with the holes in their turret fronts plugged with plywood, and with their crews armed only with pistols and rifles. Some met the *Panzers* in this condition. The price of misusing such light vehicles as battle tanks is illustrated in *FKaC* scenario #96 'The Crux of Calais'. Like the Sherman, the *Covenanter* and early *Cromwells* had hatches for the driver and co-driver that could not be opened when the turret was turned to certain angles. This greatly reduced a hull crewman's survival chances if the vehicle caught fire, and is reflected in *ASL*'s lowered Crew Survival number of '5' for the *Centaur* and *Cromwell IV* as opposed to '6' for the later models. Also, the auxiliary MG turrets fitted to some early British cruisers and *Crusaders* were officially condemned as being "unfit for human habitation" even in cooler European conditions, let alone the desert heat, especially as the British *BESA* MG produced more (toxic) fumes than other types in use.

In addition, many early *Crusaders* had armour of very poor quality compared to US armour plate, and a post-war British technical report stated that the 'Composite plate' used on *Crusaders* - with a harder outer plate bolted onto a softer welded inner structure - was ballistically unsound, as two plates butted together offer less resistance than a single plate. There is evidence that some *Churchills* had poor quality armour, and in Tunisia cases of the steel flaking badly when penetrated were reported. Although some *Churchill VII*s were available by D-Day, they were comparatively rare outside *Crocodile* units not just because of slow output and a desire to use up older types first, but because a number had to be withdrawn for field modifications in July 1944 due to the poorly secured glacis plate armour that could fall inwards under the shock of impact. Some *Cromwells* too suffered from sub-standard armour made by an inexperienced manufacturer, though this batch of vehicles at least saw no action. It should be stressed that poor quality armour was a problem faced by most combatants at some stage; a British post-war report stated that it was a common saying in the desert war that when Italian armour was hit "the whole of the side fell out", and a wartime report observed that the armour flaked very badly and "whenever one of these machines [M13/40] had been penetrated by a small shell, the whole crew has been cut to pieces". British experts also noted inconsistencies in the quality of the *Panther*'s hull front armour, and also observed that German welding of armour was usually of poor quality. Despite pressures forcing a reduction in the use of scarce non-ferrous metals like nickel, molybdenum and chrome, strict British production controls usually avoided a later fall in armour plate quality even though almost all armour was manufactured by the open hearth method of steel production which made quality control more difficult.

Having dwelt so long on the negative aspect of British tanks, it is only fair to discuss the good points for the sake of balance. The

*BESA* MG with its telescopic sight was preferred over the slower-firing US .30-cal. *Browning*, which lacked sights and was regarded as fine for spraying fire only. The *BESA* was much better for economical, aimed, bursts as expenditure could be very high—in one "brisk engagement" in Italy a British Sherman unit expended 93,000 MG rounds. In comparing the Sherman and British tanks from a mechanical standpoint, the latter's lower silhouettes (in at least some instances) and off-road mobility were superior; the *Churchill* in particular often surprised the enemy by appearing unexpectedly in apparently 'tank-proof' terrain like the steep Tunisian, Italian and, later, Korean hills or the muddy *Reichswald* forest. The *Churchill* was under-powered, slow and most, later, versions had only a five-speed gear-box but with closely-spaced gear ratios. The engine moreover had the high-torque characteristics at low speed normally found only in diesel engines. In addition, it was very sure-footed thanks to heavily-ribbed and wide steel tracks with a long ground contact length, hence *Churchills* has a slightly lower ground pressure than many contemporary allied tanks (though not sufficient to warrant lower GP ratings in *ASL*) but still plenty of grip, with the ability to make a 'neutral turn' (spin on their axis). All this gave *Churchill* crews immense confidence to tackle rough terrain, and the *Churchill*'s capabilities have now been recognised in *ASL* with new rules for the *Churchill* when hill-climbing. One German officer even complained that it was "unfair" of the British to use tanks in the *Reichswald*. Given that the British made only little use of the *Culin Hedgerow Device* since it was not available to them until the end of August 1944, the *Churchill*'s ability to cope with Normandy's *bocage* better than other tanks was very welcome. In fact two separate British reports contradicted each other on the effectiveness of *Culin*'s device ('Prongs' in British terminology), but the *Churchill* in particular was deemed to perform better without it. In comparison, the Sherman fitted with only standard-width tracks needed good roads to be really effective when conditions were muddy or 'soft', and a good example of how road-bound Shermans could limit the tactical options is the *FKaC* scenario # 108 'Guards Attack'. The best automotive feature of British tanks was the British *Merritt-Brown* transmission (from which the *Tiger*'s more temperamental system was developed) which gave the *Churchill*, *Centaur*, *Cromwell*, *Comet* and *Centurion* the unique ability to spin on their axis, whereas the *Stuart*, *Lee/Grant* and *Sherman* had the cruder *Cletrak* system that often gave an insufficient turning circle for Europe's narrow lanes or Burma's and Italy's many hair-pin bends, even in bottom gear.

