
Spearhead & Modern Spearhead

Scenario Generation System

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1.0 INTRODUCTION:

Unlike earlier editions the Spearhead Scenario Generation System now combines the scenario generation rules for both World War II Spearhead and Modern Spearhead into one volume. The aim is to reduce complexity and to better highlight the subtle but important differences between the rules. Players of earlier versions are advised to carefully read the rules to identify changes.

In addition the opportunity has been taken to add additional scenarios and rules which should provide additional tactical challenges without increasing complexity.

These rules are designed to generate scenario style games without formal scenario development. My aim however was not to replace formal scenario design, but rather allow Spearhead and Modern Spearhead games to be played where formal scenario development is not possible due to time constraints or lack of forces.

There are several advantages to the system. Firstly, a player can build and use an initial army then, as his miniature battlegroup grows, he can add various additional options. No longer must his most recent additions await a special scenario to be developed. Further, as a dedicated scenario designer is not required both players are presented with a range of tactical problems to solve while having limited knowledge of their enemy's objectives or resources.

I have tried to model several levels of decision making into the system. Higher levels of command will determine the terrain the brigades will be operating in and the likely objectives the brigade commanders will be allocated. In turn, the brigade commander will determine his brigade's detailed objectives based on doctrine and resources. The brigade commander may follow a plan that allows a carefully staged advance or a positional defence. Alternately, he may follow a plan that is more closely linked to manoeuvre warfare concepts. The brigade commander may also find he is thrown on the defence by a sudden enemy counter attack. In most situations resources will be short and decisions and risks will need to be made and taken.

The Spearhead Scenario Generation System can be used as the basis of a competition. However, I do not believe that the games should be fought between armies from widely disparate time periods. Certainly this was not the aim of this document. Nor should games involve armies that were not historical opponents or likely potential opponents. Rather, the focus of this document remains that of producing scenario games between historical or likely historical opponents. This should be the focus of any competition.

When playing scenario games, or designing lists, be sure to seek variety. This produces additional tactical problems and will add greatly to your games.

I have been assisted in the development of this scenario system by a number of play testers, who despite several false starts have remained resolute in their support.

Additional data cards and points values will be progressively added to the system. Initially they will be provided by separate download from my website. They, along with the current version of this document, can be found at: http://homepages.paradise.net.nz/mcnelly/scenario/scenario_system.htm

Finally, it is often tempting for people to modify the Spearhead or Modern Spearhead rules and I imagine in time, this scenario generation system. I would discourage players from doing either. A standard set of rules allows players who normally do not game together to pick up the rules and play a game. Further, from the perspective of this document, I have invested significant time into developing what is a subtle scenario generation system and even small changes will greatly impact play balance.

Keith McNelly

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2.0 ARMY COMPOSITION:

2.1 Nationality and Year:

Prior to the game the year, theatre and nationality of the forces involved must be determined. Both players may only field troops available during that period and from that theatre. Typically games should be themed to at least a specific year.

Before the game both players declare their TOEs for all lists.

2.2 Tables of Organisation:

The structure of lists and their relationship to Tables of Organisation are defined in section 7.0.

The lists are composed of battalions and support companies. These support companies are typically attached to the various battalions as required by the commander's plan.

2.3 List Composition:

Each player calculates, prior to the battle, three base lists. These lists are referred to as a Defend List, an Attack List and an Encounter List. In addition, each player should calculate several options. A points system, which defines the point cost for all stands, is included, refer section 10.0.

2.3.1 Basic List Composition

The basic lists and their general usage is defined as follows:

Defend List: This list is used for scenarios where the divisional commander has primarily been forced into a defensive posture, or in some cases is conducting limited attacks in fluid situations.

Attack List: This list is used for scenarios where the divisional commander is conducting offensive operations which include hasty or deliberate attack situations.

Encounter List: This list is used for scenarios where the divisional commander is operating in fluid situations.



Attack and Encounter lists are of the same nominal value. Players may use the same list for both. However, a separate Encounter List allows players to better model the exploitation phases of a battle which often use more mechanised formations.

2.3.2 Optional Reinforcements

The base lists may be reinforced by the use of optional reinforcements. These are defined as Option A and Option B reinforcements.

It is desirable to have multiple options though only one may be selected for a particular game. This enables the player to make decisions based on the terrain or generated scenario as well as providing additional variety. Some options may only be available in particular scenarios. As a guideline three Option A reinforcements and three Option B reinforcements per divisional TOE provide a suitable level of variety.

2.3.3 Entrenchments and Minefields

Defend lists, except when they will form part of Modern High Intensity mechanised scenarios likely to have taken place in Cold War Europe between front line troops, may include light entrenchments sufficient to entrench one infantry battalion's fighting stands as well as HQ stands and those support stands integral to the battalion. Additional light or heavy entrenchments and minefields or entrenchments must be purchased using an Option A or B reinforcement.

Entrenchments and minefields may not be used in an Attack List or Encounter List unless specifically defined by a scenario.



Note

Modern Spearhead High Intensity Scenarios outside Europe, or those in Europe not representing predominately intense mechanised warfare may benefit from allowing entrenchments and minefields in defend lists. However, this should be agreed as part of the general scenario.

2.4 Scenario Size:

Players, or the competition organiser, must determine the points budget in advance. The following tables provide guidelines to model typical and optimal troop densities.

2.4.1 World War II High Intensity Warfare:

High intensity World War II scenarios typically cover engagements that include some armoured elements. Infantry centric operations, especially with poorer quality troops should use lower points budgets.

All Theatres Prior to 1942 and the Far East 1941-1945:	Points Value
Defend List	300
Attack & Encounter Lists	450
Option A reinforcement	40
Option B reinforcement	80

All Theatres During 1942 excluding the Far East:	Points Value
Defend List	350
Attack & Encounter Lists	500
Option A reinforcement	40
Option B reinforcement	80

All Theatres 1943-1945 excluding the Far East:	Points Value
Defend List	450
Attack & Encounter Lists	650
Option A reinforcement	50
Option B reinforcement	100

2.4.2 Modern High Intensity Conventional Warfare:

High intensity Modern conventional warfare scenarios primarily cover warfare in Cold War Europe and major engagements in the Indo-Pakistan and Arab-Israeli Wars.

