

STONIK

Brigade-Level Combat - Europe 1944



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INTRODUCTION

This is a set of wargame rules intended to simulate actions between about one brigade equivalent a side, supported by divisional or even corps troops where they would have been available.

The basic philosophy of the rules can be summarised:

- a. That morale and leadership are decisive factors in these battles
- b. Logistics is a critical factor, even in the battalion battle and is too often overlooked,
- c. Communications, command and control are very influential and central to conducting a battle
- d. Planning – especially artillery fire planning is a vital part of the battle, and again is too often overlooked.
- e. That technology is generally over-rated and minor differences between, say, tank types have been given too great a prominence in wargame rules. I have attempted to redress this.

Once you apply this philosophy – particularly to the battles in France and the Low Countries in 1944 it turns out that the focus of games moves away from waves of tanks hurtling across the fields, but a complex interplay of artillery, infantry and tanks – carefully orchestrated within an overall plan. Artillery fire planning takes a much higher importance in STONK than in many games – as does the operation of infantry. Using the information in these rules it is possible to simulate long battles – lasting days – including the all important logistics and preparation.



To make this work, in STONK the focus is on the operations of companies – with platoons and heavy weapons as the smallest units separately represented.

This is shown on the table top by models on a base of the appropriate size - the exact number or models per base can be varied to meet your own taste and financial resources – the game is perfectly playable without models at all, substituting counters for the models (this is certainly a cheap alternative for those without unlimited money).

It is important that players think of these bases as indivisible, and concentrate on the actions of companies and battalions as a whole – and my advice is to focus on the company as your basic sub-unit; treating platoons very much as subunits.

There are a number of lookup tables in the rules that have been specially designed to combine a whole load of relevant factors into a single die roll.

This means you can play without buckets of specialised dice – one or two d10s are all you need. And you'll find that looking up a single table is a lot quicker and easier than gathering and counting dice.

When starting out using these rules it is best to start small (as indeed it is with any new rules), and try out actions involving just one battalion a side. There is a sample scenario, map and counters with this edition of the rules to allow you to do this straight away – without even needing models.

It is important to continually bear in mind the ground scale used with these rules. 1:4000 (or 1cm = 40m) and this is very small.

If the models used were to this scale, then a tank would have to be about 0.75mm long, so the size of the models has very little direct relevance to the action. Players should be careful not to be misled by this, and where possible terrain should be in keeping with the ground scale rather than the model scale. Check out your terrain by looking at an ordnance survey map to see how large villages and woods actually tend to be in real life.

On the subject of scale; in 1944, a British armoured division could, and often would, attack on a frontage of one mile or less. This would be represented by a frontage of some 40 centimetres on the table top.

Of course, this would only constitute the leading brigade battlegroup, but within the terms of our rules, this means the whole wargame could be fought out over a frontage of less than half a metre. This gives you some idea of the possible concentration of effort that could be expected, and to warn you against the old wargaming cliché of spreading your models to fill the table space available. This will produce ridiculous and unhistorical results and look wrong.

A great deal of emphasis is placed upon the umpire in these rules, and he should have a good knowledge of the period first, and the rules second.

The rules can be used without an umpire, but the key elements of hidden movement and fog of war will be lost. Without fog of war it isn't really a WW2 wargame worthy of the name. Contrary to popular practice, there is no points system, since the forces used must be historical, and placed within a realistic military context from the period. In my view points just detract from that – encouraging players to have the 'best for the points' and 'equal armies' rather than a realistic historical and usually asymmetrical battle.

The best criterion for choosing your forces is whether they actually fought in the NW Europe Campaign and a short





search through one of the many excellent books on the period will settle the question. In any event, the scenario played usually determines the forces.

These rules are not to be treated as Holy Writ; they were not written with that intention, but simply as a set of guidelines for keen WWII wargamers to fight brigade battles of the type typical in NW Europe in the period.

The interpretation of the rules is therefore not absolutely fixed, but dependant upon the tactical

situation you are attempting to simulate.

Players and umpires should continually measure the results of their games with their own knowledge of the period, of what the units were actually capable, based on the history of the campaigns. You will get a lot more from your STONK wargame if you concentrate on reading up on the history in preference to using the letter of the rules to work out what to do. Rules lawyers will not find much to enjoy in STONK.

To help readers who are relatively new to the period, I have included a short bibliography and some web links at the end of the rules.

The rules are in two parts:

Part I is the bare bones with the main tables with little or no explanation – intended for the more confident wargamer or those who have already read the whole rulebook; In the header of each paragraph in Part I is a reference to the explanatory paragraph(s) in Part II to help you navigate the rules.

Part II is the fuller explanation of the rules given in Part I, with notes and examples, to try to put the rules in their proper perspective, as well as a handy glossary of terms for those not yet fully familiar with the period.



Good luck, and have fun.

Jim Wallman
Streatham 2006



PART I: THE BASIC RULES

1.1 SEQUENCE OF ACTION

	Rule references	
	Part I	Part II
1. Check orders & communications status	1.2	2.5
2. Target location	1.3	-
3. Direct fire calculations	1.4 & 1.5	2.7, 2.10, 2.13, 2.16
4. Infantry and Area fire calculations	1.4, 1.6 & 1.7	2.12, 2.13, 2.14, 2.16
5. Movement	1.9	2.15
6. Close assaults	1.11	2.11, 2.19
7. Check for morale and rallying	1.12, 1.13 & 1.14	2.6, 2.8, 2.9, 2.19
8. Update logistics status	-	2.16, 2.17
9. Engineering and digging	1.10	2.18

1.2 ORDERS AND COMMUNICATIONS

2.5

INFANTRY AND TANK ORDERS:

Issue Combat orders: 30 minutes per complete company or the equivalent ordered, per main objective.

To issue orders for movement only – i.e. not expecting combat: 40 minutes per battalion or equivalent.

ARTILLERY ORDERS

Activity	Time delay (mins)	(turns)
Opportunity Fire Bring effective fire from <i>one</i> battery on a target of opportunity	10 minutes	1
For each additional battery after the first	5 minutes	½
Registered Fire To bring effective fire on registered target	5 minutes	½
For each additional artillery regiment/battalion (or part)	5 minutes	½

Fire Plans

To prepare and communicate a fire plan takes 5 minutes per target, plus 5 minutes per battery. During planning, guns should not be used on other tasks.

If targets are speculative (i.e. unregistered or unobserved) then these times may be halved.

