



BOOK 3: PLAYERS MANUAL, LATE WAR: NORMANDY

Alan Paull and Peter Connew

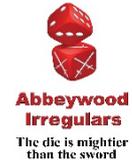
WARGAME RULES FOR WORLD WAR TWO TACTICAL / OPERATIONAL LEVEL ACTIONS



Surprised Stare Games Limited
80 Fenton Road, Warboys, Huntingdon, Cambridgeshire, PE28 2SL
<http://www.surprisedstaregames.co.uk>
enquiries@surprisedstaregames.co.uk



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MISSION COMMAND

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This book is the alpha version of the Players Manual for Mission Command, Surprised Stare Games' recreational World War Two wargame for use with miniatures, published in association with Abbeywood Irregulars. This version was published in April 2015. We aim to publish a bound beta version in 2015 to be followed by a full release version as soon as reasonably possible thereafter. Both the beta and final versions will have extensive graphics included, which are not present in the alpha version. Our intention is to make Mission Command available both in traditional print and online media.

If you have any comments about the alpha versions of Mission Command, please don't hesitate to send them to: Alan Paull, alan@surprisedstaregames.co.uk. Your comments are extremely valuable to us in the next stage of the game's development. We will treat all comments in confidence, unless you give us permission to share them with our Mission Command community.

Dedicated to the memory of our fellow Abbeywood Irregular

Stephen Welford

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WELCOME TO MISSION COMMAND

Welcome to Mission Command's players manual for Normandy in 1944. In this manual we'll focus on how to play Mission Command. We'll give you a brief overview of the game, and more extensive information about the specifics of playing a Mission Command scenario set in Normandy in 1944, including the fighting up to the Siegfried line in the autumn of 1944, although, with its set piece engagements, our focus has been on Normandy itself. If you want to know more technical information about the rules, consult the Reference Manual.

Mission Command is a set of World War Two recreational wargaming rules for use with miniatures. The rules attempt to capture the essence of tactical and operational combat command from roughly company level to division level without the bloodshed, fear, death and destruction normally associated with actual warfare. The focus of the rules is on helping players to learn more about the effectiveness (or otherwise) of a national army's operational doctrine – its way of fighting – during the Second World War using tabletop miniatures.

Our distinctive approach with Mission Command is to provide a model that attempts to reflect doctrine, particularly in command, control and communications, and to enable players to integrate the various types of troops in an historical fashion. With Mission Command, if you're handling a German Panzer Division, it will be a different experience from handling an equivalent British or US unit.

A Mission Command game is founded on realistic, historically accurate or pseudo-historical scenarios that present background information and occasionally some pre-game activity. The game itself is run by one or two umpires, who will supervise and facilitate the game for two teams of players. In very large games each side may be divided up into smaller command teams.

In Mission Command, the exercise of command, control and communications is not as abstracted as in most modern wargames – there are no command dice, no PIPs and no artificial 'fog of war' mechanisms. Each command of company level or above has to be given orders at the start of the game which can be modified later, but orders are brief. Communications and changes of orders are carried out via command elements, but as units are restricted by the necessities of combat, players will find that they have to make difficult choices about what they do during combat. Fog of war, imperfect information and sometimes confusion emerge naturally from the interactions of players attempting to carry out combat activities in accordance with doctrinal restrictions and complicated tactical situations.

Our normal ground scale is 1mm = 2 metres. We use 15mm miniatures. Each human figure represents about 10 real men, each vehicle model or heavy weapon from 3 to 5 actual vehicles or weapons. We have found that with reasonably speedy play, real time and game time are approximately equal over the course of a whole scenario.

Coverage in this first version of the player manual is of the British and German armies in Normandy in 1944. Other forces and theatres will be in subsequent versions.

ORGANISING PLAY

Mission Command is usually played by two opposing teams plus at least one umpire. The size of the teams will depend largely on the number of elements to be used and the complexity of the scenario. Players represent a composite of the command, control, communications and intelligence staff of the military forces engaged.

Most scenarios in Mission Command will be organised by the umpire, and we've included details of how to do this in the Mission Command umpires manual. Players are hereby warned that reading the umpires manual, particularly the opposing side's briefings, will spoil your enjoyment!

We believe you'll have a better experience, if players adopt a few of the suggestions in this manual.

Mission Command is an umpired game. The word of the umpire is final! The umpire does not have to adhere to the letter of the rules, and will, for any reason or none, make judgements that the umpire believes to be appropriate to the circumstances. Players persistently challenging an umpire's judgement may find that game decisions go against them, or that their own high command intervenes.

As an introduction to the game for smaller numbers of players or for shorter games, you can play Mission Command with a single team of players and the umpire running the opposition. A normal sized game can be run by 1 umpire on a single table with 1 to 4 players on each side. If you have access to a larger table, scenarios for up to 7 or 8 per side can be run, preferably with 2 umpires. For even larger numbers of players, and if you have access to a large space, you can play a single Mission Command scenario on multiple tables. This is particularly effective for breakthrough or exploitation scenarios. Many games are likely to involve two teams of 2 to 4 players and 1 or 2 umpires. This number of players should enable each side to field roughly a brigade sized force for a scenario that will take the better part of a day to play and a similar amount of game time. For an evening game, reduce the forces to at most a battalion or two each side, perhaps with a small number of supporting elements. It is quite possible to play 'one-against-one' games, preferably with a neutral umpire, for which we recommend no more than the equivalent of a single battalion on each side.

Material needed

You will need (collectively):

- The Mission Command rules under the strict control of the umpire
- Play aids for players
- Scenario details for each side
- Miniatures to represent the forces on each side
- A large wargaming table or set of tables
- Terrain pieces
- Measuring sticks or rulers
- Area fire templates (available as PDFs from our website)
- 20-sided dice and scatter / deviation dice
- Markers for casualties and suppression
- Chits for morale state and overwatch fire (available as PDFs from our website)
- A method for showing the current game turn on each table
- Short pieces of painted wire or thread for marking gaps in obstacles, cleared lanes through minefields and so on, if necessary for the scenario (optional)
- From 2 hours upwards playing time, depending on the scenario
- Two teams of players (one side versus the umpire is also possible)
- At least one umpire

Scenario

The scenario, supplied by the umpire, should describe the initial military situation, terrain, friendly and enemy forces (if known), and the mission of each side. It might be historical, pseudo-historical or a-historical, but it should indicate some appropriate objective victory conditions, or victory can be adjudicated with reference to a historical outcome.

Players should be given ample opportunity to digest the scenario details and formulate a plan of action. With larger games some of the planning and reconnaissance can be done in advance of the day of the engagement, if players and umpires are willing. We have found the following activities useful:

- Use of maps. At least sketch maps of the on-table features should be provided, so that players can use them to draw up their movements and to position out-of-sight elements. Period maps add great flavour to the game.
- If defending, draw up any road blocks, trenches, minefields and emplacements that the umpire permits you to use. If you have engineer elements, you might be able to use them for emplacing vehicles in concealed positions, to improve natural defences, or to build bunkers.
- Pre-game assembly. You may wish to specify both off-table and on-table deployments. If you have space, use small side tables (we use card tables) for off-table artillery and reinforcements.
- Pre-game reconnaissance. The umpires may permit use of air assets or recce units to give you information, and if time, brief reconnaissance missions can be used to give some continuity to the coming action.
- Planning. Nominate one player as the C-in-C. This player may be privy to more information than the other players in the team, so that he can concentrate on developing an overall plan, while the other players focus on their local tactics. He should be the final adjudicator if players disagree about the best course of action. Most importantly, make sure that you have a plan for the action.

Team structure

We have found that it is helpful to use a simple team structure for who does what, so that each player has a specific role. For example:

- Commander In Chief – overall commander of all forces on one side; ultimate command decision-maker, though advised by the rest of the team. In large games, the C-in-C may directly control elements (reserves for example), but must normally exercise troop control through subordinates, except perhaps for a small number of centrally managed assets. The C-in-C should not interfere with lower level command decisions, except through the proper communications and command channels. The C-in-C is often responsible for all pre-game activities in conjunction with the umpire and the enemy C-in-C.
- Chief of Staff – in charge of all transmissions of orders (ensuring appropriate routing delays are adhered to) and collation of intelligence about enemy forces. The Chief of Staff should be central to the development of amendments to plans during the engagement and, as with his historic counterpart, is the sounding board for his C-in-C.
- Fire support – responsible for artillery, aircraft and other centralised fire assets (this role is often reserved to the C-in-C in smaller teams).
- Tactical commanders – responsible for use of troops on the ground ('pushing the figures around'), the tactical commanders will perform the bulk of the nitty-gritty activities with the individual elements. Most players will be tactical commanders and will oversee the activities of between 10 and 40 elements – about a battalion plus some supports in size.

A minimum team size for a brigade group (2 or 3 battalions plus supports) would be 3 players, usually a C-in-C also in charge of reserves, plus 2 tactical commanders with a battalion of so each. Additional players for such a force might control artillery and other long range assets, or might take control of reserves to free up the C-in-C.

AN OVERVIEW OF THE GAME MECHANICS

For full details of the Mission Command rules, consult the Reference Manual or your friendly umpire. This handbook provides you with some basic information to get you started.

Mission Command is played in a series of game turns, each consisting of one bound per side, the same side always having the first bound of the turn. During their side's bound players will activate their troops to carry out actions, including moving, shooting, communicating, taking up overwatch positions, and for specialist troops (for example engineers) various special actions, such as laying smoke, clearing obstacles or planting demolition charges. The possible actions of the troops will depend on their capabilities indicated in the scenario and mediated by the umpire.

Actions are governed by the Sequence of Play (see Play Aid 1, also reproduced at the end of this manual) and the tactical circumstances. The game continues with successive bounds until the end game conditions specified by the scenario have been fulfilled. Then victory is adjudicated.

During the main part of a turn, players activate the groups from the side taking its bound. The controlling player activates each group one after the other, until all groups on that side have been activated. Players on the side taking its bound decide the order in which their groups are activated, though for speed of play in large games two or more groups can be activated at the same time if they're not going to interact. Activation entails the player deciding what actions each element in the group will do. These might be typical actions that most elements can do or specialist actions that are only available to elements of particular types. Each element can take up to two actions, only one if suppressed.

Hot and cold situations

When a group is activated, you determine whether its situation is 'hot' or 'cold'. A hot situation is up close and personal, and your men will tend to move with more caution, whereas if it's cold, they're prepared to risk moving faster.

The following are typical actions that nearly all elements can carry out. Some actions can only be the first action or the last action, depending on whether the group is in a hot or cold situation. There are more types of action available, particularly for specialist troops.

- Shoot (1st action only)
- Move once (hot situation only)
- Move twice (cold situation only)
- Overwatch (1st action only)
- Communicate (cold: either or both actions; hot: last action only)
- Self-preservation
- Conceal troops
- Pass (do nothing)

The situation is hot if any part of the group:

- Intends to shoot within 500m of a visible enemy element, or
- Intends to move so that a visible enemy currently within 500m will spot the moving group, or
- Is visible to a visible enemy element currently within 500m.

Otherwise the situation is cold.

Dice

We've standardised the Mission Command rules on 20-sided dice (d20). This type of dice enables us to use probabilities down to 5%, which we believe is fine-grained enough for differentiating weapon types. It's worth bearing in mind that this doesn't mean that every weapon difference and every nuance of armour configuration can be modelled – we've taken a relatively balanced view between playability and realism in our use of dice, resulting for example in armour classes ranging from 1 to 10, and each tank model only differentiated by front and side armour. One result of these design decisions is that most medium tanks in Normandy are represented with armour classes of 5 at the front and 3 at the side, and we make no attempt to add specific rules for weaker rear or top armour, or for additional armour plate added in the field.

When you shoot, for most types of weapon you'll use a d20 roll to see if you've hit the target, then if you have hit, a further d20 roll to determine whether a casualty or knock-out (KO) has been achieved. The Play Aids contain lookup tables that cross-reference the tactical situation, weapon system and

target. Morale is handled via reaction tests triggered by specific events (usually having been hit). You take reaction tests (morale checks) by group not individual element. Roll a d10 (we use a d20 and ignore the tens column), look up the result in the table and do what the effects table indicates.