High Intensity Conventional Warfare: 1956-1959	Points Value
Defend List	450
Attack & Encounter Lists	650
Option A reinforcement	50
Option B reinforcement	100

High Intensity Conventional Warfare: 1960-1969	Points Value
Defend List	550
Attack & Encounter Lists	750
Option A reinforcement	50
Option B reinforcement	100

High Intensity Conventional Warfare: 1970-1979	Points Value
Defend List	600
Attack & Encounter Lists	800
Option A reinforcement	60
Option B reinforcement	120

High Intensity Conventional Warfare: 1980+	Points Value
Defend List	650
Attack & Encounter Lists	850
Option A reinforcement	60
Option B reinforcement	120



Some post Modern conflicts, as well as potential conflicts, have tended to have lower force densities than those likely in Cold War Europe or have involved armies of lower technologies, at least for one combatant. These scenarios as well as infantry centric operations should use lower point budgets. They are considered Low Intensity Conflicts and involve more dismounted infantry, and correspondingly an increase in entrenchments as well as fewer support assets.

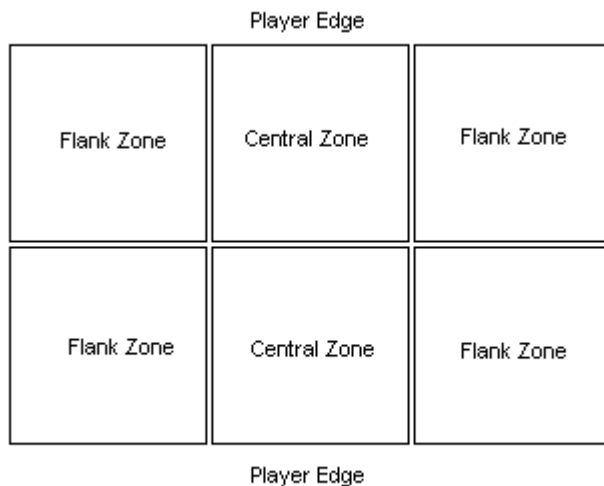
3.0 THE BATTLEFIELD:

3.1 Defining the Battlefield:

3.1.1 Table Dimensions:

The table should measure 1.8 metres in width by 1.2 metres in depth. The ground scale is 1" = 100 yards in Spearhead and 1" to 125m in Modern Spearhead. These dimensions are critical as they impact the troop density of the various scenarios.

The 1.8m x 1.2m table is divided into six "zones", each 600mm x 600mm. There are two central zones and four flank zones. This can be illustrated as follows:



Note

The alternate ground scale for Modern Spearhead is easily calculated. All ranges, movement and command ranges are multiplied by 2/3rds. Therefore a stand that has a movement of 9" moves 6" in the alternate ground scale. Likewise a tank that had a range of 18" has an alternate ground scale range of 12".

Measurements in this document provided in millimetres describe terrain setup and victory conditions for Spearhead and Modern Spearhead regardless of ground scale. Those defined in inches assume the alternate ground scale has been applied already if using Modern Spearhead.

3.1.2 Battlefield Terrain:

It is critical that the terrain on the table be representative of the area the battle is being fought in. With a potentially large geographical area, ranging from areas of dense European countryside scattered with villages to the deserts of the North Africa, it is difficult to compile detailed terrain generation rules. Therefore, only the most general of guidelines will be described.

The battlefield is defined as being either a desert battlefield or a non-desert battlefield. The theatre, period and armies available determine this. Some areas often thought of as desert may not be classed as desert for the purposes of deploying terrain. These areas are likely to be near water sources and in more heavily populated areas.

3.1.2.1 Potential Objectives:

On a non-desert battlefield each zone must include, in addition to other terrain, at least one key terrain feature.

Within each zone one key terrain feature is defined, by the player placing terrain, as a Potential Objective for that zone. On non-desert battlefields five of these Potential Objectives will eventually become game Objectives.

On desert battlefields terrain is often more open and terrain objectives less critical. To model this a player is only required to place one Potential Objective in one of his three zones. He may however place more, up to one per zone, as described previously.

One less than the total number of Potential Objectives, rounded down to the nearest odd number, will become game Objectives.

3.1.2.2 Key Terrain:

Key terrain features may only include:

- A collective farm or small village: Represented by a single town sector. Unless defined otherwise at placement such a sector consists of small wooden buildings or, in the case of a desert battlefield, small weak buildings, refer SH 11.5 or MSH 13.5. No more than two such farms or small village sectors may be placed in a zone and no more than one if the zone contains a small town.
- Small Town: A collection of two town sectors. Only one small town may be placed on the table.
- Large Town: A collection of three town sectors. Only one such town can be used and only if no small town is placed. No other towns or villages can be placed in that zone.
- A bridge, or bridges: Crossing a river or stream. A bridge cannot be defined as a Potential Objective in a central zone unless there is no river in that zone and the bridge crosses a stream.
- Hill: A key hill feature is the highest hill within the zone. The highest contour, or one of the highest contours if more than one, is always the key terrain feature if a hill is nominated as a Potential Objective.



Modern Spearhead scenarios should have the size of large towns and small towns increased to model increased urbanisation, especially in Cold War Europe in the 1970s and later.

In these scenarios a total of two small towns may be placed, but only one in the same zone. A large town may be used in addition to up to two small towns, but may not be in the same sector as any other town or village. The maximum size of large towns is increased to five town sectors.

The centre of a key feature must be at least 250mm from all table edges and no part can be closer than 150mm to any table edge.

3.1.2.3 Hills:

The size of hills can vary considerably. Ranging from long ridges through to numerous small single contour rises that break up visibility and reduce engagement ranges. Large flat top hills that provide large hull down positions are not permitted; rather such features should have one or more small spot heights which limit the area on which vehicles can claim hull down positions from. Terrain is usually contained within the zones. However, particularly large hills may extend into adjacent zones provided no other terrain has been placed in that zone.