Nor were the British blind to these faults in foreign designs, though British criticism sometimes went too far, to the point of being churlish. While the *Stuart* was adequate in the desert, by 1944 it was outdated and less well regarded; in Normandy it was described as an "atrocious on tracks" with a gun incapable of



harming "anything tougher than a water-truck" and too tall and conspicuous even for the intercommunication, let alone recce, roles now assigned to it. The Lee/Grant were described with justification as standing out "like a fairy on a rock cake, visible for miles around" and "as high as the Tower of Babel." In July 1943 the Sherman was unwisely dismissed as "...less reliable than the Valentine [doubtful], more vulnerable than the Matilda [probably untrue], slower and more conspicuous than the Crusader" [true, assuming the latter had not broken down], and had "... a

proneness to catch fire [true], [an] indifferent gun-sight [true], inferior secondary armament [true, no decent sights on the hull MG], vulnerable hatches and louvres". The reliability of the radial-engined Shermans was also deemed inferior to the Cromwell, but all other sources disagree, and at the end of the day these US vehicles did the job asked of them. One British official even had the nerve to tell an American counterpart that the UK resented the USA "forcing Shermans on them" after alleged over-production led them to push the surplus off onto Britain and, as self-appointed

spokesman, alleged that no more were wanted. He failed to explain how Britain could have managed without them, and may not have known (but should have done) of the great efforts by British officials in the USA to get a share of these tanks, and to have their national preferences incorporated into the design! Nor was such ignorance confined to the war years; the modern historian Russell A. Hart wrongly argues that the USA supplied Britain with only its "reject" Shermans in Normandy, implying that these alone were the inflammable types, and lists only the M4A1,

### Turret Traverse Systems

Vehicle	Fastest traverse time (seconds) 360° w/power	Control Quality (and type)
Tiger II	<10 @3000 engine rpm**	Poor (H)
A 13	10	Good (H)
Crusader	10	Good (H)
Valentine 2-pdr	10 left / 12 right	Poor (E)
AEC I	10 left / 12 right	Poor (E)
AEC II and III	11	Poor (E)
Challenger	12 @ 2700 engine rpm	Good (E)
T-34/76	13.8 left / 13.6 right*	Poor (E)
Matilda II	14	Good (H)
Stuart M5A1	14.4 left / 14 right	Poor (H)
Cromwell	14-15	Good (H)
A9	15	Good (H)
A10	15	Good (H)
Churchill	15	Good (E)
Sherman	15 Oilgear type	Good (H)
Sherman	15 Loganport type	Poor (H)
Sherman	15 Westinghouse type	Poor (E)
M 18 TD	15 Oilgear	Good (H)
M 36 TD	15 Oilgear	Good (H)
M 24 Chaffee	15 Oilgear	Good (H)
T 26 / M 26	15	Good (H)
Panther A	15 @> 2500 engine rpm (forbidden 11/44 >)**	Poor (H)
Stuart M3A3	15.4 left / 15.92 right	Poor (H)
Valentine 6-pdr	16.9	Poor (E)
Panther G	18 left / 17 right	Poor (H)
Panther A	18 @< 2500 max engine rpm (max from 11/44)**	Poor (H)
Tiger II	19 left / 18 right @ 2000 engine rpm	Poor (H)
Lee / Grant	20	Poor (H)
Ram	20	Poor (E)
T-34/85	21.1	Poor (E)
Comet	24	Good (E)
PzKfw IV	25.07	Poor (E)
S35 Somua	36	Poor (E)
Char B bis	36	Poor (E)
Char D2	36	Poor (E)
Panther D	60	Poor (H)
Tiger I	60	Poor (H)
KV 1	60-70	Poor (E)

\* One source gives 10 seconds for all T-34/76 versions, which does not seem to take increasing turret weights of successive versions into account; this figure probably therefore only applies to the earlier M 1940 version with smaller and lighter turret.

\*\* To preserve engine life German crews were eventually restricted to 2500 rpm when traversing; whether they obeyed this official edict is another matter.

(H) Hydraulic mechanism

(E) Electric motor



M4A3 (not used by the British in Normandy) and the M4A5 (in fact a 'paper' designation for the Canadian Ram tank) instead of the M4A4, whereas the British also used the M4 and the M4A2.

Perhaps the most significant British advantage lay in turret traverse systems, and this has now been recognised in ASL following extensive research by this writer long after *WoA* was released, and explains why the Challenger and Comet have now been given fast turret traverse in ASL. Britain developed an hydraulic turret traverse system based on power turrets fitted to RAF bombers, and later also an electrical system, both having a specification demanding 360° traverse in 20 seconds (though this time varied, depending on the size and weight of the turret). The hydraulic system was first tested on an A9 cruiser in 1938 but the War Office specification of a full rotation in only 8 seconds proved to be over-ambitious and a slower speed had to be accepted—after a lot of work. These systems gave a range of creep speeds so that power could actually be used for the fine laying of the gun, which speeded-up the firing process in situations where a split second could mean the difference between life and death. In comparison German, Soviet and early US systems were less effective, the former being dismissed in a British post-war report as "exceedingly cumbersome and inefficient. Training by power was never attempted, possibly because German turrets were usually wildly out of balance." Hydraulic traverse systems in the British army (at least) gave way to electric gear because of the wish to avoid oil leakage, and to lessen the fire risk if a vehicle was penetrated.