Spotting dice are not used. Instead troops are automatically located dependent on range, posture, terrain and weather.

Terrain and structures can be seen at longer ranges than specified in the Spotting Table – the umpire will describe these as appropriate to the scenario. In some circumstances troop movements may be visible at longer ranges (for example vehicles moving in the open), even though they cannot be properly identified or brought under effective fire. The umpire will inform players as appropriate to the scenario.

Pre-measuring

You can pre-measure ranges and movement distances as long as the game is not held up. This generally means that if you've left it till you announce firing, you can't pre-measure a range.

Typical actions

A lot of the time your elements will be shooting or moving. As shooting can only be a 1st action, the sequence is 'shoot then move', NOT 'move then shoot'. If you want to shoot with an element then move in the same bound, the shot will take a -2 modifier. This means that you'll probably prefer to do one or the other for much of the time.

Each element gets 2 actions per bound. If it's suppressed, it only gets 1. So you'll have to choose carefully. The rate of movement depends on whether the situation is hot or cold. In a cold situation, you could choose to do two move twice actions, resulting in moving the element at four times the rate in the Movement Table. This would typically be 4 lots of 100m for infantry. However, if the element was suppressed and within 500m of the enemy, it would only be able to move 100m, even if its morale was not affected (only 1 action for a suppressed element, one move once action would be 100m).

Typical actions are listed here. The Reference Manual has a complete list of actions and many special actions too that may be relevant for specialist troops or in particular scenarios.

Shoot

The element may use any type of fire of which it is capable against any eligible target.

This action can only be taken as an element's first action.

If the element intends to move as its second action, this intention must be indicated prior to point-to-point fire, because there is a negative modifier to hit if the element intends to move. After shooting, the movement action can be cancelled at the player's discretion, but the negative modifier cannot be retrospectively de-applied.

Move once / move twice

These two actions are collectively referred to as 'move' actions. A 'move' means that the element can move up to its normal movement rate (see Movement Rates Table); for example an infantry element could move anything from 0 to 100 metres. An element may move up to its normal movement allowance for each move.

The move once or move twice actions can be carried out as an element's 1st and / or 2nd action.

Movement includes turning in place (unless as part of an overwatch action). Each turn greater than 45 degrees costs 50m for a vehicle, and is free for a non-vehicle element.

If several elements in the group are carrying out the same move action (typically a number of elements moving in the same direction), then the player may choose to move those elements simultaneously. The player must point this out to the opposing player or umpire prior to moving them. If any opportunity fire interrupts the move action, all the moving elements must carry out at least the same proportion of their planned movement that was completed by the target element.

Overwatch

This action places an element in a position to carry out opportunity fire during an opponent's bound. The element taking this action may turn in place to face any direction when taking up overwatch if desired, and this turn does not count as movement. Only elements with direct fire capability can take an overwatch action.

This action can only be taken as an element's first action.

Suppressed elements cannot carry out an overwatch action, and they lose overwatch if already in it.

An element in overwatch retains this stance until either it carries out a move, shoot or special action, or it is suppressed.

Communicate

The element carries out all communications activities.

This action can be taken as either a 1st or 2nd action (or both) in a cold situation, so an element could take advantage of a communication as a 1st action to select an appropriate 2nd action. However, in a hot situation it can only be a last action, so elements in a hot situation cannot react to a communication until the following turn. If two elements communicate with each other, and one uses its 2nd action, then both must use their 2nd or last action.

Players must not use this action to pre-empt a change of orders.

Self-preservation

Any element may optionally carry out a self-preservation action instead of following its current orders, if it comes under direct fire from a previously un-located enemy within 500 metres. If the owning player chooses to carry out the self-preservation action, then the element must either

- a. Carry out direct fire at one of the enemy elements that fired at it, or
- b. Retreat as if it had suffered a reaction test retreat result. This retreat does not change the group's morale state, though it does count as a retreat for reaction test adjustments. The element must continue to retreat in subsequent bounds until it can no longer locate the enemy element(s) that fired at it. No rally is required.

A self-preservation action costs all of the element's action slots (normally 2, but 1 if suppressed).

Attach Separated Elements

Individual separated elements, or multiple elements in a unit with no command element, can be taken under command by a parent command element in their line of command or by a "sister" command element of a similar grouping within their parent formation. The command element must be in the command range of the separated elements and carry out this action to notify them of the change of command arrangements.

This action takes two actions for the parent command element and two actions at the same time for the attaching elements. Once this has been completed, the elements are no longer separated.

Conceal Troops

An element in a cold situation that is not in open terrain may expend both its actions to conceal itself or prepare itself a concealed position. When the element subsequently carries out an overwatch action in this position, it gains all the benefits of concealment.

PLAY AIDS

We've produced some sheets of play aids for quick reference that are reproduced alongside this manual.

INTRODUCTION TO LATE WAR: NORMANDY

Fighting in Normandy during 1944 was characterised by several factors that were not typical elsewhere. Much of the decisive fighting took place in Lower Normandy in the difficult terrain known as 'bocage', consisting of small fields bounded by thick hedgerows, scattered woods, narrow, sunken lanes and many small villages and farms with the occasional larger settlement. Sweeping manoeuvre by large formations of armoured troops was virtually impossible unless the bocage country could be avoided, and even then the constrained nature of the Normandy battlefield until the Allied breakout in the late summer of 1944 meant that movement on both sides was severely inhibited.

Most of the terrain in the theatre was relatively flat until the borders of Germany were reached. However, slight rises in this terrain took on a great significance, as means to observe the enemy, and to position troops on reverse slopes. In addition, some of the bocage country was divided by sudden stream-cut gullies, providing sometimes steep-sided obstacles and bottlenecks at bridges. The country was not heavily wooded, but hedgerows and orchards provided cover and concealment opportunities.

Out of the bocage the terrain was perceived by both sides as more favourable 'tank country', relatively open and criss-crossed by a network of metalled roads linking many small settlements and a few larger towns. A number of small coastal rivers wind their way to the coast and provide potential help to the defenders. However, the Seine is the major river of Normandy, and this lies in Upper Normandy to the east and north of the main area of decision. Towards the German frontier, and on the Belgian border, a series of major rivers, hills and forests provided more defensible positions and tended to channel attacking options.

The main cities of Normandy were Rouen, Caen, Le Havre and Cherbourg. Of these the most critical in the campaign were Caen, a major bottleneck behind the eastern landing areas, and Cherbourg, the major port that was the principal early Allied target. The region's settlements could form formidable tactical obstacles, because buildings were strongly built of stone, and villages in open areas were sufficiently close together that they could provide good locations for supporting artillery and anti-tank fires. The combination of winding coastal waterways (both rivers and canals) and good roads provided a complex network for the movement of troops, with choke points that could not be avoided, and relatively little cover on roads from air attack.

The weather in the region is temperate without the extremes of climate found in other theatres. Nevertheless the winter of 1944-5 was exceptionally cold and the effects of this are reflected in relevant scenarios. The main decisive action in June, July and August was fought in warm, dry conditions, with notable exceptions of some patches of summer storms.

THE BRITISH

Overview

The British Army was, in some respects, a collection of regiments, rather than a single army. Each regiment had its own long traditions, its own methods of training, and its own approach to tactics. There was no army-wide doctrine, even though the War Department occasionally issued guidance. The argument against a prescribed doctrine was that it would lead to the slavish adherence to "text book" solutions, which would reduce initiative, and wouldn't be appropriate to the real battlefield. The prevailing view was that the regimental tradition had stood the test of time, and besides, we wouldn't want to follow a bunch of rules written by a chap from a different regiment!

On the other hand, the lack of system still seemed to produce cohesive and effective battalion-level units, even though they spent little time training with larger formations or with other combat arms. An unfortunate side-effect was that the British Army found it difficult, especially when compared with the Germans and Americans, to adapt its techniques to the developments of practical combined arms operations and tactics. While a commander-in-chief in theatre might attempt to introduce new operational methods or new practices for brigades or divisions, the effectiveness of these attempts, where they were made at all, was dampened by the requirements of war-fighting and the failure of most brigade and division commanders to take advantage of the rare opportunities for training their whole unit together. Our scenarios are designed to illustrate some of these strengths and weaknesses.

The Royal Artillery was an exception. It was a highly professional and forward-thinking force that gained the respect of the other combat arms by its quick responses and thorough-going systematised organisation of command and control. In defence and offence it was the gunners that were the bedrock of success. The British player will usually have the opportunity to call on considerable off-board firepower, and careful planning in advance to use both programmed and on-call artillery will pay dividends.

British forces in Normandy

British battalions in Normandy were a mixture of the highly experienced, typically having fought through the desert and / or the Italian campaigns, and the entirely green. Even the most experienced found the circumstances of Normandy very different and difficult. For example the much praised 7th Armoured Division (the Desert Rats) discovered that their experience in the desert of wide open spaces, little cover and long range engagements was of little avail in the close-in fighting and abundance of vegetation in Normandy. This manual contains a section at the end describing how Normandy bocage affects spotting, combat and movement.

The British Army deployed a high proportion of specialised brigades and divisions early in the campaign. These included the elite 6th Airborne Division and a multitude of highly trained and aggressive commando brigades – the latter heavily armed with short range weapons, some official, rather a lot unofficial, but somewhat lacking in supporting heavy weapons and artillery. The bulk of divisions were made up of newly raised, well-trained but inexperienced infantry battalions, using trucks for strategic movement. By this stage of the war each infantry battalion had extensive supporting combat units in addition to its rifle companies, including a mortar platoon, carrier platoon with extra machine guns and PIATs, an anti-tank platoon with 6 pounders, and a platoon of pioneers. These additions gave it a fairly high level of light support weaponry, and a high proportion of rifles, but it depended on brigade or divisional assets for greater firepower. The Universal Carrier light armoured vehicle (the ubiquitous 'Bren Carrier'), while providing much needed mobility, proved to be highly vulnerable in the close range environment of Normandy. The British player with fresh units will often have a large number of these vehicles for towing, fetching and carrying.

Some regiments were designated 'motorised', which usually meant that their companies had integral light armoured vehicles, typically US M3 half-tracks. In a hostile situation the transports were usually left in the rear, as it was quickly realised that the plethora of hand-held AT weapons risked high losses of vehicles.

The quality of equipment compared to the opposition was mixed. By 1944 the 5.5" medium gun and the ubiquitous 25 pounder gun/howitzer demonstrated the British Army's superiority in artillery when

coupled with their high quality of command and control. Although the 25 pounder uses a smaller template in Mission Command than the German 10.5cm howitzer, the British will generally have more of them, with more ammunition, and can call upon the larger 5.5" gun often at regimental strength.

The most common tank in the British Army was the US-built M4 Sherman medium tank that had initially mounted the 75mm M3 gun on introduction in late 1942. It was recognised that the Sherman main armament was inferior to heavier German tanks, such as the Panther and Tiger, but it took considerable time to develop and deploy a tank with a heavier gun. The Americans developed a 76mm variant, while the British managed to modify their existing 17 pounder anti-tank gun to fit into the Sherman turret. The latter configuration was known as the Sherman Firefly, intended as a short term measure till other British tank designs came on stream. In fact the other designs – primarily Challenger and later Cromwell models – proved problematic, and Sherman equipped armoured units depended on the Firefly when up against Panther and Tiger tanks. A typical Sherman unit in Normandy consisted of one Firefly for every three 75mm variants, and Mission Command reflects this practice with a typical squadron having 1 Firefly and 3 'normal' Shermans.

The Cromwell primarily equipped armoured reconnaissance regiments, although 7th Armoured Division was initially equipped mainly with Cromwells, which left it vulnerable when up against heavier German tanks – so the Division was supplemented with Fireflies at the same ratio as the all-Sherman units. The Cromwell was faster than most contemporary medium tanks at 40 mph (64 kph) top speed. However, its main gun – the Ordnance QF 75mm – was only slightly superior to the Sherman's 75mm M3, and therefore still overmatched by equivalent German weapons. The Churchill tank equipped regiments in separate Armoured Brigades, frequently attached to infantry divisions, giving them more tanks than the average panzer division in Normandy. The Churchill was a slow heavy tank primarily used to support infantry. In addition it was the base unit for many esoteric and important variants, including the AVRE (Armoured Vehicle Royal Engineers) which sported a 290mm petard mortar for bunker-busting.