3.1.2.4 Woods and Jungle:

Woods can range from small areas that represent tree lines along roads up to large areas of wooded terrain possibly bisected by roads, rivers or streams. Each player may only dominate two zones with a single large wood. A wood is considered to dominate a zone if it covers two thirds of the total zone area. Such dominated zones must include an objective other than a hill. Other zones containing woods should contain two or more sections that can be moved as described in Terrain Placement, refer section 3.2.

In low intensity conventional warfare scenarios, in certain geographical areas, woods may be replaced with jungle. An area of jungle is limited to only two zones and if placed must dominate the zone. Jungle is considered to dominate a zone if it covers two thirds of the total zone area. No other jungle terrain can be placed. Objectives within such zones may include hills. The use of jungle should be by player agreement prior to the game and list selection.

3.1.2.4 Fields, Hedges and Walls:

Fields can be of various types and represent specific areas on the battlefield. The actual field type is determined later, refer section 4.2.2. This mechanism is designed to reduce excessive player manipulation of tabletop terrain. Fields can be of low height that restrict movement but do not block visibility. These include wheat fields or ploughed fields. Alternately, fields can contain tall crops of sufficient height that block visibility to stands on the same level.

Fields may, or may not, be surrounded by walls, hedges or hedgerows. Unless defined at placement as having walls, hedges or hedgerows fields are presumed to be without them.

Walls, hedges or hedgerows may also surround areas of hard ground that need not be defined as fields.

3.1.2.5 Water Features:

An individual player cannot place more than one coastline or lake edge. A coastline or lake edge cannot be placed in a central zone. Coastlines or lake edges may not project onto the table more than 150mm from that table edge that has the longest water edge.

Rivers or canals, which can only be crossed by bridge, are limited to no more than two zones only one of which can be a central zone. When a river is positioned in a central zone the zone's potential objective must be positioned closer to the opposite long table edge than the river or canal. Streams, which slow rather than prevent movement, do not suffer these restrictions. Streams, rivers or canals cannot be placed so that they enter a zone that has already had terrain placed in it. A stream, river or canal placed touching a zone that does not currently have terrain in it must be extended when terrain for that zone is placed.

3.1.2.6 Soft ground and Marsh:

Areas of soft ground, unless soft ground in deserts, are limited to two areas per zone, neither of which can be more than 125mm across in any direction.

Areas of marsh can range from small areas that physically touch streams to large areas that link rivers or streams. A marsh is considered to dominate a zone if it covers one third of the total zone area. Each player may only dominate one zone with a large marsh. Such dominated zones must include a stream or river.

3.1.2.7 Snow:

Snow is not available except in winter and then only then by the mutual agreement of both players prior to the game and placing of any terrain. In this case the entire battlefield is considered snow covered and should be represented as such. A snow covered battlefield defines the season as winter. In this situation fields are always considered ploughed fields.

3.1.2.8 Desert:

Desert battlefields cannot have woods, rivers, canals or streams, marsh or snow. A desert battlefield cannot have more than two built up areas. These areas may be either small villages or up to one small town.

Desert hills can be soft ground to represent shifting dunes.

On a desert battlefield each player may only dominate one zone with a large area of soft ground. An area of soft ground is considered to dominate a zone if it covers one third or more of the zone.

A desert battlefield may have a special terrain feature called a desert road. Unlike other roads, which are placed after all other terrain, desert roads are placed initially. Only three zones may have a desert road. A

desert road cannot be placed so that it enters a zone that has already had terrain placed in it unless the zone contains a town in which case it must. A desert road touching a zone that does not currently have terrain in it must be either extended when terrain for that zone is placed or have a town placed as a potential objective for that zone.

3.2 Terrain Placement:

The following rules presume a table that has terrain placed freely over top of a playing surface and that all such terrain can be freely moved. If using terrain boards the following rules are amended, refer section 3.2.4.

3.2.1 Initial Terrain Placement:

Before determining the tactical stance each player rolls a D6. The highest player will place terrain first. The player numbers the zones and rolls again. The resultant zone is then populated with terrain excluding roads other than desert roads. At the time terrain is deployed in a specific zone the player placing the terrain defines the Potential Objective of that zone. Players then alternate terrain placement by zone, dicing to see which zone is to be populated next, until all zones have been populated.

3.2.2 Moving Terrain:

Once terrain is positioned in all zones each player may pivot or move one D6 terrain features, other than rivers, streams, canals and desert roads. If both players die scores are the same no terrain movement takes place. In other situations players alternate terrain movement, the player with the original highest score starting. The player with the low score may "pass", in which case the other player may move terrain. Players continue moving terrain until both players have "passed" consecutively, at which time no more terrain is moved, or the high scorer has moved terrain pieces equal to his initial dial roll.

Terrain cannot be moved completely out of a zone. Potential objectives may not be moved if their new position would make their new position illegal as defined in section 3.1.2.2.

Hills that have a flat edge and therefore shaped to fit along a table edge are anchored to a table edge. However, during the terrain movement phase they may be moved along any table edge that forms a boundary to the zone.

3.2.3 Placing Roads:

On non-desert battlefields both players now place roads. Roads must connect all villages, towns and bridges. Each long table edge must have two or three roads exiting it and each short edge must have one or two roads exiting it.

On desert battlefields villages are presumed to connect to desert roads or table edges by desert tracks. These tracks are not modelled and have no impact on movement. Towns must be connected to desert roads and the nearest table edge. The latter is the only time roads are placed, during this phase, on a desert battlefield.

3.2.4 Terrain Boards:

Players wishing to use terrain boards should use the following variations.

Terrain boards should be 600mm square or assemble to create a 600mm square zone. They would ideally have only modelled rivers, streams, coastlines and roads. Other terrain would ideally be free standing to ensure variation.

If roads are modelled on the terrain board then they will of course be placed in an earlier phase. In this case free standing towns and villages can not be placed off roads but may be moved along roads staying within sectors. Farms can be positioned off roads and are not linked to the road network.

3.3 Defining Objectives:

Each player now rolls a D6 and the highest scorer defines a Potential Objective as a game Objective. Players then alternate until five Potential Objectives have been nominated or, in desert battlefields one less than the total number of Potential Objectives rounded down to the nearest odd number. These objectives are game Objectives for both players and are of equal value.