In short, German, Soviet and early US turrets were slued round in the general direction of the target and sighting adjustments were then made by hand. Britain sent a sample of the hydraulic version to the USA in 1940, and from this with considerable British pressure and input the Oilgear system was developed, along with the inferior Loganport hydraulic and Westinghouse electrical systems (both of which suffered from tight spots and variations in friction, especially the Loganport gear). It is no wonder that US crewmen tried to get into a Sherman with an Oilgear mechanism. The systems used on vehicles like the T-34s, Valentines, Lee/Grants and those (later) versions of the Stuart that had power traverse suffered from considerable 'back-lash' in the mechanisms; even after British modifications the hand traverse and elevating gear on the early Stuarts was so poor that crew were reluctant to traverse the turret in action. When the Lee / Grant's 37mm gun was used at all, crews also preferred to use manual rather than power traverse. The Italian L6/40 and M11/39, the first batches of Soviet T-34/85s, the German PzKfw III family, the US M10 and Staghound had only hand traverse; the PzKfw III needed 88 hand turns in high gear to traverse 360°, and 132 in low gear for fine laying while the M10 gun crew needed about 80 seconds to turn the turret just 180°. The German hydraulic systems were directly dependent on engine speed, while the PzKfw

IV used a crude electrical system. Another German disadvantage was that their better but more complicated sighting equipment took a little longer to operate and this could give allied vehicles an edge in a gun duel. One advantage of US traverse systems over British equipment was that they were run from batteries, and so could be used 'silently' with the tank's engine turned off. Yet according to a report by a US Tank Destroyer officer, his M36 crews used power traverse only in training, and preferred manual traverse in combat (which was far smoother than the M10's manual system). Little data on Italian systems seems to have survived, but Italian sources state that their hydraulic systems turned the turrets only slowly, were badly sited in the centre of turrets, were large and cumbersome (especially the earlier of two versions) and often removed by crews who regarded them as "almost useless".

The superiority of the British systems (with some exceptions) can be seen in the preceding table, gleaned from numerous published and unpublished sources.

The mounting of the 17-pdr in AFVs also allowed the British to engage and defeat the German armour in Normandy (most of which was concentrated against them) more effectively than the US army's less potent AFVs. It is also one aspect of the tank war that the British were and still are very self-righteous about. The USA at first ignored British offers of 200 17-pdr barrels per month if Uncle Sam would build his own Sherman Firefly turrets and US forces were never to use this "shot-gun wedding of a British gun to American reliability." It has been customary to blame the US army's initial indifference to the Firefly on a 'Not Invented Here' policy but recent research suggests there were also other reasons. Firstly, a lower threat perception of continuing German AFV development, partly due to a lack of combat experience compared to the British, making the USA complacent. Secondly, British military opinion was widely held in contempt in the USA concerning tank technology; so hostile to anything British were certain 'patriotic' US officers that when the British suggestion for comparative trials against US weapons was finally granted, the 90mm gun had its performance secretly boosted by the addition of propellant taken from British 17-pdr rounds. National pride, it seems, counted for more than American lives. Thirdly, various 76mm weapons with two sets of non-interchangeable ammunition were already being produced in the USA, not to mention the 90mm gun, and the 17-pdr would only further complicate logistics. Moreover, the inadequate performance of these weapons against the Panther was not yet known. Ironically, the M10 had been designed to mount the 17-pdr, but none were so used by US forces. Fourthly, the 17-pdr's fierce muzzle blast and an alarming flashback at the breech end suggested design problems—with hindsight, unfounded—though the British at one stage considered issuing crews with naval-style anti-flash clothing. Fifthly, 76mm APCR was the great white hope that would render the gun's performance close to the 17-pdr's—or

so it was thought. When the fighting in NW Europe revealed the 76mm gun's shortcomings, even with APCR, the wishes of US field commanders were ignored, or frustrated, and many American tank crews were condemned to a needless death by this policy.

The US army subsequently twice requested Fireflies from the British and about 100 of the initial order for 160 conversions were started using, preferably, the M4A3(W) and some M4s too but none arrived in time to see combat in American hands. 'C' company of the US 755<sup>th</sup> Tank Battalion had 12 M4s (British ICs) allocated in April 1945 in Italy, by which time the war was effectively over and they were never used in anger. This delay was caused by various factors. According to Ross, by October 1944 the US army had lost 1400 tanks in NW Europe, 90% being burned out (i.e. irreparable), plus another 400 in December and 510 more during the Battle of the Bulge and had not anticipated losses on this scale, causing in turn a critical shortage of 75mm Shermans (which by then the USA was no longer producing as production had been scaled down). Britain had also lost far more tanks than anticipated in Normandy. This ironically conspired to reduce the number of tanks otherwise available for conversion to Fireflies when Britain was forced to return many 75mm Shermans to US ownership and to also forego her promised share of 3 months' new tank production. With hindsight, Canadian Ram tanks might have been used to replace 75mm Shermans, had they been earlier up-gunned. It must also be said that the British had taken their revenge for America's initial rejection of the Firefly by deciding, in July 1944, to equip their own tank troops with two Fireflies each before they would countenance supplying any to the US army, and also that earlier US fears about a possible shortage of 17-pdr ammunition for any Fireflies given to US forces were borne out. Unofficially however, British Fireflies (referred to in at least one British unit as 'Mayflies', a term sometimes also used when referring to M10 Achilles), and Churchill Crocodiles, were sometimes despatched to support US units in combat.

Contrary to the myths, the British actually built far more Fireflies than the 600 previously asserted by authors—who ignored primary sources; at least 2139 and possibly 2239 were produced, including those latterly earmarked for the US army. Despite being regarded as only a temporary expedient, the British were very fastidious about which versions of the Sherman were used, and rejected diesel-engined and other 'minority' types because of their smaller interior space (M4A1 and M4A2) and perhaps because there would be long-term spare parts problems (M4A3). Only the M4 and M4A4 appear to have been used, though trials were conducted on other types and in the post-war years many Firefly turrets were dropped onto any old Sherman hull to create museum exhibits. Many Fireflies previously thought to be on the M4A1 hull are in fact late-production M4s (i.e. with cast and rolled hull sides forward of the turrets) and thus very similar in appearance at first glance



to the M4A1, especially as the amount of outside stowage hung on many British tanks make it hard to tell many Sherman types apart, especially if their engine decks are obscured from view. The British also insisted that only the Oilgear traverse gear was used in Fireflies for reasons already explained and because, of the three otherwise interchangeable types used in Shermans, it was also the most compact. Because only late-production 105mm Shermans had power traverse and it was a minority type in British service anyway, they were not used for conversions.