Command, control and communications

By this period of the war radios were a primary means of communications in the British Army down to company and even lower levels. All armoured vehicles typically had radios. However, the use of face-to-face word-of-mouth communications, as in other armies, was the main communications method, if senior commanders could be gathered together, and players would be expected to plan their battles in this way. Within brigades and regiments there were radio nets between commanders at the same level (for example all company commanders) and up to the next level (typically from company to battalion). There was therefore some flexibility within a battalion, and companies were often able to co-ordinate their own assets, for instance to call in supporting 3" mortar fire. However, links between battalion and brigade, and brigade to division, were hierarchical, requiring adherence to the strict chain of command, in contrast to the Kampfgruppen of the Germans and the similar Combat Command structure of the Americans. This was one of the reasons for the lack of co-ordination between armoured and infantry regiments.

The exceptions were the Royal Artillery, Royal Naval artillery support and, later in the campaign, air liaison, whose observers were attached directly to units down to company level. Royal Artillery FOOs were also the battery commanders, so that they had the authority to control and command the guns. In effect this gave individual battalions and companies an ability to call in massive amounts of firepower very quickly at the discretion of a well-briefed officer on-the-spot.

Communications down the chain of command were often through written orders, and planning frequently took the form of a description of successive phases of operations against geographical objectives. British players should use sketch maps for phase lines, if seeking a more realistic approach to British planning, but we don't encourage players to indulge in unnecessary staff work. When everything went like clockwork, this type of control could work, but planning mistakes and the unexpected could and did throw plans awry very quickly, leaving units to muddle through as best they could. Relatively inflexible detailed phase-based planning remained the curse of British Army tactical and operational control long after the end of the war.

British tactics and operations

The British Army was highly sensitive to infantry casualty rates, having suffered much since 1939. This situation led to a relatively cautious tactical approach, a reliance on air, artillery and tank support,

rather than audacity and speed. Stiff resistance from the enemy resulted in pauses and calls for more heavy weapons support, rather than quick manoeuvre. British units were also prone to withdraw from exposed positions to more protected ones, even if the positions taken were tactically highly significant and had to be re-taken again later. However, commitment, determination and improvisation often led to localised successes.

Consideration of British operations in Normandy is coloured by the need to divine the intentions of General, later Field Marshal, Montgomery. This Manual will not attempt to do so. The practical outcome of British operations in Normandy was a failure to achieve a breakthrough of the German front and exploitation to the rear, despite many attacks. Even if these operations, ranging from Operation Perch immediately after the D-Day landings through to Operation Bluecoat in late July and early August, had far-reaching objectives, the results were a series of 'bite-and-hold' local advances at best, while 'crumbling' – to use Montgomery's description – German (and British) units. British players should always attempt to follow the script of their orders from high command, rather than to try to second guess – the scenarios we present (and designed by others) may provide greater opportunities for success than the true historical situation presented.

Recce

Throughout the Normandy campaign the Allies had complete control of the air. As a result the Germans had to adopt extreme measures to conceal their activities, restricting strategic movement to night time, and making as much use as possible of cover, dummy positions and periods of poor weather, and this did reduce the effectiveness of aerial reconnaissance. Typical uses of air power included, not only strategic bombing, interdiction of reinforcements and logistics, and direct tactical support to front line troops, but also pinpointing and knocking out German artillery positions. Skirmishes and minor attacks might generate an artillery response, revealing gun positions and permitting counter-battery fire possibilities or air strikes. The British side will often have air assets to deploy.

Not only did the Allies have the advantages of almost untrammelled aerial reconnaissance, they also had the top secret Ultra intelligence that occasionally provided high quality information about German forces and, more importantly, their intentions. Briefings in the scenarios will tend to provide the Allies with more information, and more accurate information, than their opponents.

Reconnaissance from ground units should not be overlooked. In British armoured divisions there were often both armoured cars, supplied from army corps assets, and a dedicated reconnaissance regiment with fast tanks, providing two alternative methods. Some divisions split up the armoured cars between brigades, so that all had a proportion to use, while the armoured reconnaissance regiment, with its more powerful cruiser tank component, would be deployed by the division, often protecting a flank or focused in one particularly desired direction. In Normandy the Cromwell-armed reconnaissance regiment was almost the equivalent of a further tank battalion and was occasionally used as such, sometimes pairing it with a motorised infantry battalion. As in the German Army, light armoured car recce units were expected to range far and wide, in 'drive till shot at' mode. They were equipped with powerful radios, though terrain, weather and the temperament of the machine seemed to limit effectiveness frequently. The Cromwell recce regiment had the distinct advantage of greater firepower than German armoured reconnaissance units. It was not expected that recce units would be committed to heavy combat tasks, such as assaults or last ditch defence, but unexpected circumstances could find them in that type of awkward position.

Offence

British infantry tactics were based on the rifle section as the mainstay of the action. The Bren gun, the infantry's primary light support machine gun, was deployed to support the firepower of the rifles, in contrast to German practice which was the other way round. British infantry tactics in attack differed little from late World War 1 practice, and many units found it difficult to adapt to the Normandy terrain. Lack of co-ordination with armour frequently led to tanks outstripping their pedestrian counterparts, with the result that an attack could turn into an unsupported tank attack followed by a separate infantry attack. On the other hand, artillery and mortar support was significantly better than earlier in the war, and it was during the Normandy campaign that British units learned to take advantage of the increasingly predictable propensity of German forces to counter-attack at every opportunity.

Offensive action was carried out with four main actors: air power, artillery, armour and infantry. The first two provided the major advantages for Allied armies in Normandy, with artillery close to the beaches supplemented by naval gunfire up to 2 to 10 miles inland (4-16,000m) Mission Command

scenarios will usually begin after preparatory air and / or artillery barrages that are not 'gamed', as these can rarely provide a positive game experience for either side. However, the effect of these barrages was dramatic and harrowing for those on the receiving end, and this will usually be modelled through initial casualties and morale disadvantages. On the other hand, surviving German defenders sometimes fought on in isolated strong points, particularly if supported by dug-in armour.

By this time of the war infantry would rarely attack a strong defence without armoured and heavy weapons support. There was an expectation and experience in each of the main armies in Normandy that unsupported infantry would fail, and British accounts describe some battalions calling off attacks in the absence of tanks, either because the tanks had disappeared out in front, or not appeared when expected.

British attacks were typified by strong well-supported advances of infantry and armour against key geographical objectives after preliminary bombardments, with simultaneous front and flank attacks delivered by infantry with tank support, if possible. British units up to division and corps level paid special attention to their flanks, preferring to maintain a continuity of pace of the advance across the entire offensive front, so that their forces could not easily be attacked in flank or rear themselves. This approach lent itself more to 'bite-and-hold' advances than breakthrough and exploitation, but was less risky. Knowing that German units would almost invariably counter-attack lost positions, experienced British forces would prepare for this by establishing killing zones using self-propelled artillery and mortars on and immediately in advance of recently taken positions. However, there was frequently a problem in recognising the German main line of resistance, because of the German defence in depth tactics, and the amount of cover available.

Defence

For most of the campaign the British were on the attack, but there were significant local counter-attacks that placed them on the defensive, particularly in the early days after D-Day. With such a preponderance of artillery, the British in defence used their guns and naval guns to disrupt assembly areas and break up early advances identified by aerial reconnaissance. Even tank attacks were broken up in this fashion. Infantry units were almost always dug-in in defensive positions, with minefields deployed if time, largely to counteract localised German attacks and patrolling activity, and to channel attacks into strong points.

As in offensive tactics, so in defence, British infantry and armour did not co-operate well. Main positions were held by infantry units, with artillery and anti-tank support. The latter were often parcelled out along the defensive position, rather than concentrated. Full armoured divisions were usually withdrawn from defensive duties and retained by army commands or at army group level for specific offensive operations.

Early in the campaign the British placed great reliance on their elite paratroop and commando units, both in the purely defensive dug-in role, and as rapid reinforcement to threatened areas. Although often described as lightly armed units, in defence they could be supported easily with increased fire power from the air, from artillery and from independent armoured brigades. Such 'out of role' employment crumbled their specialist assault ability, for which they were specially trained.

Planning and the British player

The British team in a Normandy scenario is likely to be attacking, and the vast majority of attacks will be carefully prepared ones, so that you can maximise your superiority in air power and artillery. First examine the forces that are under your command compared with those of the enemy that you know about, and gain an understanding of how your own aims and objectives fit into the overall context of the British operation. You should look for both the strengths and weaknesses of your forces. Consider carefully the ground over which you're going to fight. Identify significant terrain features that you may have to take or hold, or that will influence how you manoeuvre.

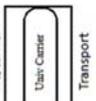
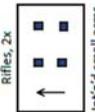
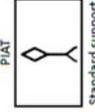
Your briefing should include information about your senior commander's intention for your forces, and an outline of the method you're expected to adopt, which might include reference to specific positions to take, enemy forces you're likely to encounter, and whether you're expected to destroy them, hold them, or defend against them. You should also have information about where to deploy your forces and about any reinforcements to be received by you or, from reconnaissance, by the enemy.

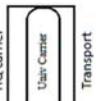
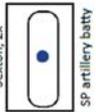
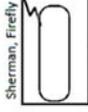
Typical planning issues that you'll need to address are:

1. What are our primary tactical objectives?
2. What are the intermediate (phase) objectives, if any?
3. What is our artillery fire plan?
4. What is our air fire plan?

Mission Command stats for a sample of British troops

Each scenario will specify the speed, armour, weaponry and other details for its components. A sample of British command cards with their stats is given here.

<p>B Company, Royal Northumberland Fusiliers</p> <p>Coy HQ  Small command</p> <p>HQ carrier  Transport</p> <p>Thin Centre  Transport</p> <p>Small command </p> <p>Rifles, 2x  int'g'd small arms</p> <p>2" Mortar  Standard support</p> <p>PIAT  Standard support</p> <p>3 ton truck  Transport</p>	<p>C Squadron, 13th Royal Tank Regiment</p> <p>Radios HQ links to its elements & separate net to Battalion HQ.</p> <p>Churchill VII Speed: 24 kph; Armour: 9/7; Gun: OQF 75mm; co-axial MG; hull MG</p> <p>HQ, Churchill VII  tank (command)</p> <p>Churchill VII, 3x  tank</p>
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<p>I Battery, 113th Regiment, RHA</p> <p>HQ  Small command</p> <p>HQ carrier  Transport</p> <p>Thin Centre  Transport</p> <p>Sexton, 2x  SP artillery batty</p> <p>Fwd Observer  Specialist support</p> <p>Radios HQ links to its battery HQs and has a separate net to Div Artillery HQ. Note that fire missions will generally be via controlling FOOs not down chain of command.</p> <p>Universal Carrier Speed: 48 kph Armour: 1/1</p> <p>Forward Observation Officer in Crusader FOO is generally attached to battalion or company HQs and control the battery fire from there. A single FOO can control multiple batteries from multiple regiments. FOO is in Crusader tanks (no guns or MGs). Speed: 42 kph Armour: 3/2</p> <p>Sexton Speed: 40 kph Armour: 3/3, open-topped Gun: OQF 25 pdr gun/howitzer LMG for AA and ground defence</p>	<p>A Squadron, 3rd Royal Tank Regiment</p> <p>Radios HQ links to its elements & separate net to Battalion HQ.</p> <p>Sherman, 75 Speed: 40 kph; Armour: 5/3; Gun: US 75mm L/40; co-axial MG; hull MG; AA MG</p> <p>Sherman, Firefly As above, but Gun: OQF 17 pdr; co-axial MG</p> <p>HQ, Sherman, 75  tank (command)</p> <p>Sherman, 75, 2x  tank</p> <p>Sherman, Firefly  tank</p>
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BRITISH UNIT ORGANISATIONS

British Army unit designations in WW2 can be confusing to the uninitiated. The term 'regiment' in the British Army in the field meant a battalion-sized unit, as the regiment was a purely administrative organisation. Where other armies had multi-battalion 'regiments', the British Army equivalent was the brigade. Several brigades made up a division. In addition, lower level sub-units in the armour and cavalry were called squadrons and troops, rather than companies and platoons. There were other esoteric pieces of confusing nomenclature, so it's always best to check with the Table of Organisation and Equipment (TOE) of your forces in the scenario before jumping to conclusions about unit composition.