4.0 STRATEGIC SITUATION & ENVIRONMENT:

Once the battlefield has been defined the Strategic Situation is used to determine the tactical situation and in due course the scenario. The environmental aspects of the scenario are determined within the scenario setup procedure.

4.1 Strategic Situation:

After terrain placement and objectives have been determined each player rolls a D6 and this score is added to the nation's Strategic Situation Table value to determine the tactical situation.

There are two possible tactical situations. They are the Positional Situation or the Fluid Situation.

The modifiers are as follows:

World War II Strategic Situation Table	Prior to 1939	1939	1940	1941	1942	1943	1944	1945
German	-	+1	+1	+1	+1	+1	0	0
Italian	0	0	+1	+1	0	0	0	0
Japanese	+1	+1	+1	+1	+2	+1	0	0
Other Axis	0	0	0	0	0	0	0	0
British, Commonwealth & Free French	-	0	0	0	+1	+1	+1	+2
American	-	-	-	-	+1	+1	+1	+2
Russian	+1	0	+1	0	0	+1	+1	+2
All others	0	0	0	0	0	0	0	0

Modern Strategic Situation Table	
Soviet and WARPAC Allies, including East Germany, Czechoslovakia and Poland, in Cold War Europe or against third world neighbours.	+1
Post Cold War Russian against former Soviet States.	+1
United States and European NATO 1 outside Europe or in Yugoslavia during or after the Cold War.	+1
Syrian forces on the Golan Front during the 1973 War or Israeli forces in all other scenarios.	+1
Cuban in Africa unless against South African or South African against southern African neighbours and Cubans.	+1
All other nations and situations	0

If the modified scores are the same, or the difference is one, a Fluid Situation exists. Otherwise a Positional Situation exists where the high scorer is the attacker, the low scorer the defender.



Note

The modifiers model typical situations. Players undertaking a specific campaign may wish to alter selected modifiers.

4.2 Environment:

Only the most basic environmental elements are defined here. Players may optionally expand these, by agreement, to enhance their scenario.

4.2.1 Night & Dawn:

Some scenarios may involve a number of turns occurring at night. For simplicity these games start at night and after a number of turns daylight conditions exist. The first daylight turn is dawn and lasts one turn, after which there is full light.

Players conducting night operations in World War II scenarios should use the advanced scenario rule, refer section 8.2.8.

If using Modern Spearhead all night moves occur, for simplicity in "night" conditions, refer MSH 6.1.1.

4.2.2 Seasonal Effects on Terrain:

On non-desert battlefields that are not covered by snow roll one D6 after the Tactical situation has been determined to determine specific seasonal effects.

Die Roll	Seasonal Effect
1	All fields are considered ploughed fields and may impact movement but do not provide cover. Increased chances of inclement weather conditions may apply, refer section 4.2.3
2, 3 or 4	All fields contain low crops that may impact movement but do not provide cover.
5 or 6	All fields contain tall crops that may impact movement. Tall crops only provide spotting cover. Areas of mud are removed from the table.

4.2.3 Weather:

Both players roll a die and add the total. If there is an increased chance of inclement weather, refer section 4.2.2, add one to the total. If the modified total is 11 or 12 inclement weather is a feature of the battlefield.

The actual inclement weather is determined by rolling a second die:

Die Roll	Inclement Weather
1, 2 or 3	On non desert battlefields there is heavy rain. No road bonus in scenarios except in Cold War European situations. All ploughed fields are treated as areas of mud. Visibility is reduced to half until the weather improves for stands without night vision. This is determined by rolling a D6 at the beginning of the turn. If a six is rolled the rain ceases. Only night and bad weather capable aircraft and helicopters in Modern Spearhead scenarios can operate or be requested. In all other situations any programmed missions occur one turn after the rain ceases.
4, 5 or 6	Heavy low cloud. Air operations are impacted until the cloud cover breaks. This is determined by rolling a D6 at the beginning of the turn. If a six is rolled the cloud cover breaks. Only night and bad weather capable aircraft and helicopters in Modern Spearhead scenarios can operate or be requested. In all other situations any programmed missions occur one turn after the heavy low cloud breaks.



Note

Note, inclement weather is determined after all planning operations are complete and just prior to the game starting.

4.2.4 Time of Day:

In certain scenarios the attacker may elect to start his attack at night. The attacker states, after completing his orders, how many turns of night will exist by defining the number of night turns. The number of night turns must be between one and five.

All off table battalions entering the table during night turns must test for night arrival. This includes flank marching battalions, reserves and timed orders. The test is completed by rolling a single D6. Consult the following table to determine if the battalion arrives successfully.

Battalion Type in Deliberate Attack Scenarios	Successful Arrival
World War II British, Commonwealth, American or German Regular or Veteran prior to 1943	4, 5 or 6
World War II British, Commonwealth, American, Russian and German Regular or Veteran from 1943	3, 4, 5 or 6
World War II Russian Regular or Veteran from 1944	3, 4, 5 or 6
World War II other	5 or 6
NATO1, NATO2 or WARPAC1 Regular or Veteran	3, 4, 5 or 6
WARPAC2 Regular	4, 5 or 6
Modern other	5 or 6

The score required is modified as follows:

Situation	Modifier
Flank Marching	+1
Deep flank march	+2
Conducting a Spoiling Attack	+1
If there are three or more night moves remaining	+1

Battalions that do not arrive retest in subsequent turns. Battalions that requires a score greater than 6 will not arrive that turn.

5.0 TACTICAL SITUATIONS & SCENARIOS:

Each scenario and permissible options are defined within the following sections.

Unless stated otherwise troops entering the table do so from the players own long table edge, this edge being determined by the scenario.

5.1 Positional Situation:

There are three possible scenarios in the Positional Situation. They are Hasty Attack, Deliberate Attack and Spoiling Attack Scenarios.

The modified high scorer in section 4.0 is the attacker. The attacker may elect to conduct a Hasty Attack or a Deliberate Attack.

If the attacker elects to make a Deliberate Attack the defender may select to conduct a Spoiling Attack. A Spoiling Attack is considered to have occurred before the Deliberate Attack could be delivered. If the defender does not wish to conduct a Spoiling Attack the original attacker conducts the Deliberate Attack as planned.