All but two (with 1<sup>st</sup> Polish Armoured Division) of the 338 Fireflies in Normandy on 30<sup>th</sup> June 1944 were M4A4 types, but thereafter M4s predominated by the war's end due to losses of M4A4s and conversion of more M4s, so that there were eventually roughly two M4s for every M4A4 in service. Because only gasoline-powered Shermans were converted, those units with 75mm diesel-engined Shermans had the additional complexity of having to use two different fuels for their tanks, though many un-armoured vehicles in such tank units had to be supplied with gasoline fuel anyway. The main drawback with the Firefly was the conspicuously long gun, and the British attempted various disguises for the barrel such as foliage, light-coloured paint on the front half of the barrel, special camouflage schemes, or tin can-like objects halfway along the gun tube. The Germans were not fooled and naturally gave Fireflies their best, urgent, attention; so much so that 1<sup>st</sup> Polish Armoured Division was later forced to augment about 40 Fireflies with 76mm Shermans to replace heavy losses (a type unsuitable for conversion to Firefly standards). Understandably, they camouflaged their 76mm barrels too, and the paint scheme was also used on some Churchills and on Archers in Polish units.

Other British successes included the 'Funnies', and the British excelled in producing such specialised armour, notably the DD tank, the Crab mine clearing flail tank, the Crocodile flame-thrower, the AVRE assault vehicle and a host of bridge-layers. Again the US army was offered equal shares but initially took only DD tanks on the grounds of crew unfamiliarity with British equipment—and so suffered terribly on D-Day; the US used small numbers of Crabs later. In Tunisia British infantry battalions would often march across anti-personnel minefields in line abreast without losses but later mine technology, especially the use of wooden or concrete casings, rendered mine detectors less effective, and made this a suicidal business in Europe. The early Crab had a 65% mine-destruction rate, while the contour-following Crab II had a 90% rate—at least until the chains were all blown off, but the wily Germans often sowed their devilish anti-personnel 'S' mines in ground too soft for Crabs to negotiate. The Churchill's roomy hull interior (one veteran told this writer "you could play football in one") and its good off-road capability made it ideal as a beast of burden for assault engineers and their volatile baggage. The formidable Churchill Crocodile was feared and hated by the Germans to the extent that captured

Crocodile crews were often shot; one captured German officer expressed surprise that the British would stoop to use such an "un-British weapon." FKaC scenario # 106 'Kangaroo Hop' simulates a set-piece attack that lets us play with the various 'Funnies'.

Britain and the Commonwealth also produced thousands of nimble, low-slung, and silent recon vehicles used with great dash and success by the army and RAF in all theatres. If British tanks were often under-gunned, British armoured cars were veritable eggshells armed with sledgehammers in comparison, and carried welded armour from an early date. The exceptions included the Morris CS9 used in France and the early desert war; their crews dubbed them "suicide boxes", and while the massive AEC was outstandingly reliable as we have seen, it was under-powered, slow, very tiring to drive and essentially road-bound due to its bulk, 'crash' gearbox and leaf-spring suspension (revealing the truck ancestry of the chassis); it possessed "great potential for blocking the roadway". Note that the new Chapter H notes have extended the availability of the Marmon-Herrington III variants up to the end of the Sicily campaign, as the 47mm gun version was hastily deployed there by the 5<sup>th</sup> Recce Regiment.

Technical development of wheeled vehicles was not really spectacular although the Daimler armoured cars were something of an exception here and the supply of these superb machines never met demand. As a result the inferior Humber scout and armoured cars were produced as substitutes, despite barely meeting official specifications on account of their commercial chassis being incapable of taking heavier loads. Most British AFVs suffered from this problem as long as they were regarded as tanks on wheels, but once the General Staff lost interest in light tanks after Dunkirk, because tougher vehicles were needed to resist the expected German invasion, wheeled vehicles gradually usurped the recon

role. These vehicles sacrificed armament and armour for accommodation, speed and range and the British enthusiasm reflects not only their lower unit cost but also the greater need for fresh information by senior officers who, in the early war years at least, were far happier to let their subordinates run the war up front without the sort of unannounced visits and interference that many German generals were famous for. In addition, the British infatuation with these vehicles was rooted in their tradition of horsemanship and élan—a scout car or armoured car was the military equivalent of a well-bred 'hunter' horse or a sports car. Whatever his other failings, 'Tommy' excelled at recon.

Apart from a heavily armoured tank-killer, the only other serious omission from the British armoured repertoire was a good APC, and they relied far more on their poorly protected carriers (with their small load-carrying capacity) than on US half-tracks; the latter were mostly reserved for more supportive and less risky roles. The Canadian-inspired Ram Kangaroo and the later adaptation using the Priest were useful stopgaps, but access to the vehicles (only from above) was not ideal, as these rear-engined vehicles could not be fitted with rear doors. Plans were also drawn up to use Centaurs and Churchills as Kangaroos. Carriers were used more as 'battle taxis' than *ersatz* APCs, with their crews dismounting at the first opportunity to render them less vulnerable and less conspicuous. Players tempted to fire their 2" mortars from inside their vulnerable carriers might care to remember this. This absence of an APC in part explains the poor British infantry / armour co-operation, when tanks quickly out-ran the supporting infantry advancing on foot.