EXAMPLE: Fire plan of 7 targets with 3 batteries, and in the middle of planning one battery has to engage a target for 10 minutes; the calculations are:

7 Targets	=	35 minutes
3 batteries	=	15 minutes
Delays	=	10 minutes
Total planning time	=	60 minutes

Setting up Artillery

Set up battery position	40 minutes (4 turns) for artillery
	20 minutes (2 turns) for SP Artillery
	20 minutes (2 turns) for heavy mortars
	10 minutes (1 turn) for mortars

RADIO COMMUNICATION:

Orders are normally conducted via a face-to-face 'O' group meeting, and the delays in setting this up are built in to the orders times.

In some cases, orders have to be distributed by radio, telephone or runner. This is unreliable at the best of times, and so where an O-Group would not be possible, roll 1d10 (0=0)- score as follows for the effect of communication delays:

Score	Effect
Less than 3	Orders take twice as long to complete
3 - 6	Orders take 20 minutes longer to complete
7 or more	Orders not delayed at all

Factors

- +2 Signal Platoon or equivalent with the formation HQ
- +1 Mainly US units
- 1 Mainly German units



1.3 TARGET LOCATION

Roll 1d10 per company-sized unit (or equivalent) observing (0=0).

Target:	IN OPEN		IN COVER		DUG IN	
	Not firing	Firing	Not firing	Firing	Not firing	Firing
Vehicle Units or guns being towed						
Platoon / Troop	4	2	6	4	7	6
Company / Sqn	3	2	5	3	6	5
2 Companies /sqns	2	1	4	2	5	4
Battalion	1	0	3	1	4	3
More than a Battalion	0	-1	2	0	3	2
Deployed Guns						
Half Battery or Isolated A/Tank	5	3	6	4	7	6
One Battery	4	2	5	3	6	5
Two Batteries	3	1	4	2	5	4
Battalion or more	2	0	3	1	4	3
Deployed Infantry						
Isolated Platoon	6	4	8	6	10	9
Company	5	3	7	5	9	8
2 Companies	4	2	6	4	8	7
Battalion or more	3	1	5	3	7	6

Additions to the die roll:

OBSERVER IS:

Moving	-2
Pinned	-2
Suppressed	-4
Less than half a company	-1
Under smoke	-6
Veteran	+2
Green	-2

TARGET IS:

Moving	+2
Non-tactical	+2
Fired before from same position	+2
Green	+1
Veteran	-1
Under 200m (5cm)	+2
Over 1000m (25cm)	-1
Over 2000m (50cm)	-3
More than one company	+2

Maximum visibility will be defined by the umpire, but is normally from 2000-5000 metres. In bocage country the maximum visibility is around 100-400 metres.

Night

At night maximum visibility is reduced to 1000 (25cm) metres in moonlight / artificial moonlight, or 200m (5cm) otherwise. An illuminating round creates the same effect as moonlight for a radius of 400m (10cm) from target point for one turn.

1.4 EFFECTS OF FIRE

Troop Type	P = PINNED	S = SUPPRESSED
Infantry	Veteran may move up to 1cm All other class may not move. May fire.	Cannot move or fire.
Armour	Veteran may continue at max 5cm. All others may not advance. May fire.	Cannot fire. Must withdraw at least 200m (5cm)
Artillery	May not move. Dug in artillery may fire. Otherwise may not fire.	May not fire or move.

1.5 THE STONK ARMOUR TABLE™

2.7, 2.10, 2.13, 2.16

Used for direct firing on vehicle units. Roll 1d10 (0=0)

WEAPON RANGE BANDS IN METRES (cm)	Light Infantry AT				-	-	-	Point Blank	100
	Infantry AT				-	Point Blank	-	100	-
	Heavy Infantry AT				Point Blank	100	-	-	-
	Medium AT Gun				400	800	1000	2400	-
	Heavy AT Gun				600	1200	2000	3000	-
	Light AT/Tank Gun				100	300	700	1000	2000
	Tank Gun				300	600	1200	2000	-
	Heavy Tank Gun				500	1100	1600	2500	-
INDIRECT FIRE WEAPONS					AIR STRIKE	MEDIUM ARTY	FIELD ARTY	MORTAR	
Die Score	↓Target Situation ↓				RESULTS				
	Stationary in Open	Moving in Open	In Cover	Hull Down	↓	↓	↓	↓	↓
	-	-	-1	1 or 2	P	-	-	-	-
	-1	-1 or 0	0 to 3	3 to 6	P	P	-	-	-
	0	1	4	7	1P	P	P	-	-
	1 or 2	2 or 3	5 or 6	8 or 9	1P	1P	P	-	-
	3	4	7	10 +	2P	1P	P	P	-
	4	5	8	-	2S	2P	1P	P	-
	5	6	9	-	2S	2S	1P	P	P
6 or 7	7 or 8	10+	-	3S	2S	1P	P	P	
8+	9+	-	-	3S	2S	1S	1P	P	

Additions to die roll:

Firer Pinned	-1	Target Light armour	+1
Disappearing target	-2	Firer moving	-3
Target heavy armour	-1	Target TIGER TANK	-2
Target non-tactical	double effect		
Target under fire from more than 1 direction	+1		

1.6 INFANTRY AND ARTILLERY TABLES 2.12, 2.13, 2.14, 2.16

Use on Infantry-type targets and deployed guns. Roll 1d10 (0=0).

Double effect on non-tactical targets.

DDI = Deeply dug in.

DI = Dug in.

IC = In cover/APC

SIO = Stationary in open.

MIO = Moving in open.

TABLE A: INFANTRY TYPE WEAPONS:

Range Band	Up to 400m (10cm) and Medium Mortars					Up to 800m (20cm)					
Die score	DDI	DI	IC	SIO	MIO	Die score	DDI	DI	IC	SIO	MIO
0	-	-	-	-	-	0	-	-	-	-	-
1	-	-	-	-	P	1	-	-	-	-	P
2	-	-	-	P	P	2	-	-	-	P	P
3	-	-	P	P	1P	3	-	-	P	P	P
4	-	P	P	P	1S	4	-	-	P	P	P
5	P	P	P	1P	1S	5	-	P	P	P	1S
6	P	P	P	1S	1S	6	-	P	P	P	1S
7	P	P	S	1S	2S	7	-	P	P	S	1S
8	P	S	1S	1S	2S	8	-	P	S	1S	1S
9	S	S	1S	2S	2S	9	P	P	S	1S	2S
10	S	S	1S	2S	2S	10	P	S	S	1S	2S

TABLE A : FACTORS AND MODIFIERS:

Firer pinned	-1	Per casualty over 2 SP.	-1
Heavily Armed Infantry / MMG	+1	Speculative fire	-3
Lightly Armed Infantry	-2	Firer Veteran Infantry	+1
Target Green Infantry	+1		