In earlier periods of the war British battalions were frequently moved between different brigades and divisions as immediate needs demanded, resulting in a lack of familiarity between units that were to fight together for a specific operation. While not eliminated completely, this practice was much reduced in the Normandy campaign, particularly within armoured formations. This gave an opportunity for skilful divisional commanders with experienced troops, such as Pip Roberts (11th Armoured Division), to encourage co-operation between infantry and armoured battalions. Newer divisions found this much more difficult, and instances of failure to co-ordinate combined arms forces continued to the end of the war.

We have included here a description of the primary combat effective troops, but have not attempted to reflect supporting train troops. These listings are drawn from official TOEs. Scenario force lists will be adjusted to take into account casualties and other unit changes owing to the operational context and the consequences of combat.

All the Universal Carriers will generally have a Bren gun.

Independent armoured brigade

These independent armoured brigades could be either truly independent with a separate role (often held in reserve in the expectation of commitment to armoured exploitation), or attached to armoured or infantry divisions ear-marked for attack.

INDEPENDENT ARMoured BRIGADE	
Headquarters	1 Sherman V Control tank (armed)
	1 jeep
	1 radio truck
	2 Sherman V tank
	1 Crusader AA tank
	2 Humber scout cars
	1 motorcycle element
3 Armoured Regiments, each	
Headquarters	1 Sherman V Control tank
	1 Crusader AA tank
	3 M5 Stuart light tanks
	2 Humber scout cars
3 Squadrons, each	1 Sherman V Control tank
	2 Sherman V tank
	1 Sherman Firefly tank

Motorised Infantry Battalion		
Headquarters	1 large command element with M3 White scout car	
Support Company	1 small command element with Universal Carrier	
	2 HMG (Vickers) elements with Universal Carriers	
	3 6 pounder AT guns with Loyd carriers	
3 Motor Companies, each	1 small command element with M3 White scout car	
	1 3" mortar element with mortar carrier	
	1 PIAT element	3 M3 half-tracks (with LMG)
	1 2" mortar element	
	2 integrated infantry elements	

British infantry division

The infantry division might also include an attached armoured brigade, if on an attack.

DIVISION TROOPS	
Headquarters	1 large command element with car
	1 radio truck
	1 integrated infantry element with truck

Division Royal Engineers	
Headquarters	1 small command element with jeep
	1 engineer element (bridging)
	Bailey bridge with truck
Engineer Field Companies, each	1 small command element
	1 PIAT element
	3 engineer elements
	2 medium trucks

Machine Gun Battalion		
Headquarters	1 large command element with Universal Carrier	
	1 PIAT element with Universal Carrier	
3 Machine Gun Companies, each	1 small command element	4 Universal Carriers
	3 HMG (Vickers) elements	
Heavy Mortar Company	1 small command element with Universal Carrier	
	4 4.2" mortars with mortar carriers	

Divisional Reconnaissance Regiment	
Regimental Headquarters	1 large command element with Humber light reconnaissance car

Headquarters Squadron	1 3" mortar element with mortar carrier
	2 6-pounder AT guns with Loyd carriers
3 Squadrons, each	1 small command element with Universal Carrier
	2 Humber light reconnaissance cars
	1 integrated infantry element with M3 Half-track
	1 2" mortar element
	1 PIAT element
	3 Universal Carriers
	1 Humber IV armoured car

3 INFANTRY BRIGADES, EACH

Brigade Troops

Headquarters	1 large command element with staff car or jeep
Headquarters Company	1 integrated infantry element with truck
	1 radio truck

3 Infantry Battalions, each

Headquarters	1 large command element with staff car or jeep
Support Company	1 small command element with Universal Carrier
	1 2" mortar element
	2 PIAT elements
	3 Universal Carriers
	2 3" mortar elements with mortar carriers
	1 engineer element with light truck
	2 6 pounder AT gun with Loyd carriers
4 Rifle Companies, each	1 small command element with jeep or Universal Carrier
	1 LMG element
	1 PIAT element
	1 2" mortar
	2 integrated infantry elements
	3 trucks

DIVISION ROYAL ARTILLERY

Headquarters	1 command element with staff car
	1 radio truck

3 Field Artillery Regiments, each	
Headquarters	1 Forward Observation Officer element with jeep or Universal Carrier
	1 radio truck
3 Batteries, each	1 command element
	1 PIAT element
	1 light truck or Universal Carrier
	2 25 pounder gun/howitzers
	2 Quad prime movers

Anti-tank Regiment	
Headquarters	1 large command element with staff car or jeep
4 Batteries, each	1 small command element with Universal Carrier
	2 17-pounder AT guns with M5 half-tracks or Crusader Gun Tractors
	1 6-pounder AT gun with Loyd carrier

Light Anti-aircraft Regiment	
Headquarters	1 large command element with staff car or jeep
3 Batteries, each	1 small command element
	4 towed 40mm Bofors light AA guns
	4 15-cwt trucks

British armoured division

An armoured car regiment was often attached from corps to enable the division to use its own armoured reconnaissance regiment as a fourth tank battalion. The division would then reorganize as four tank-infantry teams, each one similar to a US Combat Command, with two teams serving under each brigade headquarters.

DIVISION TROOPS	
Headquarters	1 large command element with staff car
	1 radio truck
	1 integrated infantry element with truck
	1 Crusader AA tank
	2 Sherman V
Machine Gun Company	1 small command element with Universal Carrier
	3 HMG (Vickers) elements with Universal Carriers
	1 4.2" mortar with mortar carrier

Division Royal Engineers	
Headquarters	1 small command element with jeep

	1 Churchill AVRE	
3 Engineer Field Squadrons, each	1 small command element	2 trucks
	1 PIAT element	
	3 engineer elements	

Armoured Reconnaissance Regiment		
Headquarters	1 command Cromwell 75	
	3 Humber light reconnaissance cars	
3 Squadrons, each	1 command Cromwell CS or 75	
	3 Cromwell 75	

INFANTRY BRIGADE (LORRIED)		
Brigade Troops		
Headquarters	1 large command element with staff car or jeep	
	1 radio truck	

3 Infantry Battalions, each		
Headquarters	1 large command element with staff car or jeep	
Support Company	1 small command element	
	1 2" mortar element	
	2 PIAT elements	
	4 Universal Carriers	
	2 3" mortar elements with mortar carriers	
	1 engineer element with light truck	
	2 6 pounder AT gun with Loyd carriers	
4 Rifle Companies, each	1 small command element with jeep or Universal Carrier	
	1 LMG element	
	1 PIAT element	
	1 2" mortar	
	2 integrated infantry elements	
	3 trucks	

DIVISIONAL ROYAL ARTILLERY		
Headquarters	1 large command element with staff car	
	1 radio truck	

Field Artillery Regiment	
Headquarters	1 command element with staff car
	1 radio truck
3 Batteries, each	1 small command element
	1 Forward Observation Officer in Crusader tank (unarmed)
	2 25-pounder gun/howitzers
	2 Quad prime movers

Self-propelled Field Artillery Regiment	
Headquarters	1 command Crusader tank (unarmed)
	1 radio 15 cwt half-tracked truck (or M3 half-track)
3 Batteries, each	1 small command element
	1 FOO in Crusader tank (unarmed)
	1 M3 Half-track with LMG
	2 Sexton SP gun/howitzers

Antitank Regiment	
Headquarters	1 large command element with armoured car or Universal Carrier
2 Towed Batteries, each	1 command armoured car or staff car
	3 17-pounder AT guns with M5 Half-tracks
2 Self-Propelled Batteries, each	1 command armoured car or Universal Carrier
	3 Achilles SP AT guns

Light Anti-aircraft Regiment	
Headquarters	1 large command element with staff car or jeep
3 Batteries, each	1 small command element
	4 towed 40mm Bofors light AA guns
	4 15-cwt trucks

ARMoured BRIGADE	
Headquarters	1 Sherman V Control tank (armed)
	1 jeep
	1 radio truck
	2 Sherman V tank
	1 Crusader AA tank
	2 Humber scout cars
	1 motorcycle element

3 Armoured Regiments, each

Headquarters	1 Sherman V Control tank
	1 Crusader AA tank
	3 M5 Stuart light tanks
	2 Humber scout cars
3 squadrons, each	1 Sherman V Control tank
	2 Sherman V tanks
	1 Sherman Firefly

Motorised Infantry Battalion

Headquarters	1 large command element with M3 White scout car	
Support Company	1 small command element with Universal Carrier	
	2 HMG (Vickers) elements with Universal Carriers	
	3 6 pounder AT guns with Loyd carriers	
3 Motor Companies, each	1 small command element with M3 White scout car	
	1 3" mortar element with mortar carrier	
	1 PIAT element	3 M3 half-tracks (with LMG)
	1 2" mortar element	
	2 integrated infantry elements	

THE GERMANS

Overview of German doctrine and practice

German doctrine was based on the World War I “Stosstruppen” tactics used in their 1918 offensives on the Western Front. These tactics were further developed and combined with the use of armour and air power, and codified in the Truppenführung (German Army Manual) issued in 1933 and 1934. Responsibility for tactical decisions was decentralised down to the lowest appropriate level of command, on the basis of knowledge and understanding of the immediate local situation within the context of the overall mission. A major implication of this doctrine was that junior officers and NCOs had to have a good understanding of the overall mission, explained clearly and concisely by senior officers, so that they could take good tactical decisions, rather than slavishly following the letter of complicated sets of orders. At times a humble leutnant might find himself in control of the firepower of an entire Kampfgruppe. This concept, known as 'auftragstaktik', is nowadays often described as 'mission command'.

By the Normandy campaign German losses had led to a marked and continuing decline in troop quality, particularly in the infantry. In any event the infantry recruited for service in the west was second best, compared to the demands for quality on the Eastern Front. Coupled with Hitler's insistence on excessive infantry deployments to 'fortress cities', to southern France and to counter the potential threat of a Pas de Calais invasion, the Germans were unable to form an effective defence in depth at all points on the Normandy front without relying on piecemeal deployment of panzer units to stiffen the weak infantry divisions, a role for which they were ill-suited. In addition they had to provide local mobile reserves to plug gaps created by Allied attacks. German commanders found it almost impossible to concentrate the Panzer divisions for their key designated role as an operational reserve for effective offensive or defensive action.

German forces in Normandy

German forces from 1944 were characterised by a combination of the very advanced and the somewhat out-dated, both in terms of organisation and equipment. While there was a leavening of very experienced divisions in the Normandy campaign, including SS and other Panzer units, many German infantry divisions were not only under strength from June 1944 onwards, but were also partially manned by green conscripts and sometimes less than reliable soldiers from subject East European territories. The Eastern Front had priority for the best infantry units. Infantry divisions were divided into two broad classes: 'static' and 'offensive' units. Static divisions were manned by physically less fit men, they had little or no transport and were expected to perform defensive tasks, such as manning fortifications and prepared positions. Offensive divisions were regular infantry divisions, though rarely the equal of Eastern Front veterans. In addition the Germans fielded parachute infantry divisions that were mostly, though not always, first rate.

By 1944 German infantry training had declined, primarily owing to the requirement to get troops to the front quickly, with the result that operational infantry units in Normandy were expected to complete their training 'on the job'. Front line divisions usually had a proportion of troops with combat experience, and they quickly learned their craft. They proved to have immense resilience in the face of sometimes overwhelming circumstances. In 1945 even more brittle and less well-trained divisions came on stream, formed from the desperate recruitment of both older and younger elements of the population coupled with even less training. These differences are reflected in the quality grades stated in our orders of battle, and some units will have a mixture of grades by company.