The Loyd carrier appears to have been very unreliable, according to post-war British reports of its use in the Mediterranean theatre; its weak steering compromised further by towing too heavy a load like the 6-pdr gun and its ammunition, and the catalogue of woes included unreliability, poor tractive power, a weak suspension and rear axle and brake fading—all attributed to "abuse" through overloading. Its cousin, the Universal Carrier was similarly overloaded and abused. The wheeled tractors used to tow field guns were plagued by a poor cross-country performance and were hard and tiring to drive, so that carrying the 25-pdr *en portee* was even mooted. In North Africa the British first encountered jeeps when they found many abandoned by US forces (along with 16 Stuart tanks) after the Kasserine debacle and 'adopted' them, but they had a poor reputation for reliability since many troops drove them much too fast and over-loaded them in preference to using their own mediocre 15 cwt trucks. Most but not all British trucks were generally reliable, if not sparkling performers; again these were commercial adaptations rather than purpose-built vehicles and they lacked the rugged construction and higher performance of US vehicles. General Horrocks, the CO of XXX Corps commented favourably on the high speed of the US 6-wheeled trucks of the 'Redball Express' compared to the slower British con-

#### TIPS FROM THE TRENCHES

A 1 FP attack with +1 DRM inflicts DM on a broken unit and is potentially eligible to inflict encirclement. Both rules (A10.62 and A7.7) require "enough FP (taking the possibility of Cowering into account) to possibly inflict at least a NMC." On such an attack, an Original 3 DR could inflict a NMC. In contrast, a 2 FP attack with +3 DRM could qualify only if the attacking unit were exempt from Cowering (e.g., Fanatic, Elite British, leader directed, etc.) since an Original 2 DR would Cower.





voys with their smaller 4-wheelers. 38% of British motor transport came from Canada, 20% from the USA and 42% from Britain. Truck standardisation was, again, poor and pre-war tax regimes had encouraged manufacturers to produce less powerful lighter, two-wheel drive, trucks at the expense of heavier and more powerful types. Although they were better suited to the desert than their foreign equivalents, as the ASL desert rules show, the reliability of British trucks, and hence the performance of armoured and motorised units in the desert, was not helped by a failure to produce sufficient spare parts during late 1941 and early 1942, because (as with the Red Army on the eve of war) the total output of vehicles seemed to matter more than stockpiling spare components.

### Vehicle counters

Many vehicles have had to be omitted from *FKaC*, as was the case with *WoA*, for historical reasons and to keep the cost down. The 'rattle-trap' Light Tanks Mk I to VIB are all pretty similar in game terms (all were death-traps in real life), so a 'generic' Mk VIB counter suffices. The Cavalier's only use in action was as an (unarmed) OP tank in Normandy, while the venerable but vulnerable Medium Mk II saw little or no action (which was just as well for its unfortunate crewmen). The US M8 Greyhound only saw limited action because the British refused to issue it until something was done to improve the protection against mines (special additional belly plates were made), though crews issued with them in September 1944 praised their cross-country performance and ability to cross light bridges. Apart from the thin flooring, they also disliked the difficulty experienced in reversing it—a bad feature for a recce vehicle—and British troops also found that the middle set of wheels flicked spent cartridges lying on the road into the upright position, and these then punctured the rear wheels. The M24 Chaffee saw only limited British service, just two being lost in action, as did the Valentine DD tank (just 75 Mk IXs were used operationally in Italy when Sherman DDs were scarce).

It is doubtful whether the Covenantor, the Staghound III, Valentine X, or Sherman III (L) saw combat; certainly the Sentinel and the Centurion did not, while the Fordson armoured car was visually similar to the Rolls Royce and is indistinguishable in game terms. The Churchill IX to XI 'reworks' with appliqué armour to roughly Mk VII standards and either early 8 AF, or with later 14 AF Mk VII, turrets, were apparently built so late in the war and in only very small numbers; none saw any action. The SOD (Sawn off Daimler), an armoured car with the turret removed and capable of 70 mph on roads, was a minority and strictly unofficial type used during the Normandy breakout but deemed too vulnerable for recce after the Rhine crossing. These omissions have made way for more deserving inclusions like the India Pattern carriers, the Loyd Carrier, Humber LRC, Rolls Royce armoured car, Valentine II/IV and III/V, Sherman Dozer and the Priest Kangaroo.

However pressures on counter space forced out various Churchill Bridge-layers, the Matilda Frog flame-thrower used so effectively by the Australians against the Japanese, and a host of hastily-improvised AFVs of dubious value hurriedly converted to resist the expected German invasion of Britain in 1940. Captured tanks have also been excluded; those used by the British were mainly Italian M 13/40s in the desert when their own stocks were low, but in the ETO one Tiger and two Panthers (wryly renamed 'Cuckoo' and 'Deserter') were used until their breakdowns became incurable.