TABLE B: TANKS OR CLOSE SUPPORT TANKS OR EQUIVALENT:

Range Band	Up to 400m (10cm)					Up to 1000m (25cm)					
Die score	DDI	DI	IC	SIO	MIO	Die score	DDI	DI	IC	SIO	MIO
0	-	-	-	P	1S	0	-	-	-	-	-
1	-	-	P	P	1S	1	-	-	-	-	P
2	-	P	P	P	1S	2	-	-	-	-	P
3	P	P	P	P	1S	3	-	-	-	-	P
4	P	P	P	1S	1S	4	P	P	P	P	P
5	P	P	S	1S	1S	5	P	P	P	P	1S
6	P	S	1S	1S	2S	6	P	P	P	P	1S
7	S	S	1S	1S	2S	7	P	P	S	S	1S
8	S	1S	1S	2S	3S	8	P	P	S	S	1S
9	1S	1S	2S	2S	3S	9	P	P	S	S	1S
10	1S	1S	2S	3S	3S	10	P	S	S	1S	2S

TABLE B : FACTORS AND MODIFIERS:

Moving vehicle	-2	Less than 3 SP.	-2
Firer pinned	-1	Speculative fire	-3

TABLE C: ARTILLERY WEAPONS:

Weapon Type	Heavy Mortars / Field Artillery					Medium Artillery / Air					
Die score	DDI	DI	IC	SIO	MIO	Die score	DDI	DI	IC	SIO	MIO
0	P	P	P	P	1S	0	P	P	P	S	1S
1	P	P	P	P	1S	1	P	P	P	1S	1S
2	P	P	P	P	1S	2	P	P	P	1S	1S
3	P	P	P	P	1S	3	P	P	P	1S	2S
4	P	P	P	S	2S	4	P	P	S	2S	2S
5	P	P	P	1S	2S	5	P	P	1S	2S	2S
6	P	P	S	1S	2S	6	P	S	1S	2S	2S
7	P	S	S	1S	2S	7	S	S	1S	2S	3S
8	S	S	1S	1S	2S	8	S	1S	1S	3S	4S
9	S	1S	1S	2S	3S	9	1S	1S	2S	3S	4S
10	S	1S	2S	2S	3S	10	1S	2S	2S	3S	5S

TABLE C: FACTORS AND MODIFIERS:

Heavy Rate of Fire (double ammo)	+2	Per casualty over 2 SP.	-1
Firer pinned	-3	Speculative fire	-3
Air attack	+2		

For each AA unit per air unit within 500m (12.5cm) of target area -1 (see notes).
 Unobserved map fire: counts as speculative.
 Unmarked minefields are treated as medium artillery when first encountered.

1.7 ARTILLERY BEATEN ZONES 2.14

Type	Beaten Zone	Tabletop template
Mortar Battery	150m x 150m	4cm x 4cm
4 Gun battery	100m x 300m	2.5cm x 7.5cm
6 Gun battery	150m x 300m	4cm x 7.5cm
8 Gun battery	200m x 300m	5cm x 7.5cm
MMG platoon	100m x 100m	2.5cm x 2.5cm
Air strike (3-4 aircraft)	500m x 500m	12cm x 12cm

Safety zones: i.e. the closest friendly troops will approach own bombardment

Artillery	200m (5cm)
Aircraft	5000m June 1944
	1000m August 1944
	500m September 1944 onwards

Fire zones for artillery may be varied in shape provided area remains constant.

1.8 SMOKE

Tank smoke (from main armament) lasts one move (10 minutes), and is 200m (5cm) in diameter.

Artillery smoke lasts one move and is 100m (2.5cm) frontage per gun.
Smoke from tank smoke dischargers (where fitted) is not separately represented as it is subsumed in the combat results.

Mortar smoke lasts one move and is 40m (1cm) frontage per tube.

1.9 MOVEMENT

2.15

Unit Type	Tactical		Non-Tactical	
	metres	cm	metres	cm
Armour or APC	600	15	2000	50
Fast armour or carriers	800	20	2000	50
Slow armour	400	10	1600	40
Armoured cars	800	20	3000	75
Infantry	200	5	600	15
Horse transport on roads	200	5	1000	25
Horse transport off roads	100	2.5	Not possible	Not possible
Lorries on roads	600	15	3000	75
Lorries off road	200	5	Not possible	Not possible

Movement Restrictions:

Minefields	Maximum of 100m (2.5cm) move for all units until cleared.
Open woods	HALF speed for tracked armour IMPASSABLE for lorries. QUARTER speed for light armour or armoured cars, or small wheeled
Close woods	QUARTER speed for tracked IMPASSABLE for wheeled vehicles
Forest	IMPASSABLE for all vehicles HALF speed for infantry
Low density built up area	HALF speed for all vehicles
Dense Built-Up area	HALF speed for all troops
Deploying / Mounting from/to vehicles	Always takes one turn
Deploying Antitank guns/ mortars	Always takes one turn



1.10 DIGGING IN

2.18

	Shell scrape = 'In Cover'	Dug In	Deeply Dug In
Infantry			
Not under fire	60 mins (6 turns)	3 hours (18 turns)	
Digging whilst pinned	70 mins (7 turns)	4 hours (24 turns)	12 hours (72 turns)
Digging whilst suppressed	80 mins (8 turns)	5 hours (30 turns)	
Guns or Vehicles			
Not under fire	n.a.	8 hours (48 turns)	n.a.
Under fire	n.a.	12 hours (72 turns)	n.a.
Engineers			
Platoon with mechanical diggers digging company-sized infantry position or battery sized artillery position	30 mins (3 turns)	1½ hours (9 turns)	6 hours (36 turns)

A platoon of pioneers supporting a company reduces the time by 25%

1.11 CLOSE ASSAULT

2.11, 2.19

Close assaults can only take place in the same move if the assaulting troops have moved less than half their move

Otherwise the calculation of the close assault is carried over to the following move.

Close Assault Score = 1 point per strength point of infantry, armoured cars or armed halftracks, 2 per tank or any type, or 4 per close support tank.

Tanks and Close Support Tanks score half their value in close woods or built up areas.