If the defender opts to conduct a Spoiling Attack the roles of attacker and defender are reversed.

The player determined to be defending nominates which long table edge will be his preferred base line and rolls a die. If he rolls a 1-4 this becomes his base line and his opponent that opposite. If he rolls a 5 or 6 the opposite table edge is his base line.

5.1.1 Hasty Attack Scenario:

5.1.1.1 Attacker's Options:

The attacker uses his Attack List. He may elect to reinforce his attack with an Option A reinforcement. By selecting such an option he is penalised with respect to victory conditions, refer section 6.1. The decision to use the reinforcement is made before the defender's HQ elements are deployed and is noted on the player's roster sheet. If a reinforcement option is not taken at this time the option is lost for the game. The use of the Option A reinforcement need not be declared until the end of the game.

The attacking player may flank march on one short table edge. Any flank march is not declared until it arrives and is not permitted to arrive before turn three if comprising completely motorised, mechanised or armoured battalions or turn five if any other type.

Deep flank marches, which have any stands arriving further than 600mm from the attacking player's base line, incur a -1 on the flank march table. All stands flank marching must arrive at least 300mm from the defenders base line.

The number of battalions that can flank march are defined in the main rules, refer SH 3.7.3 or MSH 3.7.3.

Where the modified score for a flank marching battalion is greater than six a flank marching battalion always arrives on a six.

Any off-table reserves must have their entry point marked on the player's map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The attacker may elect to pre-plan artillery fire during the game with up to one pre-planned fire mission per artillery or mortar battalion drawn from the brigades own artillery assets supplemented by one pre-planned fire missions from any one divisional artillery battalion. These fire missions count towards an artillery battalion's total number of fire missions. Only off-table artillery may conduct pre-planned fire missions, see also section 8.2.1.1 (if SH) or 9.2.1 (if MSH).

The attacker may pre-plan helicopter way points in MSH scenarios.

The attacker may not conduct a night attack.

5.1.1.2 Defender's Options:

The defending player uses his Defend List. He may elect to reinforce his defence by using an Option A reinforcement. This will impact the victory conditions, refer section 6.1.

The defender cannot deploy closer than 250mm from the enemy base line unless placing stands in a specific town sector whose centre is at least 250mm from the enemy base line.

Any off-table reserves must have their entry point marked on the player map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The defender can not pre-plan artillery fire or air support or pre-plot helicopter waypoints.

The defender may not place minefields, points used on minefields are lost.

Refer section 5.1.4 for the Positional Situation Sequence.

5.1.2 Deliberate Attack Scenario:

5.1.2.1 Attacker's Options:

The attacker uses his Attack List. He may elect to reinforce his attack with either an Option A or Option B reinforcement. However, by selecting either one of these lists he is penalised with respect to victory conditions, refer section 6.1. The decision to use the reinforcement is made after the defender's HQ elements are deployed and is noted on the player's roster sheet. If a reinforcement option is not taken at this time the option is lost for the game. The use of the Option A list need not be declared until the end of the game. The use of the Option A or B reinforcement need not be declared until the end of the game.

The attacking player may flank march on one short table edge. Any flank march is not declared until it arrives and is not permitted to arrive before turn three if comprising completely motorised, mechanised or armoured battalions or turn four if any other type.

Deep flank marches, which have any stands arriving further than 600mm from the attacking player's base line may not be made.

The number of battalions that can flank march are defined in the main rules, refer SH 3.7.3 or MSH 3.7.3.

Where the modified score for a flank marching battalion is greater than six a flank marching battalion always arrives on a six.

Any off-table reserves must have their entry point marked on the player's map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The attacker may elect to pre-plan artillery fire during the game with up to a maximum of ten fire missions. These fire missions count towards an artillery battalion's total number of fire missions. Only off-table artillery battalions may conduct pre-planned fire missions.

The attacker may pre-plan limited aircraft support mission, refer section 8.2.2 (if SH) or 9.2.2 (if MSH). The attacker may pre-plan helicopter way points in MSH scenarios.

The attacker may conduct additional pre-battle reconnaissance. He nominates two table zones where his resources are to be concentrated, refer section 3.1.1. At least one zone must touch his own table edge while the second can touch his own table edge or be a direct extension of the first sector creating a corridor between opposite player table edges.

The attacker may elect to conduct a night attack.

5.1.2.2 Defender's Options:

The defending player uses his Defend List. He may elect to reinforce his defence by using an Option A reinforcement. This will impact the victory conditions, refer section 6.1.

The defender, except in Modern High Intensity scenarios, receives 16 light entrenchments free. The defender may use camouflaged positions.

The defender cannot deploy closer than 250mm from the enemy base line unless placing stands in a specific town sector whose centre is at least 250mm from the enemy base line.

Any off-table reserves must have their entry point marked on the player map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The defender can not pre-plan artillery fire or air support. He may not pre-plot helicopter waypoints.

The defender may place minefields. Minefields are deployed on table initially with his HQ stands. Minefields cannot be moved. See also section 8.2.3 (if SH) or 9.2.3 (if MSH).

Refer section 5.1.4 for the Positional Situation Sequence.

5.1.3 Spoiling Attack Scenario:

5.1.3.1 Attacker's Options:

The attacker uses his Defend List. He reinforces his attack with an Option B reinforcement without penalty, refer section 6.1. The decision to use the reinforcement is made after the defender's HQ elements are deployed and is noted on the player's roster sheet. If a reinforcement option is not taken at this time the option is lost for the game.

The attacking player may flank march on one short table edge. Any flank march is not declared until it arrives and is not permitted to arrive before turn three if comprising completely motorised, mechanised or armoured battalions or turn four if any other type.

Deep flank marches, which have any stands arriving further than 600mm from the attacking player's base line may not be made.

The number of battalions that can flank march are defined in the main rules, refer SH 3.7.3 or MSH 3.7.3.

Where the modified score for a flank marching battalion is greater than six a flank marching battalion always arrives on a six.