### Tank doctrine

Britain's handling of armour suffered for far too long from a lack of commanders who really understood how to use it properly; one junior officer testified that he had received almost no training in this subject as an officer cadet in the 1920s and was discouraged from joining tank units as their officers were "not very nice people." As late as 1935 Staff College courses barely mentioned the subject in what this same officer, now promoted, described as "disgraceful" teaching. This phobia was also partly a symptom of the long-overdue and often unpopular mechanisation of the cavalry from 1937 onwards. Pre-war interest in tanks was seen by most officers as unhealthy, freakish and fanatic, and there was a dearth of pre-war exercises (most of which bordered on farce), at least until after Dunkirk, while the shortage of land in the overcrowded wartime British Isles, caused by the greater agricultural demands amid the U-boat blockade, made it difficult for larger British and US formations to train and practice as a body. Simulating the harsher but more open and flatter desert conditions was impossible. The pre-war pioneers like Fuller and Liddell-Hart had left the army and could only influence events by writing, or had been moved to positions in the army where they had little influence; Hobart's many talents were unceremoniously discarded in 1938 after he had worked very hard to make British mechanised units in the desert so efficient, and he languished as a corporal in the Home Guard until Winston Churchill rescued him to raise new armoured divisions, including the 79<sup>th</sup> Armoured Division of specialised assault vehicles. When British generals admitted that their own forces were "...still an army of amateurs fighting professionals" it was as much a confession of the poor handling of armoured units, as it was an indictment of bad small-unit tactics.

The performance of British armour was not helped by organisational blunders; in late 1941 divisions in North Africa were re-organised into brigade-sized units with only weak tank strength and artillery support. They were doled out along the front and expected to accomplish all that their larger predecessors had failed to do against an enemy who believed in the concentration of force—the Germans just gobbled them up piecemeal. Inspired by the exploits of 'Lawrence of Arabia' and the sometimes wild and vague

theories of Liddell-Hart and Hobart, British commanders (when they were not experimenting) chose to fight a sort of mechanised guerrilla warfare and dispersed their armour and sometimes their artillery too into weak 'Jock Columns', grossly over-estimating the dangers that concentration would face from air attack, and practised 'mobility' for its own sake by driving about to no useful purpose and to the steady mechanical detriment of their vehicles—'swanning about' in British slang—which ingested sand at the rate of one pound per five miles travelled. Many Grants were already worn out in this way in training exercises before they ever met the enemy. This dispersion also encouraged excessive and undisciplined use of radio communication, which the Germans were very adept at intercepting and exploiting.

None of this was really appropriate against concentrated doses of *Panzer Division*. The British also reorganised their desert formations far too often and only 11 of the 20 or so divisions' worth of tanks (up to 2<sup>nd</sup> Alamein) had fought in more than one large battle, and only 4 in more than two thanks to rest periods, diversions to other theatres, or losses. Thus whereas Axis units remained essentially the same in the desert, the British units were not particularly experienced; 7<sup>th</sup> Armoured Division, for example, had some 17 different armoured regiments and 9 infantry battalions rotated through it in just 2 years. The 5<sup>th</sup> Indian Division had 23 changes in brigades involving 11 different formations in a 4-week period, attached for a night, a week, or even for just a few hours. All that can be said in mitigation is that thanks to General Hobart, CO of the poorly-equipped Mobile Division Egypt in 1939, the British were better-equipped and a lot more competent than the generally less mobile and more epicurean Italians in waging desert warfare, though this availed them little against Rommel.

When the British armour was then reorganised on a divisional basis, it was for much of the war a tank-heavy TO&E with inadequate infantry support and hence flexibility—'pure in race' as the Germans (who preferred mixed battle-groups containing all elements) wryly described it when taking a subtle swipe at Nazi dogma. Consequently British commanders eventually knew how to command tanks but for far too long afterwards still not how to handle the infantry and artillery elements that all armoured divisions needed to function effectively. The separation of tanks and regiments into 'infantry' and 'cruiser' types did nothing to improve tactical doctrine by confusing things with over-specialisation; co-operation between these two armoured branches was often lacking because the more amateur cavalry and the more professional RTR units shared a mutual dislike dating back to the Great War, and this rift took time and the deeds of a greater 'enemy' to heal. Each, separate, role was executed in a rigid manner while the different performance characteristics of the vehicles concerned caused headaches for commanders like the early mixtures of T-34s and KV-1s did in the Red Army. The 'I' tanks downgraded mobility (at least



until the Churchill arrived), surprise and flanking movements while the cruiser units, confident that their speed was a substitute for thinner armour and reassured by official statements that their 2-pdrs would pierce German armour at under 500 yards range, would trundle or charge, respectively, unsupported and with their pennants flying into enemy killing-grounds like French medieval knights, and just as slow to learn the lessons. A good (European) example of this stupidity is *FKaC* scenario # 91 'Ad Hoc at Beaurains'. Small wonder that one British officer, disillusioned at the way so many Crusaders had been shot out from under him in the desert, attempted to lead his tank platoon from a 3-ton truck in order to improve the survival chances of his crew; he was quietly sent to the rear for psychiatric treatment. There he met a 'shell-shocked' officer who had survived nine such losses; while another crew survived seven knock outs and yet another had ten tanks destroyed under them in just 30 days. US analysis revealed that the average man could only tolerate 2-3 burn outs, and only a few men 6 to 8, before breaking down psychologically.

Even in Normandy, where common sense should have prevailed, and where the British could afford to lose 6 tanks for every *Panzer* destroyed, they initially 'charged' German defences. Having then been painfully bitten, British armour quickly became very shy and the lack of training in aggressive tactics of the sort practised routinely by German, Soviet and US armour became very evident during the liberation of Europe. That said, the British were probably better-suited temperamentally than the Americans to the bloody, grinding, attrition of the Normandy battlefields and they possessed, initially, more tanks (deemed 'expendable') than the US forces landed on D-Day for that very purpose, though it must be said that casualties were proportionally at least as high in US units. In Normandy the British faced 7 *Panzer* Divisions and lost about 1530 tanks, the US army faced 2 *Panzer* Divisions and lost about 875 tanks. But the British did systematically destroy the German armour embroiled there as planned, albeit at terrible cost; the self-sacrifice of the British, Canadian and Polish troops allowed a rather over-critical, ungrateful, and boastful Patton to race across France largely unopposed. One US historian says of Patton, "Principally, he occupied ground rather than destroying armies", and General Bradley at least was mindful of the British contribution, which seems to have been forgotten, or played-down and ridiculed in some recent US war films.