Roll 1d10 per side (0=0), add **leadership score**. Add following:

Deeply dug in	+4	Unsupported tanks	-2
Dug in	+3	Surprised	-2
Attacking from more than 1 direction	+2	Outnumbered 2-1 in	-1
Pinned	-1	„ 3-1	-2
Suppressed	-3	„ 4-1	-3
Non-tactical	-3	„ 5-1	-4
Specialist close assault / Flame throwers	+2	Tiger tanks	+2

RESULTS TABLE

Take difference in resulting scores: **Attacker final score minus defender final score.**

SCORE	RESULT
5+	Position carried. Attacker pinned on position, defender surrenders. If defender deeply dug in then attackers take 1P for every defending unit
1-4	Position taken. Defender successfully withdraws 200 metres. Attacker takes 1P per defending unit. All Defenders take 1P each.
0	Confused fighting over trenches. First round Attacker takes 2P per defending unit. Defenders take 1P per attacking unit. Second round both take 1P per enemy unit.
-1 to -4	Attacker halted at 100 metres and takes 1P per defending unit.
-5 to -8	Attacker halted at 100 metres and takes 2P per defending unit.
-9 to -12	Attacker halted at 100 metres and takes 3P per defending unit.
Less than -12	Attacker breaks and runs non-tactical to nearest cover to rear. Takes 3 per defending unit, and is suppressed on arrival at nearest safe cover. If last move was a 'confused' close assault result then attacker surrenders.

1.12 MORALE

2.8, 2.9, 2.19

Morale is tested for each company in the following circumstances:

- The moment it encounters a Big Surprise
- At the point it :
 - Drops below 75% strength
 - Drops below 50% strength
 - Drops below 25% strength
- Every turn it is below 10% strength

Throw 1d10 (0=0). Additions to the die score :

+ Leadership score for company	-2 if Morale Shaken
+2 if dug in	-2 if suppressed
+2 if on captured objective	-2 for green troops
+2 for veterans	-1 if below 75% strength (in SP)
+1 in cover / buildings	-3 if below 50% strength (in SP)
	-5 if below 25% strength (in SP)

Results

Score 4+ Company Ok, may fight on

Score 0-3 Morale Shaken.

Score less than 0 Demoralised – surrender to enemy if within 200m (5cm)

Demoralised units may NOT:

- Reorganise
- Fire
- Advance
- Communicate sensibly (for arty calls)
- Locate targets.
- In addition the demoralised unit's leadership is reduced by 1.

1.13 RALLYING

2.6, 2.9

When a unit becomes pinned or suppressed it will remain so until rallied.

This is treated as follows:

Roll 1d10 (0=0), add leadership score. If the result is greater than or equal to the units rally score, then the unit has rallied one level.

This will normally move the units status from suppressed to pinned, or from pinned to Ok.

If the result is double the required rally score then the unit can rally two levels.

If the original pinned or suppressed result was caused by an air attack or flame thrower unit, the -2 from all rallying rolls.

If the rallying unit is still under fire whilst trying to rally , -1 from die roll.

Typical rally scores :	Good troops	= 4
	Average troops	= 6
	Poor troops	= 8

1.14 TROOP QUALITY

2.6

Veterans are always pinned by fire whatever the result.

Green units may ignore pinned results if attacking (i.e. moving forward to the objective).

Note that suppression is unaffected – no matter how good the troops are.





PART II: EXPLANATIONS

2.1 METHOD OF PLAY

There are two distinct methods of play, depending upon your personal preference and the availability of an umpire.

- A. **Alternate Moves.** The first method is primarily for those without umpires. Each bound is split, opposing players moving their forces alternately. In each player's part of the move, the sequence of action at Para 1.1 is followed. When measuring time expired for communications etc, count one side's moves only. This method does have serious shortcomings, in that one side has only a limited opportunity to react to the actions of the other. It is important therefore to bear in mind that all actions of both sides are in fact occurring simultaneously, and that the alternate move is merely a game convenience. In certain critical circumstances, a defender should be allowed to fire during an attacker's movement phase, where he might otherwise have unrealistically missed his opportunity to fire. It is up to the players to agree on the reasonableness of any particular action. If nothing else is achieved, the alternative move game can a little faster moving than the simultaneous move method below, but it is less than ideal.
- B. **Simultaneous Moves.** The second method requires the use of an active umpire for it to be fast moving, although it will work without an umpire provided that the players are sufficiently non-competitive. In this case the sequence of action is carried out simultaneously for both sides. Interaction disputes are dealt with by the umpire(s). In this format, much greater emphasis is normally placed on proper orders, briefings, maps, communications and concealment.

In either case, it is important to conceal, preferably by marking on sketch maps, the location of forces that would not be in sight. This is where an umpire is essential for determining intervisibility.

Another excellent method of achieving game concealment is to have one or more identical terrain models, separated by a screen, or in separate rooms. Each side has its own table, and the umpire places on only those enemy forces that have been located and reported. Obviously, this method requires duplicate forces and terrain. The method can be further extended to include extra tables for detached forces from the same side, in separate rooms, to enforce the real confusion and communication problems. Clearly these more involved methods require more umpires and extensive



facilities. As a guide, there should be at least one umpire per separate table or terrain model, up to an ideal maximum of one umpire per player.

2.2 SCALES AND GROUND

Each move represents about 10 minutes of real time.

The ground scale for the terrain model should be 1:4000 (i.e. 1cm = 40 metres or 1" = 100 metres)

Each model gun or tank or vehicle represents whatever is convenient, in fact models are entirely optional. It is the area of the base which is important.

When designing terrain models, be especially careful to get the relative positions of terrain feature correct for the area. Reference to readily available 1:25000 O/S maps is a useful guide.

2.3 BASE SIZES

The following are guidelines on base sizes for units. It is clearly impracticable to rule on every conceivable type of unit to be found in the NW European theatre during 1944/45, but following are the main types, with guidance on how to draw up bases for larger or smaller units where appropriate.

Unit Type	Frontage	Depth
Infantry platoon, mortar platoon, engineer platoon	40mm	20mm
Infantry HQ, Antitank section (2-3 guns), MMG Section (2 guns), British Carrier Section (4 vehicles)	20mm	20mm
Armoured Personal Carrier Platoon of 4 or 5 vehicles This is the vehicle element of an APC platoon – the infantry component is separately represented by a normal infantry platoon base.	30mm	30mm
Lorry companies (around 20 vehicles) Horse transport companies (around 20 vehicles)	10-15mm (or as appropriate for the model)	80mm
Artillery Batteries are rarely represented on the table, and in some cases can be greatly dispersed or split into sections of 2 or 3 guns.	10mm per gun represented	as convenient (20-30mm).
Tanks and SP Guns.		
1 or 2 vehicle units	20mm	20mm
3 to 4 vehicle units	30mm	30mm
5 or more vehicle units	40mm	30mm

The bases represent the normal area occupied by the unit when deployed for action. In some circumstances, units would have to operate in denser formations, for example in bocage or towns. If you wish, duplicate units to represent this close order, down to a minimum of half the dimensions given above.