German resources in the west were stretched by Allied bombing, naval blockade and the overriding priority of the Eastern Front. Although the best German equipment was arguably better than that of the Allied forces, much of it was in short supply, armoured vehicles in particular. Panther and Tiger tanks were deployed, but the most common armoured vehicles (with the exception of armoured cars and carriers) were the Panzer IV medium tank and the Sturmgeschütz III assault gun, both of which were more or less equivalent to the most common tanks used by the British. Although German anti-tank guns by this time were very effective, their artillery was mediocre at best, and control systems for artillery support not as effective as the British equivalent. German infantry support weapons (heavy weapons, such as the MG42 and the 8cm mortar) were good, and were used in great numbers and to great effect. You will find that the proportion of support weapons in relation to infantry units increases

as the actual number of elements in the order of battle declines, so that you are placing more and more reliance on smaller and smaller numbers of quite well-equipped troops.

German practice in relation to replacements and reinforcements differed from the Allies. Infantry divisions were usually kept in the front line for very long periods and were expected to fight on until their combat effectiveness was worn out without many replacements. Instead, completely new infantry divisions would be formed from 'reserve' divisions originally intended to train up new troops, occasionally from cadres of those that had been effectively destroyed by combat. Panzer divisions did receive replacements of equipment and men, and were occasionally withdrawn to rest, re-train and re-equip. However, continual emergencies at the front resulted in interruptions to this process, so that an armoured division often had some of its battalions left in combat when the rest of the division was recuperating, and it could be called back into action at almost any time. In the Normandy theatre the Germans quickly discovered that the existing relatively weak infantry units could not be relied upon to hold the line without armoured support, which resulted in the piecemeal detachment of panzer units to defensive duties. This practice undermined the German doctrine requiring concentration of significant armoured strength for major counter-offensives. Mission Command scenarios provide you with the opportunity to attempt to reconcile some of these dilemmas, weighing up the need to prevent enemy breakthroughs, while still maintaining the capability for counter-attacks and future operations.

The German Army in Normandy never had enough vehicles or fuel for them and relied on horses for some haulage in most infantry divisions, and occasionally for some elements of armoured divisions too. This restricted their mobility and some infantry divisions were designated as immobile units for this reason. Our Mission Command scenarios set in Normandy attempt to model these shortages through restrictions on ammunition usage by artillery and reductions in vehicle strength in most units. Only very rarely will German units be at full strength.

The Germans made extensive use of captured equipment, particularly from France, Czechoslovakia and the Soviet Union, resulting in some weird hybrid vehicles of variable effectiveness. This practice came to a head in the 21st Panzer Division, reconstituted in France after its loss in North Africa. This division was forbidden from using German vehicles initially except for a single battalion of tanks, and therefore equipped itself with older captured French vehicles, some converted to use German weapons by the innovative engineer, Major Becker. These were ingenious 'needs-must' exigencies and did not reproduce the quality of German equipment. We have included this practice in our scenarios.

Command, control and communications

By 1944 the Germans had developed their command, control and communications systems to a high pitch. The main differences with British practice were a highly developed use of flexible Kampfgruppen (battle groups) and a focus on devolved leadership through an understanding of the overall mission down to junior officers and NCOs, rather than adherence to a top-down set of detailed orders. This is modelled in Mission Command by orders of battle that describe integrated all arms Kampfgruppen with a very flat structure, providing unity of command, rapid transmission of orders, and excellent co-operation of infantry, armoured vehicles and supporting arms down to the company level. Kampfgruppen can be of very varying sizes and compositions dependent on the mission, and they do not necessarily mirror the conventional battalion, regiment, division command hierarchies.

Communications were often handled by talking in person, and this was the preferred method for tactical communications. German divisions and higher echelons used wired communications down to the company level (at least) throughout the war, supplemented by extensive use of radios. By 1944 radios were the norm for armoured vehicles in the German forces and increasingly at company level for infantry. However, radios did not have the reliability of wired communications or face-to-face. German and British methods overall were similar in technology if not practice, and these technologies form the basis of Mission Command communications rules, albeit considerably simplified.

German tactics and operations

This Manual won't attempt to describe fully how the Germans fought in Normandy. There are many primary sources available now for the enthusiast, both in German and translated from the German, as well as extensive easily accessible secondary sources. However, we give some basics here, so that you can be primed for the German style.

In addition to the terrain, and the manpower and motor vehicle resources available to the Allies, there were two factors that acted as constraints on the exercise of German tactics and operations: Allied air power and Allied artillery.

The Allies had virtually complete dominance of the air in this period of the war in this theatre. Players on the German side will find that this single factor places immense constraints on operational and tactical movement, supplies and practical combat techniques. Much of early war German doctrine has had to change in the face of this. Moving troops in the open except at night can be foolhardy, and all German units now take precautions against Allied airpower that has the result of slowing down movement except at night and in extremis. Petrol, oil and lubricants (POL), spare parts and some types of ammunition are often in short supply. The need to use cover and concealment at all times is a hall-mark of combat techniques, in order to limit the effect of Allied airpower, as is the deployment of flak units in all formations. These effects are shown in scenarios through difficulties of knowing when reinforcements might arrive and in what condition, heavy restrictions on off-table movement, and the persistent availability of Allied aircraft to attack targets that are visible anywhere on-table.

In addition the Allies also deployed heavy concentrations of artillery, including naval guns close to the coast. The latter meant that assembly areas within range might come under heavy indirect fire, even before an attack could be organised. The British Army was known to be averse to casualties, and the Germans recognised that the British placed great store in their artillery, which proved to be capable of unbelievably quick response in great volumes. Unfortunately the Germans haven't enough artillery of their own to use counter-battery fire, which would have been the practice earlier in the war. Now, the German artillery has to be carefully husbanded and moved in response to enemy counter-battery fire. These circumstances reinforced the need to keep all units as dispersed as possible.

Command and Kampfgruppen

German operational and tactical command and planning was based on using Kampfgruppen to attack the enemy. A Kampfgruppe is a battle group, consisting of a variety of units brought together under a single commander to carry out a defined mission. The size of a Kampfgruppe might vary from a small collection of companies up to more than a division in size. Its composition might change from day to day, making the tracking of units and capabilities by the enemy extremely difficult, and providing flexibility to the commander as the situation altered. Typically a Kampfgruppe might contain a force of all the main types of arms used in offensive operations: infantry, tanks or other armour, anti-tank weapons, artillery, engineers, with the precise balance of forces determined by the nature of the mission. Units might be drawn from several different regiments or divisions that to the outsider might look like an ad hoc arrangement. In fact the purpose of the Kampfgruppe was to provide local unity of command in the pursuit of a specific mission. This often resulted in troops in situ being placed under an entirely different formation. For example, regular Wehrmacht infantry companies might find themselves in a Kampfgruppe composed mainly of SS Panzer troops, or a company from an SS heavy tank battalion might be deployed as part of a Wehrmacht Panzergrenadier Kampfgruppe. Individual companies of tanks, assault guns or self-propelled munitions would often be deployed to stiffen the infantry for specific defensive duties or to lend weight to a counter-attack.

A few days after the Allied landings in Normandy most German units were crumbling under Allied pressure, either directly in the front line, or further back under the stresses of air power. The result was that German units were very rarely at full strength when engaged, and where a Kampfgruppe might state that a 'company' (Kompanie) was deployed, the company might be at only troop (Zug) strength. Frequently companies or even battalions were disbanded and the soldiers used to reinforce sister units. Panzer units, even in the SS, were sometimes forced to deem the ubiquitous Sturmgeschütz III assault gun to be a tank, so that the tank regiment could bolster its armoured vehicles.

Recce

German practice in reconnaissance in Normandy made only very limited use of the air, owing to Allied dominance. They made very good use of ground reconnaissance units, with aggressive patrolling and small scale actions to make contact with the enemy, identify enemy units and find weaknesses in their positions. German reconnaissance units were trained to fight for information, and to an extent their units might 'drive until shot at'. Reconnaissance units might operate 20 to 30 km in advance of their parent division, in company or battalion strength, and were prepared to push hard to find out where enemy positions were located and in what strength. Armoured reconnaissance units deployed fast armoured cars and half-tracks backed up by mobile infantry and heavy support weapons.

Although German doctrine indicated that reconnaissance units were not to be used up in the front line either for assault or static defence, the successive crises in the Normandy campaign and lack of alternative troops forced German commanders to do this often. Likewise, you will have to make do with the troops you have to hand. Reconnaissance units were also used for security on flanks and rear, and our scenarios will encourage commanders to take this into account.

Except where indicated in scenarios Mission Command does not delve into the intricacies of signals intelligence. The Germans were not aware of British special intelligence intercepts (Ultra).

Offence

German doctrine, training and practice were built on offensive operations and tactics. Defence was seen as an interlude during which German forces would be built up for a decisive offensive. Much of the Normandy campaign from a German operational planning viewpoint was a succession of attempts to free up sufficient panzer forces to launch an offensive to drive the Allies into the sea or to cut off a breakthrough. From a tactical as well as operational viewpoint the attack was the predominant mechanism. It could be used in a pre-emptive fashion to disrupt enemy preparations or assembly areas, to make an incremental local gain as a precursor to further attacks, and it could be used as a counter-attack to repair a defensive line or to cut off enemy incursions.

Attacks against prepared positions would be spear-headed by infantry, usually panzergrenadiers if available, because these troops had a higher proportion of heavy weapons than regular infantry. Artillery might be used in a short preliminary bombardment, but this was often foregone in the interests of surprise. Otherwise artillery was used to engage known enemy positions (particularly anti-tank and support weapon positions) in the depth of the enemy's main line of resistance. Heavy weapons, including machine guns, mortars, infantry support guns and infantry anti-tank weapons (panzerfausts and panzerschrecks), would be utilised in close co-operation with the attacking infantry. Assault guns en masse (not dispersed) would support the attack to eliminate blocking positions and permit the continuing advance of the infantry. Tanks would be unleashed once the main defences had been breached, in order to gain the enemy's rear areas and destroy enemy artillery and command units. Anti-tank guns would be used offensively against enemy tanks, approaching along concealed routes, enhanced by smoke if necessary. Smoke would be used to shield the flanks from direct fire attacks. Great stress was placed on continuing to move forward, even at the expense of creating vulnerable flanks. The Germans believed that the dislocation of the enemy by successful and continuing offensive action reduced the actual vulnerability of the flanks of the attacking force.

Attacks against unprepared or 'hasty' defence positions would be spear-headed by tanks and infantry combined, closely supported by the other elements. The task of the infantry was to seek and destroy the enemy's anti-tank positions, and the tanks main purpose was to outflank the enemy and destroy rear echelon supporting elements, particularly artillery. Once the flanks and rear of the enemy position had been reached and the enemy isolated, the enemy troops could be dealt with at leisure, sometimes by more German forces following up, so that the advance could continue.

The Germans stressed attacks from flank and rear, particularly by mobile troops. For this reason reconnaissance to find weak spots and to infiltrate through enemy lines was vital. In Normandy the main lines of resistance of neither side were continuous. Where there were gaps, troops in the front lines on both sides relied on active patrolling to keep flanks in contact with friendly neighbours, but in the bocage country in particular even this was problematic, because of the cut-up nature of the terrain and extremely short visibility. Gaps inevitably appeared between companies and battalions, and it was frequently the case that attacks passed through or past enemy positions without detecting them, subsequently to discover that the enemy was unexpectedly behind them.

Some German infantry was motorised in trucks or in half-tracked vehicles. Earlier in the war, German training suggested that infantry in armoured half-tracks should dismount as late as possible prior to contact, because their vehicles gave some protection. In Normandy it was soon considered advisable to dismount from half-tracks early, as the risk that the vehicles would be lost was extreme in an environment with overwhelming enemy air power and ready use of bazookas and PIATs by all infantry. Half-tracks with heavy weapons were placed in concealed locations to the rear, so that they could provide supporting fire. Half-tracks were rarely risked at small arms ranges.