Events after the attrition and break-out showed that men like Horrocks, Roberts and even the ultra-cautious Montgomery could handle armour with the dash and skill shown by O'Connor in the early desert battles and by German or US commanders; for example the British 2<sup>nd</sup> Army under General Dempsey achieved an average rate of advance of 66.6 miles per day, compared to Patton's best of 14.6 miles per day although such comparisons are rather meaningless. The handling of British and Commonwealth armour in Burma

and the PTO became both aggressive and inspired, especially in the later stages of the war, and infantry-tank co-operation (after the fiasco known as the Arakan Offensive) was of a much higher standard than in the ETO. Here, Stuarts and even Lees and Grants were driven, or dragged and/or winched by bulldozers up steep slopes to catch the Japanese with their proverbial trousers down and demolish their formidable bunkers in terrain thought by them to be safe from tank attack. According to Japanese sources, in the final battles of 1945 their forces lost 1401 POWs and 16,919 dead (compared to only 419 British and Commonwealth casualties, of whom just 49 were killed).

### Conclusion

It is ironic, if typical, that some of the British army's severest critics are fellow-countrymen. Writing of the 8<sup>th</sup> Army the historian Corelli Barnett described it as "a cumbersome and inferior fighting instrument, capable of winning against German troops only in a carefully rehearsed, tightly controlled set piece operation with ample margins of numerical and material superiority." The historian Max Hastings writing about 'Overlord' makes similar comments. The historian Stephen Ashley Hart cites the analysis of others who describe it as being "not very good" in the war and he ranks its performance in NW Europe as "relatively unimpressive" by German standards but makes the point that this is all that could be expected from a mass conscript army, given its limitations. Hitler for his part was more generous, melodramatic and prophetic when he observed that the spirit of the British people was such that the army would struggle on for however long it took, and by whatever means was necessary, to victory "even though the actual equipment at hand may be utterly inadequate when compared with that of other nations". There was more than a grain of truth in all these observations.

We have seen that 'Tommy' and his Commonwealth and 'refugee' comrades in arms had problems; the British are a very self-critical and self-disparaging people who tend to dwell more on the negative than the positive, and usually love to deflate their own heroes. But for all its many faults the British army also had strengths; while it could not accept casualties like the Soviets, Germans or even Americans it was nonetheless filled with men determined enough to fight on in dogged fashion without any allies for nearly 12 months. Tommy and his country were prepared to 'muddle through'—if not to victory, at least to impoverished national survival, sustained by a wry and very cynical sense of humour. Equipped with a mix of good and bad weapons 'Tommy' was eventually able to take on his opponents on more or less equal terms once his confidence, dented by earlier defeats, was restored. The, traditionally, small and neglected army was greatly expanded to play a far more vital role than most people had foreseen; never as professional as the Germans nor as lavishly-equipped with military hardware as the US army, it was not decisive in itself and

could never have been mistaken for a more genteel version of the Red Army.

If its overall, strategic, contribution to the land war against Germany was only marginal, it still made an important contribution to victory by taking the heat off Britain's allies at critical times. It also inflicted stunning defeats on all its enemies at times, especially against the Italians and Germans in North Africa, and in Burma where, after being defeated and chased out by the Japanese, a mixed force of predominantly Indian troops was reorganised, re-trained and re-equipped to later return and give Japan the worst drubbing suffered in any of her land campaigns. As such 'Tommy' is a worthy opponent for your cardboard Germans and other Axis troops. So when your cardboard AFVs go forth for their cardboard King and Country to support the 'thin khaki line' may they always 'Fear Naught' and pass safely 'Through Mud and Blood to the Green Fields Beyond' as the Royal Tank Regiment's official and unofficial mottos, respectively, so eloquently advocate.

The generous assistance, over the years, of the staff at the Tank Museum, Bovington, the Badley Library at the Royal School of Artillery, Larkhill, and the School of Infantry, Warminster, is gratefully and humbly acknowledged.

*[Our immense thanks go to Charles for this wonderful updating of his article. We look forward to more of his authoritative research and analysis. The footnoted version of the entire article will be hosted on our website. ...Eds.]*

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## Feline On-Board Artillery (FOBA)

[FOBA, or the dreaded "Catyushas"—"Cats" for short—are rightly feared by wargamers of any system, even more so by those who game with miniatures in sandtables (see "Minefields"). This Chapter presents the rules relating to this ultimate, scenario-ending weapon, presented here for the first time in ASL format]

**F1 HOUSE RULES:** Where present, a Cat always Rules the House. Ask anyone who is owned by a Cat. There are no EXC or possible Q&A for this rule.

**F2 HIP/CONCEALMENT:** Cats always set up HIP, regardless of terrain [EXC: if there is a Fire in the Location, a Cat always sets up Adjacent to it, unconcealed, in the Open]. Unlike other units, Cats may Assault Move into or Dash across any terrain (including Open Ground) and still maintain Concealment.

**F3.1 AREA TARGET TYPE:** Players who suffer from allergies to Cats must take an immediate TC (Tickle Check) upon entering the Building, and each turn they remain therein. Failure of this TC results in an uncontrollable sneezing fit and their eyes are marked with a Flame. After a Flame is placed, further checks become MC (Misery Checks) instead, failure of which reduces the Target in quality until Broken. Broken players must Rout out of the Building.