Any off-table reserves must have their entry point marked on the player's map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The attacker may elect to pre-plan artillery fire during the game with up to one pre-planned fire mission per artillery or mortar battalion drawn from the brigades own artillery assets supplemented by one pre-planned fire missions from any one divisional artillery battalion. These fire missions count towards an artillery battalion's total number of fire missions. Only off-table artillery may conduct pre-planned fire missions.

The attacker may pre-plan limited aircraft support mission, see section 8.2.2 if (SH) or 9.2.2 (if MSH). The attacker may pre-plan helicopter way points in MSH Scenarios.

The attacker may elect to conduct a night attack, refer section 4.2.4.

5.1.3.2 Defender's Options:

The defending player uses his Defend List. He may elect to reinforce his defence by using an Option A reinforcement. This will impact the victory conditions, refer section 6.1.

The defender cannot deploy closer than 250mm from the enemy base line unless placing stands in a specific town sector whose centre is at least 250mm from the enemy base line.

Any off-table reserves must have their entry point marked on the player map. The number of battalions that can be held in reserve are defined in the main rules, refer SH 3.10 or MSH 3.10.

The defender can not pre-plan artillery fire or air support or pre-plot helicopter waypoints.

The defender may place minefields. Minefields are deployed on table initially with his HQ stands. Minefields cannot be moved. See also sections 8.2.3 (if SH) or 9.2.3 (if MSH).

Refer section 5.1.4 for the Positional Situation Sequence.

5.1.4 Positional Situation Sequence:

The following sequence is followed:

1. The season effects on terrain are determined, refer section 4.2.2.
2. Initial attacker selects Hasty or Deliberate attack, if Deliberate the initial defender may select Spoiling attack and become the attacker.
3. The table orientation is determined.
4. Both players declare the division TO&E that their list has been drawn from.
5. The attacker determines and notes down if he is using reinforcements.
6. The defender determines if he is using his Option A reinforcement and notes this down.
7. The defender places battalion headquarters of all on-table battalions and states the battalion type.
8. The defender places minefields if permitted.
9. In Deliberate attack scenarios the attacker nominates a two table zones for additional pre-battle reconnaissance.
10. In Deliberate Attack scenarios the defender now places at least three stands if any troops are to be deployed within the zone, with entrenchments if entrenched, in zones touching the enemy table edge subject to pre-battle reconnaissance. If the second zone selected by attacker is touching the defender's table edge, and no troops are in the zone touching the attacker's table edge, three stands are placed in that zone with entrenchments if entrenched. No troops can be deployed further forward in these table zones including troops in ambush.
11. Normal off-table reserve rules apply and the entry point of reserve battalions are marked on the defenders map. All on-table battalions must have defend orders.
12. Both the attacker and defender complete the allocation of support weapons and cross attachments.
13. The attacker draws command arrows, defines the entry point of reserves and any flank marching battalions. The attacker also defines any pre-planned artillery fire and air support missions in his attack plan including the points of fire and turn of arrival.
14. The defender may adjust the on table location of his battalion headquarters stands by up to 150mm and then deploys all stands not placed earlier. He may elect to deploy up to three stands in hidden deployment. Such stands cannot be in open terrain, even if entrenched. These stands are marked on his map and are not revealed until they fire, move or are spotted. These three stands, or up to three others, may be deployed out of command. If so they are treated as a separate battalion for morale purposes. They may not move at all, even to rejoin the parent battalion. If they are eliminated they do not count as a battalion for calculating victory conditions.
15. Inclement weather is now determined, refer section 4.2.3.
16. The game begins.

5.2 Fluid Situation:

There are two possible scenarios in the Fluid Situation. They are the Mutual Encounter Scenario and the Advance to Contact Scenario.

If the modified score in section 4.1 is the same then a Mutual Encounter Scenario exists. If the difference is one then an Advance to Contact Scenario exists.

The base line of both players is a long table edge. Both players roll a D6. The player with the higher die roll selects his table edge, the other takes the edge opposite. Each player counts as under attack orders for reserves.

The list used in by both players is determined by a die roll made by the player who did not select his table edge.

In High Intensity Modern Spearhead Scenarios the die roll is modified by adding one to the score.

Die Roll	
1 to 4	Both players use an Encounter List.
5+	Both Players use a Defend List.



Players using Defend Lists may use Option A or Option B reinforcements normally. However note the limitations on the use of field defences and minefields in the specific scenarios. Field defences and minefields purchased and not used are lost.

5.2.1 Advance to Contact Scenario:

Both players may reinforce their attack by using either an Option A or Option B reinforcement. The decision to use the additional option is made before the player completes his command plan. He notes the reinforcement on his roster sheet. However, the use of any option is not declared until the end of the game. If a reinforcement option is not selected prior to the start of the game it is lost.

The player with the lowest modified score, as defined in section 4.1, must deploy one battalion on table prior to the game. The battalion cannot be positioned further than 600mm from the player's base line and the battalion can only be allocated attack, defend or timed orders. Except in High Intensity Modern scenarios dismounted infantry and infantry support weapons of this battalion may use light entrenchments, if these have been purchased. He may elect to use an Option A or Option B reinforcement but suffers a victory point penalty if he does, refer section 6.1.

The player with the high score may use an Option A reinforcement without penalty. He may elect to use an Option B reinforcement, if he elects this option he suffers the normal victory penalty, refer section 6.

Minefields cannot be used.

Artillery or air support cannot be pre-planned. Helicopter waypoints may be pre-planned in MSH scenarios.

Both players may flank march on up to one short table edge. Any flank march is not declared until it arrives and is not permitted to arrive before turn two if comprising completely motorised, mechanised or armoured battalions or turn four if any other type. Deep flank marches, which have any stands arriving further than 600mm from the attacking player's base line, incur a -1 on the flank march table. All stands flank marching must arrive at least 300mm from the defenders base line.

The number of battalions that can flank march is defined in the main rules, refer SH 3.7.3 or MSH 3.7.3.

Where the modified score for a flank marching battalion is greater than six a flank marching battalion always arrives on a six.

If both players elect to flank march, and both have flanked marched on the same table edge, that arriving later is instead deployed on the player's own base edge within 300mm of the short table edge.

A flank march that arrives on table and that has enemy within 300mm of the entry point is displaced 300mm towards the player's own long table base edge. The command arrow is redrawn immediately on the turn of arrival and is redrawn to arrive at the original final position by the most direct route.