Defence

In Normandy the Germans were frequently forced to adopt a defensive posture in the face of determined, well-resourced and well-supported Allied attacks. After the first few days from 6 June

German practice was built around mobile defence in depth, particularly because they were faced continuously by armoured troops. While the original defence of the Atlantic Wall was based on a static line that was supposed to repel the Allies on the beaches, it became clear within a day or so that the single main line of resistance was insufficient. In its place the Germans hemmed the Allies into the bocage country where possible, and took maximum advantage of small ridges, villages and towns to create interlocking strong points.

The Germans adopted successive mutually supporting areas of resistance. First contact would be maintained by patrols in front of a position, whose main line of resistance would be protected by a series of outposts within range of supporting artillery. If the outposts were driven in, attackers could expect to be engaged by artillery and heavy weapons as the outpost troops withdrew. Then the attackers would meet the main line of resistance, consisting of villages, high points and entrenched positions of several kilometres depth, all with interlocking fields of fire for artillery, anti-tank and other heavy weapons. A main line of resistance was not fully penetrated until the final rear positions had been identified and cleared. These were usually well-camouflaged and difficult to locate when dealing simultaneously with forward positions. At each stage German commanders would attempt to retain reserves for local counter-attacks, even if that meant having only a thin front line. The effects of enemy artillery were reduced by this deployment in depth.

German troops would use road blocks, mine fields and barbed wire to channel attacks, always covering obstacles with fire. At ridges they would occupy reverse slope dug-in positions, engaging troops as they came over the bare sky-line, while simultaneously firing from concealed flanking positions.

However, German practice in defence rested on mobility where possible, not manning prepared positions. If their line was pushed in, immediate counter-attacks were ordered from troops in depth, supported by well-placed mortars, machine guns, and preferably mechanised forces. In these circumstances armoured units were often called upon to act as fire-fighters to pinch out local penetrations before they could jeopardise important positions.

Hitler's order forbidding withdrawal even if troops were surrounded could not prevent forced retreats, and local lower level commanders were sometimes able to 'redeploy' without incurring the wrath of senior officers. If the enemy was palpably too strong, troops might be 'moved to a better position' or 'redeployed to a flank'.

Planning and the German player

As a German player you will need to exploit any advantages you can find to off-set the inevitable firepower advantages of the Allies. These advantages are likely to be a high proportion of support weapons, plus a more flexible command structure and better integration of weapon systems, especially against the British. You should plan for a main single angle of attack to overwhelm the enemy at the decisive point, and all your forces should be co-ordinated to achieve your mission objective. This doesn't mean that you cannot use diversions and other stratagems, but your forces must all combine to deliver the single mission objective. Your units should also have the flexibility to deal with local circumstances as they change. This flexibility means that you should not present very detailed conditional orders to your sub-units, just a clear and concise overview of the mission and where that sub-unit fits into the plan.

When you are using German troops in defence, try to retain an active mobile reserve, so that you can regain the initiative with counter-attacks. Reserves should be well concealed and not used till required, so that their positions are not given away. Make sure to deploy in depth if possible.

In planning a mission, the German command team might well pose the following types of question, bearing in mind all you know about your forces, the enemy and the terrain:

1. What is our best course of action?
2. In relation to this course of action, what is the single clear objective for the German forces in this sector?
3. Where is the decisive point?
4. How do we project maximum combat power onto the decisive point?

Mission Command *stats for a sample of German troops*

Each scenario will specify the speed, armour, weaponry and other details for its components. A sample of German command cards with their stats is given here.

I Kompanie, I Battalion, SS Panzer Grenadier Regiment - Hohenstaufen

Radios
HQ links to all its vehicle elements & separate net to I Battalion HQ and each other Kompanie in I Battalion.

SdKfz 251
The 4 infantry transports have HMG but are off-map. The others have weapons as indicated.

Speed: 52 kph
Armour: 1/1
Gun: HMG
secondary LMG

SdKfz 251/mtr
as above, but with 8cm Mortar instead of HMG

SdKfz 251/2cm AA
as above, but with single barrel 2cm AA instead of HMG

I Batterie, I Battalion, SS Panzer Artillerie, Regiment 9

Radios
FOO links to battery HQ. Battery HQ links to Regiment HQ and Kampfgruppe HQ.

Wespe
Speed: 40 kph
Armour: 2/1
Gun: 10.5cm leFH 18/7 L/28

Kubelwagen
HQ and FOO have these.
Speed: 80 kph
Armour: none
Gun: none

HQ (coherent) coherent inf, 2x

coherent small arms coherent small arms

LMG, 2x

Light support

HMG

Heavy support

SdKfz 251/mtr half-track

SdKfz 251/AA half-track

Battery HQ

Small command

Wespe, 2x

SP artillery

Fwd Observer

FOO Specialist support

FOO Kubelwagen transport

5 schweres Ko, 9 SS Panzer Aufklarungs Battalion, Kampfgruppe Weiss

Radios
HQ links to all its vehicle elements & separate net to Battalion HQ and each other Kompanie in Aufklarungs Battalion.

SdKfz 251/3 (command)
Speed: 52 kph
Armour: 1/1
Gun: HMG and LMG

SdKfz 251/9
Speed: 52 kph
Armour: 1/1
Gun: 7.5cm/124 and LMG

SdKfz 251/10
Speed: 52 kph
Armour: 1/1
Gun: 3.7cm AT gun; LMG

SdKfz 251/16
Speed: 52 kph
Armour: 1/1
Gun: Flamethrower and LMG

2 Kompanie, 109 schwere Panzerabteilung, (Kampfgruppe Weiss)

Radios
HQ links to all its vehicle elements & separate net to 1 Kompanie HQ, and separate net to Kampfgruppe Weiss HQ.

Panzer VI (Tiger 1)
Speed: 38 kph
Armour: 4/3
Gun: 8.8cm KwK 36 L/56; MG; hull MG

Panzerfaust, 2x Light support

SdKfz 251/9 half-track+7.5cm

SdKfz 251/10 half-track+3.7cm

SdKfz 251/16 half-track+Flamm

Panzer VI tank (command)

Panzer VI, 2x tank (command)

GERMAN UNIT ORGANISATIONS

These tables are provided as a good starting point for German unit organisations. However, Mission Command games are driven by specific scenarios, which will describe what was actually available, and its limitations, particularly in terms of ammunition and transport.

Unit Designations

German companies were numbered consecutively within their regiment or separate battalion. As the war progressed, stronger focus on automatic weapons and volume of firepower was used to offset dwindling manpower. Formations in the field often bore little resemblance to their official orders of battle. The formal arrangements are detailed here.

In infantry regiments, the first battalion was made up of the 1st, 2nd, and 3rd (infantry) companies and the 4th (machine gun) company, for a total of twelve numbered companies in three battalions. The machine gun company as described was routinely allotted piecemeal to provide support to the infantry companies. The regimental antitank company was numbered 13 and the infantry gun company 14. Often in panzergrenadier regiments, the "heavy" companies were not numbered, but simply identified as the schwere (heavy) company. The Anti Aircraft company was the 9th, Infantry Gun company 10th, and Engineer/Pioneer company 11th.

German Infantry Division, 1944

This was the main organizational version of the standard infantry division from 1944. It was superseded from late 1944 by the *Volksgrenadier* Division. This version has 3 infantry regiments, each with 2 battalions. An alternative was the 2 regiment, 3 battalion type.

We have included here a description of the primary combat effective troops, but have not attempted to reflect supporting train troops. For hand-held AT weapons, coherent elements will generally have Panzerfausts, the AT company a mixture of Panzerfaust and Panzerschreck; however, Mission Command does not differentiate between these types.

Owing to vehicle losses, many foot elements remained on foot, reducing mobility. Horses were used extensively as tows.

DIVISION TROOPS	
Headquarters	1 large command element with staff car
Headquarters Company	1 radio truck
	1 integrated infantry element with truck
	1 motorcycle element

Antitank Battalion	
Headquarters	1 large command element with kubelwagen
AT company	3 PaK40 AT guns (towed) with trucks or Sd Kfz 3 Maultiers or Sd Kfz 7 tractors
AT company (SP)	1 command StuG IIIG
	2 StuG IIIG

AA Company (SP)	
AA Company (SP)	1 small command element with light truck
	3 Sd Kfz 10/4 or 5

Fusilier Battalion		
Headquarters	1 large command element	
Heavy weapons company	1 coherent infantry element with command	
	2 HMG elements	
Bicycle Fusilier company	2 8cm mortar element	
	1 coherent infantry element with command	with bicycles
	2 coherent infantry elements	
2 Fusilier companies, each	1 coherent infantry element with command	
	2 coherent infantry elements	
	1 HMG element	

Engineer Battalion¹		
Headquarters	1 large command element	
	1 flamethrower engineer element	
	1 LMG engineer element	
	1 motorcycle engineer element	
	2 medium trucks	
Bicycle Engineer Company	1 small command element	
	1 bicycle 8cm mortar engineer element	
	1 bicycle flamethrower engineer element	
	1 bicycle HMG engineer element	
	2 bicycle LMG engineer elements	
2 Engineer Companies, each	4 bicycle engineer elements	
	1 small command element	
	1 8cm mortar engineer element	
	1 flamethrower engineer element	
	1 HMG engineer element	
	2 LMG engineer elements	
	4 engineer elements	

3 INFANTRY REGIMENTS, EACH		
Regimental Troops		
Headquarters	1 large command element with staff car	
Headquarters Company	1 small command element	
	1 radio truck	

¹ All engineer elements can shoot with LMG or panzerfaust or their specialism

	1 bicycle or cavalry element with radio (recon) and LMG
	2 engineer ² elements
	2 LMG elements
	2 wagons (horse-drawn)
Infantry Gun company (13 th Company)	1 small command element
	1 LMG element
	3 7.5cm leIG with light trucks
	1 15cm sIG with horse-drawn limber
Antitank Gun company (14 th Company)	1 small command element with light truck
	1 PaK40 AT gun (towed) with medium truck
	5 AT support elements (mix of Pzschreck & Pzfaust)
	1 LMG element

Each Regiment has 2 Infantry Battalions, each	
Headquarters	1 large command element
	1 bare infantry element
Heavy weapons company	2 HMG elements
	2 8cm mortar elements
	1 12cm mortar element (or 1 extra 8cm) with truck
3 Infantry companies, each	1 coherent infantry element with command
	2 coherent infantry elements
	1 HMG

ARTILLERY REGIMENT	
Regimental Troops	
Headquarters	1 large command element with staff car
3 Light Battalions, each	
3 companies, each	1 small command element
	1 Forward Observation Officer
	1 10.5cm howitzer with Sd Kfz 11 half-track
Medium Battalion	
Headquarters	1 small command element
	1 signal truck
	1 supply wagon
3 companies, each	1 small command element
	1 Forward Observation Officer
	1 15cm howitzer with Sd Kfz 7 half-track

² All engineer elements can shoot with LMG or panzerfaust or their specialism

German Panzer Division, 1944-45

This was almost the final form of the German panzer division, and was the "official" version that fought the Allies in France and Northwest Europe from D-Day onwards. Its official strength was very high, and the implementation of the by-the-book version was, arguably, never fully implemented, and in those cases where an attempt was made, it took many months. Also in the field there were always equipment and ammunition shortages, and a proportion of vehicles would be out of action under repair. Even in the SS, which tended to receive a disproportionate share of equipment and replacements, the actual tank strength of a panzer division in Normandy would commonly be less than 50% of establishment. On occasion assault guns would be substituted for tanks.

The Armoured Reconnaissance Battalion's vehicles varied considerably, and almost certainly never had a consistent standardised form. We give only one example here.