When organising your units, it is vitally important that you include the relevant tail units.

Logistics are important in this game, and the presence of tail units has a battle-winning function.

2.4 ORGANISATION

A. INFANTRY. The basic sub-unit of the company is the platoon. This is generally regarded as indivisible, the only exceptions being Carrier platoons, MMG platoons and anti-tank platoons which are often broken up into sections and allocated out to companies.

Platoons are grouped into companies, and companies into battalions, in accordance with the historical army order of battle (ORBAT).

MMG sections represent two weapons. Anti-tank sections represent 2-3 guns, and mortar platoons represent 6-8 tubes (12 tube batteries are therefore represented by two bases). Runners, jeeps etc are assumed to be in use by all units, and these do not need to be separately represented, or even considered separately.

B. ARMOUR. The basic sub-unit for armour is the troop/platoon. These will be grouped into squadrons/companies in accordance with the appropriate army ORBAT.



C. ARTILLERY. The basic unit for artillery is the battery (normally of 6-8 guns), which in most armies would be grouped into regiments or battalions. Batteries could, on occasion, be dispersed over a wide area, and in this case, it is acceptable to base the battery in section (2-4 guns) units. This applies particularly to the common German practice in the face of superior Allied artillery and air power.

Forward observation officers for the batteries and regiments do not have to be represented separately.

Designating particular units as having specific artillery units 'attached' simulates the effect of an attached FOO.

It is a good idea to have a map for off-table artillery (i.e. usually almost all the artillery resources in a scenario).

2.5 ORDERS AND COMMUNICATIONS

The following rules on orders might be thought of as restrictive, and therefore easily ignored in practice.

They are, however, central to any realistic simulation of warfare in this period, and umpires and players should insist on proper preparation and communication delays at all times.

Each unit at company level and above will be given orders consistent with its objectives. These objectives will be defined in accordance with general orders either given by the umpire as part of the scenario, or generated in another, separate, planning game. These higher orders represent Division or Corps operational directives. In the absence of an umpire or planning phase, the players can use an historical situation or arrive at some agreement between themselves on force levels and orders.

Company/squadron groups should not be split up, unless (in the case of armour for example), units are attached in support. As a guide, elements of a company/squadron should not move more than 400 metres (10cm) from the next element in the same company/squadron. Units may only react to events or targets that they are directly aware of, or have been reasonably informed of by friendly units.

The umpire(s) should penalise players moving or ordering troops apparently by telepathy.

It might be stating the obvious, but your units may only engage targets or react to events they are actually aware of. (See Para 1.2).

IMPORTANT: Issuing orders and communicating information ALWAYS takes time.

Direct support artillery fire is that from an artillery unit or units allocated specifically to the calling unit for the operation, and therefore under its command. This must be written into the initial fire plan.

Registered targets are those that have known range and bearing, ie. fully ranged in once already. It takes 20 minutes to register a target, during which time the registering battery cannot be doing anything else, and the target point must be in view of friendly forces.

Changing a battery position is a difficult and time consuming process, involving surveying the gun positions, taking accurate bearing of grid location, as well as dumping ammunition, and preparing vehicle routes to and from the position, together with laying telephone cables etc. If the battery is to be dug in, then the digging in time (Para 1.8) is additional to the setting up time for the battery.

Orders for infantry and tanks (Para 1.2)

These are very general rules of thumb for timing plans and order issuing delays. There are many circumstances, which will slow this down, such as coming under fire, or being in action at the time, or some special communication difficulties.

The umpire will generally rule on the degree of delay.

It was not only difficult, but virtually impossible for a unit to attack anything without having issued orders or had some form of briefing beforehand.

Suppressed units cannot issue or receive orders.

2.6 TROOP QUALITY

The troop quality falls into three, easy to remember, categories:

A. VETERAN TROOPS. These are units with a high proportion of experienced officers, NCOs and men. An example of this would be some of the ex-North African campaign troops, 7th Armoured Division for example. Veteran troops were very wary of being killed, since they have seen too much of it, and had lived to be veterans by keeping their heads down at the right moment!

B. AVERAGE TROOPS. There is little to say about these. The rules make a number of assumptions on the general behaviour of troops in this theatre. Average troops are therefore, by definition, those represented by the normal rules. Any troops you cannot be bothered to classify remain average.

C. GREEN TROOPS. These are troops who have, mostly, seen no previous action. An example might be some of the battalions of British 3rd Infantry Division, or many of the American units.

These are troops who have trained long and hard, and by 1944 feel somewhat left out of the fighting (if Allied), or have been psyched up on propaganda (some German units). I regard green troops as



being easier to hit, because they have yet to learn the essential differences between exercises and battle, and are less cunning in their use of ground etc. They are also less effective with their weapons (a measure also of the quality of junior leadership in the siting of weapons etc). Green troops will, however, attack anything - because all the gung-ho ones have not been killed off yet!

2.7 PINNED & SUPPRESSED ARMOUR

Yes, tanks can become pinned or suppressed. This represents the confusion, dismay and disorientation that seems to have occurred when tank units, particularly in Normandy, came under fire.

Even the crew of a single tank can suffer very badly from the 'What In Hell Is Happening' syndrome.

So, in the rules, the P and S results represent general degradation of the units effectiveness and the immediate local tactical reaction of the tank commanders and crew, without there necessarily having been casualties inflicted.

The net effect is that tank attacks can be successfully 'broken up' by defensive fire and artillery as they were historically.

As with everyone else, tank units must rally from pinned or suppressed results.

2.8 MORALE

There is no turn by turn morale throw in the normal form, since the immediate reaction of troops to fire is represented by the pinned/suppressed result.

There is, however, a general morale test of a company's will to fight on after specific 'break points' – usually either as a result of significant losses, or the impact of a 'Big Surprise' (see below). The test (Para 1.12) is to determine whether the unit is demoralised and takes no further actions

Some definitions:

Big Surprise. This is something best ruled on by an umpire. It is not merely that a previously unlocated enemy opens fire – that is commonplace.

It is intended to be when a major shock occurs – the unexpected appearance of the enemy deep in the rear, for example – or enemy in a location thought to be held by friends.

Armoured units that become demoralised are counted as permanently suppressed.

Once they have withdrawn to safety, the umpire will decide how long it will take the unit to recover. In the absence of an umpire the unit will take 1d10 x 3 hours to recover.

Infantry units demoralised will break and run (non-tactically) for secure cover to the rear. If the enemy are within 200 metres, or retreat is impossible, then they will surrender, or wait to be captured.