Refer section 5.2.3 for the Fluid Situation sequence.

5.2.2 Mutual Encounter Scenario:

Player may reinforce their attack by using either an Option A or Option B reinforcement. The decision to use the additional option is made before the player completes his command plan. He notes the reinforcement on his roster sheet. However, the use of any option is not declared until the end of the game. If a reinforcement option is not selected prior to the start of the game it is lost. The use of this option impacts victory conditions, refer section 6.1.

Minefields and entrenchments cannot be used.

Artillery or air support cannot be pre-planned. Helicopter waypoints may be pre-planned in MSH scenarios.

Both players may flank march on up to one short table edge. Any flank march is not declared until it arrives. Flank marching battalions containing non-mechanised troops can not arrive before turn five. Deep flank marches, which have any stands arriving further than 600mm from the attacking player's base line, incur a -1 on the flank march table. All stands flank marching must arrive at least 300mm from the defenders base line.

The number of battalions that can flank march is defined in the main rules, refer SH 3.7.3 or MSH 3.7.3.

Where the modified score for a flank marching battalion is greater than six a flank marching battalion always arrives on a six.

If both players elect to flank march, and both have flanked marched on the same table edge, that arriving later is instead deployed on the player's own base edge within 300mm of the short table edge.

A flank march that arrives on table and that has enemy within 300mm of the entry point is displaced 300mm towards the player's own long table base edge. The command arrow is redrawn immediately on the turn of arrival and is redrawn to arrive at the original final position by the most direct route.

Refer section 5.2.3 for the Fluid Situation sequence.

5.2.3 Fluid Situation Sequence:

The following sequence is followed:

1. The season effects on terrain are determined, refer section 4.2.2.
2. The table orientation is determined.
3. Determine the use of Defend or Encounter List by die roll.
4. Both players declare the division TO&E that their list has been drawn from.
5. In an Advance to Contact Scenario the low scorer places one battalion HQ on table and states the battalion type.
6. Option A or B reinforcements are selected and noted down.
7. Both players determine support weapons and cross attachment allocations.
8. Both players draw command arrows and define the entry point of reserves and any flank marching battalions.
9. In an Advance to Contact Scenario the low scorer may adjust the position of the on-table battalion HQ by up to 150mm and then deploys all stands of the battalion including entrenchments.
10. Inclement weather is now determined, refer section 4.2.3.
11. The game begins.

6.0 VICTORY CONDITIONS:

6.1 Game Victory Conditions:

Victory points are totalled at the end of play. End of play should be four hours calculated from when initial terrain setup starts, unless by mutual agreement. The winner is the player with the higher total. If the totals are the same the game is a draw.

Victory points are accumulated as follows:

Points	Description
+2	For each objective held at the end of play.
-1	If an otherwise held objective is contested.
+3	An attacker, in a Attack Defence Situation who has exited a tank battalion across the enemy base line during the game and all the following apply: <ul style="list-style-type: none">• The exiting battalion has not had to test morale or conducted a flank march.• The exiting battalion was a Normal Battalion at the start of the game.• All surviving stands of a battalion exited the table within 250mm of a road and the road can be traced back to the players base line with a corridor of 150mm either side of the road that is clear of enemy stands at the end of the game. This can be claimed only once irrespective of how many tank battalions have exited.
+1	A player, unless a defender in a Attack Defence Situation, that has a exited a tank battalion across the enemy base line during the game and all of the following apply: <ul style="list-style-type: none">• The +3 victory condition above has not been achieved.• The exiting battalion has not had to test morale or conducted a flank march.• The exiting battalion was a Normal Battalion at the start of the game.• The exiting tank battalion initially contained at least six tanks at the start of the game and at least four tanks on exiting. Only two battalions can claim this victory point condition.
+1	For each enemy Small Battalion that has suffered 50% casualties.
+2	For each enemy Normal Battalion that has suffered 50% casualties.
+2	For each enemy Normal Battalion that has lost ten or more stands as casualties but has not suffered 50% casualties.
+1	For each on table enemy Regimental or Brigade HQ that has been destroyed by direct fire or close combat.
+2	For any on table enemy Divisional HQ that has been destroyed by direct fire or close combat.
+1	If a Regular/Veteran Normal Battalion is retained off-table in reserve at the end of the game and the player would otherwise have a greater final score than his opponent.
-1	If using an Option A reinforcement, unless as defined by the scenario as having been provided without penalty.
-3	If using an Option B reinforcement, unless as defined by the scenario as having been provided without penalty.

An objective is considered held by the defender in an Positional Situation scenario unless the attacker has captured it during the game. In other situations an objective is not held unless captured. To capture an objective a player must have had at least part of one battalion, or two Small Battalions as defined in section 7.2.1, at the objective, or has been the last to move through the objective. Further, the battalion HQ, or in the case of two Small Battalions both HQs, must be within, or have been within, 250mm of at least part of the objective.

The enemy can contest an objective that is held. An objective is contested if at least three enemy elements are within 250mm of an otherwise held objective and all are capable of firing at stands at or on the objective with direct fire. When determining if a town is contested the measurement is made to any centre edge of a sector making up the objective. When determining if a hill is contested measure to any edge of the top contour. When determining if a bridge is contested measure to the centre of the bridge. An infantry company landed by helicopter, unless landed at least three turns prior to the end of the game, cannot contest an objective.

Where victory conditions require a tank battalion to exit the table a battalion with a tank HQ and at least as many tank companies as infantry companies, initially and when exiting, counts as a tank battalion.

6.2 Competition Victory Conditions:

If the game forms part of a competition a running total of victory points should be maintained. The final score will determine the competition winner. A player with a negative individual game score should have his individual game score rounded to zero. A player with an individual game score that is greater than ten should have the game score limited to ten.

7.0 TABLES OF ORGANISATION & EQUIPMENT:

The following sections are provided as guidelines to players only. They can be altered by mutual agreement between players or by competition organisers to address particular TO&E restrictions.

7.1 General Guidelines:

Brigades are the basic building block of the Scenario Generation System.