**F3.2 PAATC:** Players who pass their PAATC (Pre-Arrival Antihistamine Taking Check) are immune to the effects of F3.1, but suffer an immediate reduction in ELR (Energy Level Rating) to zero (0).

**F4 MOTION STATUS:** A player who does not remain in Motion is subject to a LC (Lap Check). All players take a LC with a Morale of 7 [EXC: players who are subject to the effects of F3.1 make their LC with their Broken Morale level of zero, even if still in Good Order]. Failure of the LC results in the player being pinned. Players in Motion must take a TC (Tripping Check) with a Morale of 7 (+3 DRM if F3.1 applies). Failure of the TC results in loss of whatever the player was carrying. A Final TC DR of  $\geq 12$  results in CC (Counter Confusion).

**F5.1 SCENARIO APPEARANCE:** Cats know a dog when they see one, and due to their natural enmity, will leave the players undisturbed to suffer through an entire dog of a scenario. However, if the players are involved in a tense, down-to-the-wire scenario, then the Cat will enter the player's Location and attempt to engage in CC (Counter Confusion), regardless of the Player turn or Phase [EXC: Cats will not appear during the first half of a scenario, unless the scenario is of sufficient length and has gone sufficient time that a full replay is impossible within the time span available to the players].

**F5.2 AMBUSH:** Due to their concentration on the matter in hand, players are always con-

sidered Pinned and Lax. Cats are always considered Stealthy and Concealed (even if berserk).

**F5.3 ACCURACY:** If Ambush is achieved, the Cat makes an accuracy dr on the following table:

1-6	Critical Hit
7+	Miss

Modifiers:

-2	attack from higher elevation
+1	attack from lower elevation
+1	attack from lap of player.

**F5.31 CRITICAL HIT RESOLUTION:** The more critical the situation, the greater the CC. The Cat immediately Withdraws and regains HIP status following a successful attack.

**F5.311 PLAYER RESOLUTION:** The players immediately resolve "I'm gonna kill that [expletive] animal when I catch it!" after a successful attack.

**F5.32 MISS RESOLUTION:** If the Cat fails to Ambush the players, or achieves a Miss on the Accuracy dr, Melee ensues. The player must make a Capture attempt. This is resolved on the Hand-to-Claw (HtC) table:

ODDS:	1-1
DR:	7

Modifiers:

-5	Cat
+5	Player
+1	Capture Attempt

**F5.4 BARRAGE:** If multiple Cats are present, they may either operate as independent FOBA batteries, or they may combine their CC attempts as a Barrage.

**F5.41 OVR:** If both Cats are in the same Location, and one goes Berserk, the other automatically goes Berserk as well. Berserk Cats have 945 MF and will immediately charge the nearest BSU (Board Set Up) and attempt OVR. Cats may either make successive overruns, or form a Feline Wave. Overrunning Cats attack with 4 FP (Flying Paws) each, and with a drm equal to the negative of the current turn number. Any result other than "No Effect" is treated as a MC (Mass Confusion).

**F5.411 DEFENSIVE ACTIONS:** No defensive actions are permitted by the players prior to an OVR. Following an OVR, both players may engage in SFF (yelling "Stupid Freaking Feline!") if it makes them feel better.

### FOBA ERRATA

**F3.1 AREA TARGET TYPE:** insert "under DM (Deep Misery)" after "Rout" in the last line.

Insert "**F5.321 COLLATERAL ATTACK:** During Melee, it is possible for either the Catyusha or the player(s) to cause Collateral Damage to the playing area. The attack is made on the 4 FP (Flying Paws) table, with a -1 drm for each on-board stack with  $\geq 2$  counters."

*Continued from page 13*

introducing new squad types, various ordnance and vehicles, and the last of the old style mounted mapboards (at least for those who preorder it), board 52.

ASL Starter Kit #3—Tanks is right around the corner. The third game in our ASL beginner series introduces players to AFVs (tanks and armored cars). This builds on the first two starter kits covering infantry and guns (including an entirely updated ASLSK rulebook), but this is a stand-alone game, with everything you need to play right in the box, including boards t, u, & v (Of course, you buyers of J7 already have board v.) The Starter Kits have been very successful and we have big hopes for this one.

We have also been awfully busy on the non-ASL front, but we won't intrude into the ASL Journal with those details. You can find more information on your own at the Preorder section of [www.multimanpublishing.com](http://www.multimanpublishing.com).

Speaking of playtesting, we can really use a little help in this area. Playtesting new scenarios prior to publication is a vital yet mostly thankless job, and one dear to our hearts. MMP was formed out of the ashes of The Avalon Hill Game Company's internal playtest group, and Perry actually learned ASL in that environment. Playtesters receive no payment and no real glory, but do earn the thanks of your fellow hobbyists. There is a lot of cool stuff just around the corner that needs playtesting. Do your part to help the game you love. Drop Perry and Kevin a line about playtesting at [perrycocke@comcast.net](mailto:perrycocke@comcast.net). You won't regret it.

## WANTED:

Articles for future *ASL Journals*.

Authors gain a little fame (or notoriety) and even less money (\$30/page). Sounds great, right!

## SUBJECTS:

Up to you, really, but we prefer "how to play" articles, Series Replays, scenario or unit analysis, and the like.

## WHEN:

Right now! We're looking for articles for *ASL Journal #8*. In particular articles on the PTO, Japanese, and Marines. Email [perrycocke@comcast.net](mailto:perrycocke@comcast.net) for more information!



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