2.9 LEADERSHIP

There has already been some reference to the concept of leadership. It is clear from a brief study of actions in this period that the qualities of leadership could often distinguish between success and failure in battle. Whilst the player himself is demonstrating, in a very limited way, a few of the qualities of leadership this is not the whole story. Within any unit there are many junior leaders upon whom the player is implicitly relying. Leadership score is used to modify a number of results, in particular morale and close assaults.

If the scenario or umpire has not pre-allocated this score then use the following table for each company and for each battalion commander (and higher). Roll 1d10 (0=0):

Score	Leadership
0	0
1 - 5	+1
6 - 8	+2
9	+3

The factor is used in the rules in the following circumstances:

- i. In rallying from pinned or suppressed.
- ii. As a factor in close assaults.
- iii. When testing for demoralisation.

The battalion commander can personally intervene in the above process, provided the player is prepared to take the risk.

If the role is not played by a player, then roll the commander's leadership or less on 1d10 (0=0) for him to intervene.

The battalion commander is NOT the same thing as his HQ, which is a unit in its own right, and the Battalion commander should be separately represented, either with a suitable counter, or separately on a map.

If he comes under fire then roll 1d10 (0=0), score 0 to become a casualty. When a new commander is appointed, dice for his quality as above.

2.10 THE STONK ARMOUR TABLE

This table is to be used when the target is an armoured vehicles of some sort.

It should not be used on soft-skinned vehicles which are counted as infantry-type targets.

The table looks a little complicated, but is in fact easy to use after a bit of practice. First look for the firing weapon category, and the range band on the top half of the table.

Refer down the appropriate column to the lower half of the table. Check the die score (plus additions) for the result. Easy.



Some Definitions:

Light Inf. AT = Infantry platoons with AT rifles or AT grenades only, i.e. poorly equipped for the anti-tank role, such as Volksturm or partisans.

Infantry AT = Infantry platoons with effective AT weapons such as the PIAT, Panzerfaust or Panzerschreckt.

Heavy Inf AT = Infantry platoons specialising in the ATk role, with exceptional numbers of effective man portable AT weapons.

Medium AT gun and Tank Gun = 6pdr, 75mm, 57mm, 77mm etc. The standard anti-tank guns capable of knocking out most vehicle types.

Heavy AT gun and Heavy Tk gun = 88mm, 3.7" AA, 17pdr etc. Heavy weapons capable of knocking out virtually all vehicle types.

Light AT and Tk gun = 2pdr, 37mm, 50mm etc. Obsolete or largely ineffective weapons usually found on light armoured vehicles. Not often found in the ATk role in this period.

Indirect fire = use the range bands indicated for the different types of indirect fire weapon:

AIR = air-strike;

Medium Arty = Medium artillery or mines;

FIELD = Field artillery or heavy mortars;

MORTAR = Medium mortars (not including 2 Inch / 6.0 cm mortars)

Within the results table;

A number = the number of vehicles KO'd in target unit;

P = target pinned

S = target suppressed

Multiple S or P results are no show – just a single P or S counter is needed on a given unit.

Non-tactical = the unit is not ready for combat in any way. Non-tactical units may not fire.

Target fired on from more than one direction = this reflects the vulnerability of tanks to flanking or rear fire. It is assumed that the unit will always manoeuvre to bring its front round to face incoming fire, but when fired at by enemies more than 90° apart, this becomes impossible.

2.11 THE CLOSE ASSAULT

The close assault rule (Para 1.11) assumes that the purpose of most attacks is to eject dug-in infantry from a defensive position.

In this theatre, it is achieved by an infantry assault, supported closely by tanks or assault guns, and prepared by lavish artillery bombardment (if Allied), or not so lavish (if German).

The exact area and strength of a defensive position is not always easy to define, so when the attack is adjudicated, the umpire (or the players by agreement) should determine how many defenders are involved in a single attack.

This could be a single MMG section, or a whole company, as circumstances dictate - but normally it is based on single platoons plus their supporting weapons (if any).

EXAMPLE:

A single German infantry platoon (6 strength points) dug in on the edge of a wood, supported by an MMG section (4 strength points). It has a leadership of +1. This is attacked by two rifle platoons (8 SP. each) and a Sherman tank troop (4 tanks), after a 30 minute bombardment from 25pdr battery. They have a leadership of +2. The bombardment suppressed both the MMG and the infantry platoon.

Total German strength = 6 + 4 = 10
 Total British strength = 8 + 8 + (4x2) = 24

Each side rolls 1d10:

	German roll = 5		British roll = 4	
Factors:	German		British	
	Dug in	+3	Leadership	+2
	Suppressed	-3	Die roll	+4
	Outnumbered 2-1	-1		
	Leadership	+1		
	Die roll	+5		
	-----		-----	
	Total	5	Total	6

Result: Attack minus defender: 6 - 5 = 1
 Position Taken, the defender withdraws 200 metres into the wood, and loses 1 s.p. per unit, and is pinned at the end of the move. Of the attackers, each infantry platoon takes 1 casualty, and the whole force is pinned on the objective. It will need to rally to continue the attack. Note: the tanks could just as easily have taken a casualty instead of the infantry, you can dice for where the casualties fall, or the umpire will make a judgement.

Some Definitions:

Close Support Tank = Any SP artillery used in the Close Support role, or 95mm Howitzer-armed Close Support tanks, or the equivalent.

Unsupported Tanks = Tanks close assaulting with no infantry with them. This was, at the time, regarded as risky, and highly unpopular with tank crews.

Undeployed = APC mounted troops attempting to 'shoot their way in' to a position, or other troops caught in a non-tactical position. This might be applied to bunched troops.

Specialist Close Assault Troops = Assault engineers, troops or vehicles with flamethrowers etc.

Attacked from more than one direction. Defensive positions in fox holes can usually engage incoming enemies from any direction. However what really upsets the defenders is being attacked from multiple directions – in this case from angles more than 90° apart.

2.12 INFANTRY & ARTILLERY TABLES

These tables are to be used when the main target is infantry or soft skin vehicles.

The weapons have been grouped into very broad bands. The tables themselves are self-explanatory:

Within the results table;

1,2 3 etc = the number of strength points lost in target unit;
P = target pinned
S = target suppressed
Roll 1d10 (0=0) per unit firing.

TABLE A: FIRER WITH INFANTRY TYPE WEAPONS.

One of the main assumptions here is that infantry firepower is primarily defined by its light machine guns at most ranges. There are modifiers that adjust results for units with greater or fewer numbers of LMGs.