DIVISION TROOPS	
Headquarters	1 command element with staff car
Headquarters Company	1 radio truck
	1 motorcycle LMG element (with radio)
Escort Company	1 small command element
	1 coherent infantry element
	1 HMG element
	1 LMG element
	2 medium trucks
	1 PaK 40 AT gun with Sd Kfz 11 half-track
	1 FlaKpanzer 38(t) or towed 2cm FlaK 38 gun

PANZER REGIMENT	
Regimental Troops	
Headquarters	1 command Panzerbefehlswagen V Panther
	1 PzKw IVH
	2 Sd Kfz 161/3 Flakpanzer IV (Möbelwagen) with 3.7cm FlaK 43

1 Panzer Battalion (Panthers)	
Headquarters	1 command Panzerbefehlswagen V Panther
	1 PzKw V Panther
	1 Sd Kfz 10/5 with 2cm FlaK 38 or Möbelwagen or Sd Kfz 7 with 2cm Flakvierling 38 or 3.7cm Flak 36
4 Tank Companies, each	1 command Panzerbefehlswagen V Panther
	3 PzKw V Panther V

1 Panzer Battalion (Panzer IVs)	
Headquarters	1 command Panzerbefehlswagen III (no main gun)
	1 PzKw IVH

	1 Sd Kfz 10/5 with 2cm FlaK 38 or Möbelwagen or Sd Kfz 7 with 2cm Flakvierling 38 or 3.7cm FlaK 36
4 Tank Companies, each	1 PzKw IVH with command
	3 PzKw IVH

Armoured Reconnaissance Battalion	
Headquarters	1 large command element with Sd Kfz 232 (8-rad)
	1 Sd Kfz 232 (8-rad)
	2 Sd Kfz 233 (with 7.5 cm KwK 37 L/24 gun)
1 st Company (Armoured Cars)	1 command Sd Kfz 234/1
	1 Sd Kfz 234/3
	2 Sd Kfz 234/2
2nd Company (light reconnaissance)	1 command Sd Kfz 250/3
	3 coherent infantry elements (panzergrenadier)
	1 Sd Kfz 250/7 (with 8cm mortar)
	5 Sd Kfz 250/1 with LMG
3rd Company (heavy reconnaissance)	1 command coherent infantry element (panzergrenadier)
	2 coherent infantry elements (panzergrenadier)
	2 HMG elements
	1 Sd Kfz 251/10 with 3.7cm PaK 36
	3 Sd Kfz 251/1
1 Sd Kfz 251/9 or 250/8 with 7.5cm KwK 37 L/24	
4th Company (heavy company)	1 command element in Sd Kfz 250/3
	2 panzer engineer ³ elements in 1 Sd Kfz 251/7 (engineer version) (each element has an LMG, and can be used as an LMG element)
	2 Sd Kfz 251/9 with 7.5cm KwK 37 L/24
	1 Sd Kfz 251/2 (with 8cm mortar)

Antitank Battalion	
Headquarters	1 command element with kubelwagen
	1 Sd Kfz 10/5 (with 2 cm FlaK 38)
2 Self-Propelled AT Batteries, each	1 command StuG III G or Marder or Jagdpanzer IV
	2 StuG III G or Marders or Jagdpanzer IV
Towed AT Battery	1 command element with kubelwagen
	3 7.5cm PaK 40 L/46 AT guns with Sd Kfz 3 Maultiers

³ All engineer elements can shoot with LMG or panzerfaust or their specialism

Engineer Battalion⁴	
Headquarters	1 command element in Sd Kfz 250/3
Armoured Engineer Company	1 command element in Sd Kfz 250/3
	2 panzer engineer elements in 1 Sd Kfz 251/5 with LMG capability (with inflatable boats)
	1 HMG engineer element with Sd Kfz 250/1
	1 8cm mortar engineer element with Sd Kfz 250/7
2 Motorized Engineer Companies, each	1 command element
	4 panzer engineer element
	1 HMG engineer element
	1 8cm mortar engineer element
	5 medium trucks
Bridging Company	1 command element
	1 panzer engineer element
	1 medium truck with assault boat trailer
	2 heavy trucks with pontoon trailers
	2 Sd Kfz 7 with pontoon trailers

PANZERGRENADIER REGIMENT (ARMOURED)		
Regimental Troops		
Headquarters	1 command element with Sd Kfz 251/3	
	1 motorcycle LMG element (with radios)	
	2 Sd Kfz 10/5 with 2cm Flak 38	
Engineer Company ⁵	1 command element with kubelwagen	
	1 panzer engineer element with medium truck	
	2 panzer engineer elements with flamethrowers and with medium trucks	
	1 8cm mortar engineer element	with medium truck
	1 HMG engineer element	
	1 panzer engineer element with Sd Kfz 251/7	
	2 Sd Kfz 251/16 Flammpanzerwagen	
Infantry Gun Company	1 command element	
	1 Sd Kfz 251/1	
	2 Sd Kfz 138/1 sIG 33 (Sf) aug PzKw 38(t), Grille (15cm Infantry Gun)	

⁴ All engineer elements can shoot with LMG or panzerfaust or their specialism

⁵ as previous footnote

Panzer Grenadier Battalion (armoured)	
Headquarters	1 small command element with Sd Kfz 250/3
3 Panzer Grenadier companies, each	1 coherent infantry element with command and Sd Kfz 251/3
	2 coherent infantry elements with 2 Sd Kfz 251/1
	1 HMG element with Sd Kfz 251/17 (2cm KwK 38 anti-aircraft)
	1 8cm mortar element with Sd Kfz 250/7
	1 Sd Kfz 251/10 with 3.7cm PaK 36
	1 Sd Kfz 251/9 with 7.5cm KwK 37 L/24
Heavy Company	1 small command element with Sd Kfz 250/3
	1 Sd Kfz 251/2 with 8cm mortar or 1 12cm mortar with Sd Kfz 251/1 tow or 2 Sd Kfz 138/1 sIG 33 (Sf) auf PzKw 38(t), Grille (15cm Infantry Gun)
	1 Sd Kfz 251/22 with 7.5cm PaK40 L/46
	1 motorcycle LMG (with radio)

Panzer Grenadier Battalion (motorized)	
Headquarters	1 small command element with kubelwagen
	1 motorcycle LMG element with radios
3 Panzer Grenadier Companies, each	1 coherent infantry element with command
	2 coherent infantry elements
	1 HMG element with medium truck
	1 8cm mortar element with medium truck
	1 Sd Kfz 251/10 with 3.7cm PaK 36
	1 7.5cm PaK 40 L/46 AT gun with Sd Kfz 7 tractor
Heavy Company	1 small command element with light truck or kubelwagen
	1 8cm mortar element or 12cm mortar element or towed 15cm infantry gun
	1 7.5cm PaK 40 L/46 AT gun with Sd Kfz 7 tractor
	2 2cm FlaK 38 either on Sd Kfz 10/5 or towed

PANZERGRENADIER REGIMENT (MOTORISED)	
Regimental Troops	
Headquarters	1 command element with kubelwagen or light truck
	1 motorcycle LMG element (with radios)
	2 towed 2cm FlaK 38

Engineer Company ⁶	1 command element with kubelwagen	
	1 panzer engineer element with medium truck	
	2 panzer engineer elements with flamethrowers and with medium trucks	
	1 8cm mortar engineer element	with medium truck
	1 HMG engineer element	
	1 panzer engineer element with Sd Kfz 251/7	
	2 Sd Kfz 251/16 Flammpanzerwagen	
Infantry Gun Company	1 command element with medium truck	
	2 towed 15cm Infantry Gun	

2 PanzerGrenadier Battalion (motorized), each as above

Antiaircraft Battalion	
Headquarters	1 large command element with kubelwagen or light truck
2 Heavy AA Batteries, each	1 small command element with kubelwagen or light truck
	2 8.8cm FlaK 36 AA guns with Sd Kfz 7
Light AA Battery	1 small command element with kubelwagen or light truck
	2 Sd Kfz 7 with 3.7cm FlaK 43 or Sd Kfz 10/5 with 2cm FlaK 38

PANZER ARTILLERY REGIMENT

Regimental Troops

Headquarters	1 large command element with staff car
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Panzer Artillery Battalion (armoured)

Headquarters	1 large command element with staff car
	1 Sd Kfz 251/3
2 Light batteries, each	1 small command element with kubelwagen
	1 Panzerbeobachtungswagen III or Sd Kfz 251/18 or Sd Kfz 253 forward observer vehicle
	2 Wespe with 10.5 cm howitzer
1 Medium battery	1 small command element with kubelwagen
	1 Panzerbeobachtungswagen III or Sd Kfz 251/18 or Sd Kfz 253 forward observer vehicle
	2 Hummel with 15 cm howitzer

⁶ as previous footnote

Light Artillery Battalion	
Headquarters	1 large command element with staff car
	1 radio truck
2 Light batteries, each	1 small command element with kubelwagen
	Forward observer in kubelwagen
	2 towed 10.5 cm howitzers

Medium Artillery Battalion	
Headquarters	1 large command element with staff car
	1 radio truck
1 Medium battery	1 small command element with kubelwagen
	Forward observer in kubelwagen
	2 towed 15 cm howitzer

RULES ADDITIONS FOR NORMANDY SCENARIOS

Normandy bocage

1. Normandy bocage consists of small fields bounded by thick hedgerows, scattered woods, narrow, sunken lanes and many small villages and farms with the occasional larger settlement. There are often major, well-metalled roads and an extensive network of country roads, lanes, farm tracks and pathways. Visibility is often quite short owing to the amount of terrain features, but there are minor hills with both gentle and steep slopes – more like ridges than hills – that can increase lines of sight locally. There are patches of dense woods and very occasional open areas. It is a complex mixture of patches of open, partially obscuring and obscuring terrain, generally fairly flat but with occasional ridges. At the Mission Command ground scale it is not possible to show this complex picture accurately, particularly as some important terrain features may be smaller than a full sized infantry element, and significant differences in height may be only a few metres. For this reason, extensive bocage areas are represented by a combination of physical terrain feature models and abstract modelling of its general effects.
2. Areas of dense woods, built up areas for farms and villages, major roads and important ridges should be represented by physical terrain feature models. These have their normal game effects.
3. Terrain model hedges represent 'dense hedges', normally impenetrable to vehicles. However, as Normandy hedges had irregular small gaps, these hedges can be crossed by vehicles at the expense of two actions of movement. AFVs engaged while crossing hedges use their Side Armour rating.

Generic bocage

Movement – Rough. Observation – Foot: obscuring; Vehicles, cavalry and artillery: partially obscuring. Cover – good.

4. Players should be informed clearly where areas of generic bocage are present – it is sometimes easier to use wool or cotton to mark out any open terrain, so that the remaining areas on the tabletop can be indicated as bocage. Vehicle movement off-road counts as if in rough terrain. The hedges that are portrayed count as 'dense hedges'.⁷

Hedgerow Gapping

5. Tanks fitted with hedgerow cutters (typically Shermans and some Cromwells from August onwards) have hedge-crossing penalties reduced by 50 metres. They can spend a special action that counts as movement and costs one action, to create a gap in bocage or in a dense hedge one vehicle base width wide that any troops can use subsequently. The gap should be marked, so players know where it is.