Included in this group are:

- Platoons of infantry
- Platoons of machine gun armed halftracks (such as those used by mechanised infantry)
- Armour car platoons
- Carrier platoons
- Old tanks without a weapon that can fire high explosive.

For mortars fire use the 'Up to 400m ' range block.
This refers to medium mortars, i.e. 3" or 81mm or the equivalent.
Larger mortars are classed as field artillery.

TABLE B: FIRER TANKS OR CLOSE SUPPORT TANK OR EQUIV.

The overall effect of close range fire from medium tanks on infantry type targets is much the same whatever the calibre of tank gun or type of tank.
However, occasionally lighter armour, such as armoured cars and some light tanks might get involved in a close support role. In this case treat them as 'infantry weapons' as in TABLE A – as they are mainly using their machine guns (see above)

TABLE C: FIRER ARTILLERY WEAPONS.

Field artillery is a self-explanatory term, covering weapons such as 105mm, 25pdr, 150mm IG (the small ones), and 4.2" or 120mm mortars.
Medium Artillery is defined, for the purposes of these rules, as anything larger than field artillery. I have found few references to any additional effect of the super heavy units, any in any case their lower rates of fire probably offset any advantages of weight of shell, so it is probably sufficient to include them in the medium class.

FACTORS AND MODIFIERS.

Heavy Rate of Fire – this is permitted for field artillery or mortars for one move in any hour. For them it consumes **two ammo points** per turn to use a heavy rate of fire.
Medium and heavier artillery can't do this.

Heavily Armed Infantry are those units with more than the usual number of light machine guns per platoon – such as British Carrier Platoons, German Panzer Grenadiers and US Mechanised infantry.

Lightly Armed infantry are those units with fewer than usual light machine guns – such as rear-area troops, gun crew or partisans.

Speculative fire is any fire at unlocated targets.

Air attacks – the rules do not go into detail about the effect of AA – in most cases AA does not prevent an air attack, but it can distract the aircraft and reduce the effect. So we look at the number of AA platoons or the equivalent within 500m of the air attack beaten zone, and for each AA unit per air attack the attacker take a –1 on the die.

GENERAL DEFINITIONS.

Deeply Dug In: Troops in bunkers, fortified cellars, pillboxes or other deep field defences with strong overhead cover.

Dug In: Troops in foxholes or mostly open trenches, or defending buildings. Also troops in Kangaroo type APCs can be counted as dug in.

In cover/APC: Troops occupying woods, close hedgerows (ie. bocage), forests, or in open or light APCs such as carriers, Sdkfz 251, or M3 halftrack.



Stationary in open: Troops making the best use possible of dead ground, small hedges, ditches or other terrain features not specifically represented on the table top.

Moving in open: Troops moving tactically across the open where necessary, using any available cover, but necessarily presenting a more vulnerable target.

Non-tactical. Troops may also move non-tactically (see Para 1.9). Although they are moving faster, they are not seeking cover or being cautious so they are much more vulnerable to fire. Any troops making a non-tactical move automatically DOUBLE all incoming fire effects on them. Non-tactical troops may not fire.

2.13 STRENGTH POINTS

All units are composed of a number of strength points (SP).

For vehicle and armoured units, 1 SP represents one vehicle.

For infantry it is 1 SP per 4-5 men approx. When an infantry unit loses all its strength points it has not, in fact, been wiped out to a man, but merely ceased to function as a unit. As a rough guide, one infantry strength point lost equates to one killed and two wounded.

Examples of unit strengths:

Infantry platoons	8 points
HQ Elements	4 points
Mortar platoons	1 per tube

Artillery Batteries	2 per gun
Anti-tank sections	2 per gun
MMG Sections	2 per gun
Carrier platoons	4 sections each of 4 points.

2.14 ARTILLERY RANGES

This is a guide to the main types in use. Note that when planning artillery an fire plan, maximum effective range was taken as about 70% of the ranges given below.

British Weapons:		range	class			range	class
4.2" mortar		4,000m	Field	3" mortar		2,600m	Mortar
25pdr Gun/How.		12,400m	Field	5.5" howitzer		16,600m	Medium
3.7" AA in fld role		14,600m	Field	4.5" gun		20,000m	Medium
75mm pack how.		9,500m	Field	7.2" howitzer		16,500m	Medium
U.S. Weapons							
155mm How.		14,800m	Medium	8" Howitzer		32,300m	Medium
105mm Field M3		7,300m	Field	105mm Howitzer		12,500m	Field
81mm mortar M1		3,000m	Mortar	75mm field gun		8,900m	Field
German Weapons:							
15cm Inf How sIG33		4,800m	Field	12cm mortar		6,100m	Field
10.5cm Field IFH43		16,500m	Field	7.5cm Inf How IG18		3,500m	Field
10.5cm IFH18M		12,300m	Field	IG37		5,200m	Field
8.1cm Mortar		2,400m	Mortar	8.8cm Flak as Field		14,000m	Field
7.5cm Mtn Gun GebG36		9,200m	Field	10.5cm How GebG40		16,900m	Field
7.62cm IK 290(r)		8,700m	Field	Nebelwerfer		6,000m	Medium
General Weapons:							
MMG/HMG indirect		2,000m	Mortar	Tank guns indirect		8,000m	Field

2.15 MOVEMENT

There is, in these rules, no attempt to reflect the minor technical differences between vehicles.

Movement in these rules is perhaps more properly called 'rate of advance'. The distances allowed for movement already assume a great many minor obstacles, that would be impracticable to model on a normal wargame terrain model.

The practical distinction between non-tactical and tactical movement is self explanatory, as are the main unit types.

If it has not been defined already in the scenario, use the following table to determine the density of woods, rolling 1d19 (0=0):

Score	Wood type
0 - 4	Open wood
5 - 7	Close wood
8 - 9	Forest

Obviously, the umpire can make different parts of the same wood of different densities, and there is no reason why players should be told the density of a wood without having conducted a terrain reconnaissance first.

Bocage, although not strictly woodland, does have some similar features. For movement purposes, you may like to define areas of bocage as the same as open woods.



Tank Riders: it is possible to mount a platoon of infantry on a tank platoon or the equivalent. While riding the infantry count as **both** 'Moving in the Open' **and** 'Non-Tactical' if fired on.

2.16 AMMUNITION

Ammunition is important – particularly for artillery and some types of heavy weapon.

Generally, re-arming infantry and tank companies with ammo is not conducted within the scope of the typical 3-4 hour battle.

However, you must keep track of ammo limits for the following troop types:

TYPE	Number of turns firing ('Shots')
INFANTRY MORTARS	4 HE, 1 illuminating and 1 Smoke
VEHICLE-MOUNTED MORTARS	8 HE, 1 Illuminating and 1 Smoke
TANKS	Unlimited HE/AP, 1 Smoke shot and no Illuminating.
GERMAN ARTILLERY	2d6 HE, 1 smoke, 1 Illuminating
ALLIED ARTILLERY	10 HE, 1 Smoke, 1 Illuminating

When working out your own ammunition scales for scenarios, use an approximation of 10 real rounds per ammo point.

2.17 RESUPPLY

'Bombing up' takes 30 minutes (3 turns) for infantry type units, or 60 minutes (6 turns) for tank or artillery units.

Units may not move or fire during this time. These times might be reduced pro-rata if full re-supply is not required.

Carrying capacities:	'Shots' of Ammo Carried
Carrier platoon	10
APC Company	20
Truck / Wagon company	40

Remember to keep track of the different types of ammo – i.e. Tiger tanks use different ammo (88mm) to Panzer IV tanks (75mm).

2.18 ENGINEERS

An engineer platoon with special digging equipment can dig a company-sized 'dug-in' position in 60 minutes, or a 'deeply dug in' position in 3 hours.

They are considered a non-tactical target when working. Engineers may demolish a bridge after 40 minute preparation. Bridging troops may construct a Bailey bridge in 40 minutes, or 90 minutes under fire (not including periods pinned or suppressed).

2.19 PRISONERS OF WAR (Optional)

When units surrender, the surrender will be accepted by most troops. Exceptions (i.e. SS etc) must be specified in advance in the scenario.

If a unit takes more than 50% strength losses in taking a single enemy position, then there is a chance that the surrender will not be accepted and the defenders killed ("Too late chum!").

Roll 1d0 (0=0) score 0 or 1 for that to happen.

Guards must be provided for POWs at a ratio of one strength point detached for every 8 strength points captured (or part thereof).

2.20 GLOSSARY

AA	Ack-Ack, Archie, or Anti-Aircraft fire. Also known by the German word, Flak.
AP	Armour piercing ammunition – only any use against enemy tanks.
APC	Armoured Personnel Carrier – such as the M3 or Hanomag halftracks.
AT	Anti-Tank
Bombing Up	British slang for re-equipping the unit with ammunition.
Brassing Off	British slang - see speculative fire.
Carrier	Short for the Universal Carrier, or Bren Gun Carrier – a small lightly armoured transporter that could carry 3 or 4 men and usually mounted a light machine gun.
Flak	See AA
FOO	Forward Observation Officer – an artillery officer whose job it is to direct the fall of artillery on target. Often to be found in an OP. FOO were attached to front line units to help them get artillery quickly and accurately.
HE	High explosive ammunition – suitable for firing on trenches, infantry and soft targets
Mike Target	A regimental target (in the British Army usually three batteries)
MMG	Medium Machine Gun – the tripod-mounted machine gun – also known as a heavy machine gun.
O Group	Orders Group – a face to face meeting of unit commanders to review and brief on the orders for an operation.
OP	Observation Post – usually for artillery, but also for observing the enemy.
Opportunity fire	Artillery fire called down on a target in a location not included in the fire plan and not a registered point.
Panzer Grenadier	A type of German unit trained and equipped to operate closely with tank formations. Usually more heavily armed than normal infantry and where possible motorised or mounted in armoured personnel carriers.
Pinned	If infantry – the men have ‘gone to ground’ – using what cover it can, and generally stopping forward movement. In the case of tanks, the tanks manoeuvre to avoid fire, or use folds in the ground or other terrain features to avoid incoming fire.
POW	Prisoner of War
Predicted fire	Firing on a target out of sight, based on a map and precise calculation. Since fall of shot cannot be observed and corrected by a Forward Observer, the fire is likely to be less accurate.
Ranging In	The process of registering a target. A single gun from a battery fires at a point and the fall of shot observed and reported by an artillery observer. The range is noted and the same setting applied to the other guns in the battery allowing them all to fire accurately when requested. See registered fire.
Registered fire	Fire on a pre-planned location where the guns have already worked out the range (usually by firing one or two registering shots at the target point). Pre-registration is usually an important part of a defensive fireplan.
SMG	Submachine gun – such as the Thompson, the Sten gun or the Schmeisser machine pistol

SP	Strength Point
SP	Self-Propelled
Speculative fire	Firing on an area, such as a wood or a village with no real idea whether the enemy are there or not.
Start Line	The position attacking forces occupy prior to launching an assault. This would normally (and obviously) be out of sight of the enemy.
Stonk	A linear artillery target usually ordered to several regiments
Suppressed	As above, but with the added factor of being so disturbed by the incoming fire that they will not expose themselves enough to return fire.
Uncle Target	A call for all artillery from the Division to fire on a single target.

2.21 TANK UNIT CLASSIFICATION

For those unfamiliar with the technology, this is a guide of how to treat the various types of tank unit under the rules. The definitions of tanks are very broad and this will no doubt continue to offend the dedicated technologist, but generalisation is essential to maintain a sensible and historical balance to the rules. The list is not exhaustive, but should give you a clue as to how to treat your favourite unit.

Remember that the classification is based on a *unit* rather than an individual tank – so, for example, the Sherman Firefly isn't separately listed because it was mixed in with a larger number of other types of Sherman tank within the platoon/troop.

Types	Gun	Armour	Speed
Sherman, PzKwIV, PzKwV, StugIII	Tank Gun	Normal	Normal
Cromwell	Tank Gun	Normal	Fast
Comet	Heavy Tank Gun	Normal	Fast
Honey, Puma A/C	Light Tank Gun	Light	Fast
Tiger	Heavy Tank Gun	Tiger Tank	Normal
Tiger II	Heavy Tank Gun	Tiger Tank	Slow
PzKw III	Light Tank Gun	Light	Normal
Churchill	Tank Gun	Heavy	Slow
Chaffee	Tank Gun	Light	Fast
Kangaroo APC	-	Normal	Normal
Pershing	Heavy Tank Gun	Heavy	Normal
M10 Tank Destroyer	Tank Gun	Normal	Normal



2.22 BIBLIOGRAPHY

There are thousands of books on WWII, and NW Europe in particular. The few books I have listed below, are a personal selection of those useful for background reading.

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<i>Montgomery Of Alamein</i>	Normandy to the Baltic
<i>Ryan C.</i>	The Longest Day
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* Fiction, but drawn from personal experiences of the authors.

Web links:

members.tripod.com/~nigelef/index.htm

An excellent and detailed description of how British artillery worked in WW2 by Nigel Evans

www.ddaymuseum.co.uk/

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