AT grenades, AT mines, sticky bombs, satchel charges etc versus AFVs

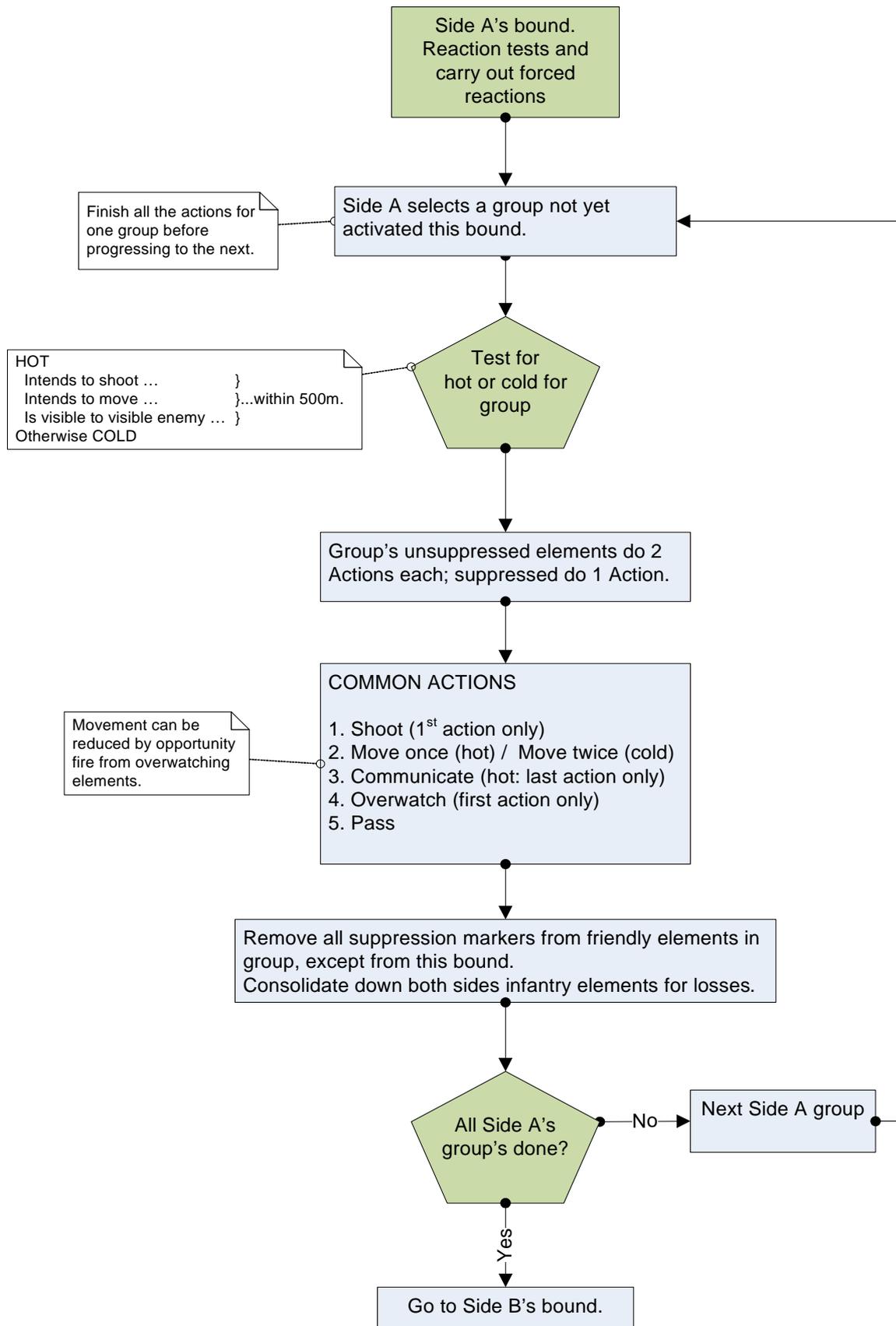
6. The following infantry elements in the Normandy scenarios can use the special shooting ability using AT grenades or mines, sticky bombs, satchel charges and the like against AFVs within 50m (see Reference Manual 8.5):
 - All full-sized regular (or better) infantry elements, except Ost troops in German employ.
 - A limited number of French resistance infantry elements in any group, specified by scenario.
 - All engineer elements can use this ability in place of their other specialisms. Engineer elements that are veteran or elite take -4 modifier instead of the usual -6 to hit.

German engineer elements

7. All German engineer elements can fire either small arms or LMG or Panzerfaust or satchel charges versus AFVs in place of their other specialisms.

⁷ Vehicles moving in generic bocage take advantage of the minor farm lanes and tracks, gaps in minor hedges, and such like that exist, but aren't portrayed on the tables. These restrictions result in vehicles moving at the 'rough' rate.

SEQUENCE OF PLAY



VEHICLE REFERENCE: BRITISH

Many vehicles had extensive variants, changes to armour and weaponry, as well as improvisations. Umpires will provide details in scenarios where variants are in operation.

<i>Name or designation</i>	<i>Armour (Front/Side)</i>	<i>Road speed (kph)</i>	<i>Weapons</i>
A10, Cruiser Mk II	3/2	26	OQF 2 pdr; co-axial MG; hull MG
A13 Mk1, Cruiser Mk III	2/1	48	OQF 2 pdr; co-axial MG
A13 Mk2, Cruiser Mk III	3/2	48	OQF 2 pdr; co-axial MG
AEC Armoured Car Mk II	3/2	60	OQF 6 pdr; co-axial MG
Archer	4/4 (open)	32	OQF 17 pdr; LMG
Achilles	4/3 (open)	51	OQF 17 pdr; AA/anti-infantry MG (pintle-mount)
Centaur, Cruiser Mk VIII, A27L	5/3	43	OQF 75mm; co-axial MG; hull MG
Churchill I (A22)	7/6	26	OQF 2 pdr; co-axial MG; hull 3" howitzer (direct fire only)
Churchill II (A22)	7/6	26	OQF 2 pdr; co-axial MG; hull MG
Churchill III & IV (A22)	7/6	24	OQF 6 pdr; co-axial MG; hull MG
Churchill V CS	7/6	24	95mm howitzer; co-axial MG; hull MG
Churchill VII (A22F)	9/7	21	OQF 75mm; co-axial MG; hull MG
Churchill Crocodile	9/7	21	OQF 75mm; co-axial MG; hull flamethrower
Comet (A34)	6/3	47	OQF 77 mm; co-axial MG; hull MG
Cromwell, Cruiser Mk VIII, A27M	5/3	64	OQF 75mm; co-axial MG; hull MG
Crusader I & II, Cruiser Mk VI (A15)	3/2	44	OQF 2 pdr; co-axial MG
Crusader III, Cruiser Mk VI (A15)	3/2	44	OQF 6 pdr; co-axial MG
Firefly	5/3	39	OQF 17 pdr; co-axial MG
Grant	5/3	39	hull-mounted US 75mm L/40 (or L/31); turret-mounted 37mm L/56; co-axial MG; hull MG; AA MG
Kangaroo	3/3	39	Hull MG; pintle-mounted MG
Vickers light tanks MkI-6	2/1	35	Turret-mounted MG; V & VI pintle-mounted MG
Matilda I (A11)	5/5	13	Turret-mounted MG
Matilda II (A12)	6/5	13	OQF 2 pdr; co-axial MG
M10, Wolverine	4/3 (open)	51	76.2mm L/55; AA/anti-infantry MG (rear of turret)
Priest	3/3	39	US 105mm howitzer

Sexton	3/3 (open)	39	OQF 25 pdr gun/howitzer; LMG for AA and ground defence
Sherman	5/3	39	US 75mm L/40; co-axial MG; hull MG; AA MG
Stuart (M3/M5) (Honey)	4/2	58	US 37mm L/56; co-axial MG; hull MG; AA MG
Tetrarch (light tank Mk VII)	2/1	64	OQF 2 pdr; co-axial MG
Valentine	5/4	24	OQF 2 pdr; co-axial MG
Most other armoured half-tracks, armoured cars, scout cars and carriers	1/1	varied	varied

VEHICLE REFERENCE: GERMAN

For ease of lookup, we have presented the vehicles in alphabetical order by their common name, for example 'Tiger' rather than Panzer VI or Sd Kfz 181.

Many vehicles had extensive variants, changes to armour and weaponry, as well as improvisations. Umpires will provide details in scenarios where variants are in operation.

Name or designation	Armour (Front/Side)	Road speed (kph)	Weapons
Brummbär (Sturmpanzer 43, Sd Kfz 166)	6/3	25	15cm StuH 43 L/12; LMG
Elefant/Ferdinand (Panzerjäger Tiger, Sd Kfz 184)	10/6	19	8.8cm StuK 43/1 L/71 (Elefant also has hull MG)
Grille, sIG 38(t) (Sd Kfz 138)	2/1 (open)	35	15cm infantry gun 33; LMG
Hetzer (Jagdpanzer 38, Sd Kfz 138)	6/2	42	7.5cm PaK 39 L/48; LMG
Hummel (Sd Kfz 165)	2/1	42	15cm sFH 18/1 L/30; LMG
Jagdpanther (Sd Kfz 173)	8/4	46	8.8cm PaK 43 L/71; hull MG
Jagdpanzer 4 (Sd Kfz 162)	7/3	38	7.5cm PaK 42 L/70; LMG
Jagdtiger (Sd Kfz 186)	10/6	34	12.8cm PaK 44 L/55; hull MG
Luchs (Pz II, Ausf L)	3/2	60	2cm KwK 30 L/55 (autocannon); co-axial MG
Marder I (Sd Kfz 135)	1/1 (open)	36	7.5cm PaK 40 L/46
Marder II (Sd Kfz 131)	2/2 (open)	40	7.5cm PaK 40 L/46
Marder III (Sd Kfz 139)	3/2	38	7.5cm PaK 40 L/46
Nashorn (Sd Kfz 164)	3/1	42	8.8cm PaK 43 L/71
Panther (Panzer V; Sd Kfz 171)	8/4	55 ⁸	7.5cm PaK 42 L/70;
Panzer 38(t) (Sd Kfz 140)	3/2	42	3.7cm KwK 38(t) L/47; hull MG
Panzer I (Sd Kfz 101)	1/1	50	Twin HMG
Panzer II, A-C (Sd Kfz 121)	2/2	40	2cm KwK 30 L/55 (autocannon); co-axial MG

⁸ Early models; later models had a governor to reduce maximum engine speed and therefore breakdowns – speed: 46

Panzer II, D-F (Sd Kfz 121)	3/2	55	2cm KwK 30 L/55 (autocannon); co-axial MG
Panzer III A-D (Sd Kfz 141)	2/2	40 ⁹	3.7cm KwK 36 L/45; co-axial MG; hull MG
Panzer III E (Sd Kfz 141)	3/3	40	3.7cm KwK 36 L/45; co-axial MG; hull MG
Panzer III F-G (Sd Kfz 141)	3/3	40	5cm KwK 38 L/42; co-axial MG; hull MG
Panzer III H (Sd Kfz 141)	4/3	40	5cm KwK 38 L/42; co-axial MG; hull MG
Panzer III J-M (Sd Kfz 141)	4/3	40	5cm KwK 39 L/60; co-axial MG; hull MG
Panzer III N (Sd Kfz 141)	4/3	40	7.5cm KwK 37 L/24; co-axial MG; hull MG
Panzer IV A (Sd Kfz 161)	2/2	31	7.5cm KwK 37 L/24; co-axial MG; hull MG
Panzer IV B-D (Sd Kfz 161)	3/2	39	7.5cm KwK 37 L/24; co-axial MG; hull MG
Panzer IV E-F (Sd Kfz 161)	4/3	39	7.5cm KwK 37 L/24; co-axial MG; hull MG
Panzer IV G (Sd Kfz 161/2)	5/3	39	7.5cm KwK 40 L/43 (later L/48); co-axial MG; hull MG
Panzer IV H-J (Sd Kfz 161/2)	5/3	38	7.5cm KwK 40 L/48; co-axial MG; hull MG
Puma (Sd Kfz 234/1)	3/1	80	2cm KwK 30 L/55; co-axial MG
Puma (Sd Kfz 234/2)	3/1	80	5cm KwK 39/1 L/60
Sd Kfz 231 / 232	2/1	85	2cm KwK 30 L/55; co-axial MG
Sturmtiger (Sd Kfz 186s)	9/6	36	38cm RW 61 rocket launcher; 9cm NbK 39 grenade launcher; hull MG
Sturmgeschütz III A-E (Sd Kfz 142)	4/3	40	7.5cm StuK 37 L/24
Sturmgeschütz III F-G (Sd Kfz 142)	6/3	40	7.5cm StuK 40 L/48; MG (pintle-mount)
Tiger I (Sd Kfz 181)	7/5	38	8.8cm KwK 36 L/56; MG; hull MG
Tiger II (Sd Kfz 182)	9/6	40	8.8cm KwK 43 L/71; MG; hull MG
Wespe (Sd Kfz 124)	2/1	40	10.5cm leFH 18/2 L/28
Most other half-tracks, armoured cars, scout cars and carriers	1/1	varied	varied

⁹ A-C were slower: 32, but very few were produced.