A player may elect to support his battlegroup, which is drawn from one or in some cases more than one brigade, by using additional troops drawn from division and on occasion corps or army level assets. The term brigade used in the Scenario System is generic and in some armies, such as Soviet, should be replaced with regiment.

Suitable TO&E are those defined in the respective SH and MSH rule books, or those TO&E documented agreed and referenced elsewhere. When using WWII Spearhead different divisional TO&E can be used for Defend, Attack or Encounter Lists. However, each individual list must draw its component parts from one divisional TO&E. If using Modern Spearhead the Attack, Defend and Encounter lists must be drawn from the same divisional TO&E.

Divisional TO&Es can be found in the Spearhead or Modern Spearhead rules, or at supporting websites. Players or competition organisers may also elect to supplement these with additional historical TO&Es. Such TO&E must be fully researched and available prior to the game or event to all players. This simulates intelligence and staff work prior to the battle.



Note

Allowing well researched historic and specific orders of battle is to be encouraged. However, it can also result in extremely optimised lists which do not always result in ideal games especially when used repeatedly. As such they should be used with caution. Variety is an important concept in the successful use of the Scenario Generation System.

7.2 Forming Battalions and Brigades:

7.2.1 Battalions:

On table battalions are defined as armoured, mechanised infantry, infantry, reconnaissance or support. In Attack Defence Situations they must be defined by type when placing HQs, refer sections 5.1.4 and 5.2.3.

A battalion may be under strength. However, no more than one third of the original fighting stands of the battalion may be removed from the battalion. Reconnaissance stands, except from divisional reconnaissance battalions, as well as any stand capable of conducting support fire, may always be removed when forming under strength battalions in addition to the one third of the fighting stands.

The doctrine of some nationalities supports the use of cross-attachment. Cross-attachment of one company requires the removal of another company from the battalion's original strength. For the purposes of the scenario system these nations may also purchase battalions that have companies already cross-attached the other battalion being assumed to operate elsewhere. Other nationalities achieve combined arms by pre-allocation of certain fighting companies, which may also be completed. Refer SH 14.0 and MSH 2.3.7 and MSH 20.1

Battalions are defined by their size at the start of the game following allocation of attachments. The size of a battalion impacts counting for the number of battalions that can be held in reserve, that can flank march, as well as impacting victory conditions.

Battalion	Number of Stands
Small Support Battalion	5 or less on table stands from a specialised reconnaissance battalion, on or off-table artillery battalions and attack helicopters.
Small Battalion	9 or less stands.
Normal Battalion	10 stands or more.

Small Support Battalions do not count as a battalion when determining reserves or the number of battalions that flank march. Small Support Battalions cannot assist in capturing objectives and their loss does not impact victory conditions.

7.2.2 Brigades:

Each list must initially comprise troops primarily drawn from one brigade, or brigade equivalent, TO&E. At least one brigade HQ must always be provided. At least two thirds of this brigade's battalions rounded up, including artillery, must be used before any additional fighting battalions drawn from a different brigade can be used. These battalions may be under strength, refer section 7.2.1.

Additional fighting battalions or brigades may be used to reinforce this basic brigade. If more than two additional fighting battalions are used these should also be organised into brigades with a brigade HQ.

7.2.3 Higher Level Support Assets:

A player may elect to reinforce his brigades with additional assets drawn from divisional support battalions.

Assets from corps or army level formations should be limited. Unless by player agreement or defined by a competition organiser they should be limited to:

- No more than six stands of artillery without a dedicated FAO.
- No more than three fixed wing aircraft.
- In World War II Spearhead an infantry division, otherwise without armour, supported by an independent tank battalion.
- In Modern Spearhead no more than two attack helicopters or three stands of non Divisional AA.

7.3 Morale:

Battalion morale must be composed of those types available to a division as stated by the TO&E. Ratios defined need not be applied to those battalions represented on table if the number of battalions is less than the total battalions of that morale type.

Attachments that are allocated to fighting battalions should be of the same or higher morale grade

Artillery, FAOs, and AGCs must always be Regular unless the division being modelled is entirely Green, or entirely Veteran. In this situation they must be rated the same as the rest of the division.

In MSH scenarios helicopters are always rated as Regular.

7.4 Construction of Option A and B Reinforcements:

The use of reinforcements in the form of options is designed to add variety and to provide a commander with additional tactical flexibility. Option A and B reinforcements must comply with the guidelines in section 7.0 to 7.4.

Options may include additional troops or specialised transport vehicles such as trucks, transport helicopters or specific divisional transport elements.

In Modern Spearhead options can provide specialised indirect fire ammunition types, such as ICM rounds or chemical smoke, or more expensive fixed wing aircraft weapon loads for a specific aircraft type in the main Attack or Defend List. Options may not be otherwise used to provide replacement or upgraded equipment.

In some scenarios options may be used to purchase minefields or further entrenchments.

8.0 SPEARHEAD ADVANCED RULES:

8.1 SH Official Advanced and Optional Rules:

The following Spearhead rules are critical to the scenario system and should always be used when using Spearhead.

Spearhead Optional Rule	Status
3.7.1 Obligatory Movement	Advanced Russian Rule does not apply.
5.10 Hedgerow Cutters	Applies.
8.7.5 Switching from Pre-Planned to Observed Fire	Applies.
14.0 Hidden Movement	Not Used. Special deployment rules provide limited hidden deployment.
14.0 Cross Attachment	Only German, American and British or Commonwealth from 1943. See also SH 9.1.4.
14.0 Close Combat	Applies.
14.0 Morale Retreats	Advanced rules apply.
14.0 American Artillery	Applies.
14.0 Parachute/Glider Air Drops	Not permitted.
Special Units and Weapons in the TO&Es	All special rules apply.

8.2 SH Special Advanced Rules:

The following advanced rules also apply.

8.2.1 SH Artillery & Heavy Mortars:

Individual support stands found at battalion or regimental level, as long as no more than one stand of the same calibre weapon per battalion or regiment respectively is available, or battalion and regimental mortars up to 100mm, are not limited in the number of indirect fire missions available. All other artillery and heavy mortar battalions, either on or off table, are limited in the number of indirect fire missions per battalion as follows:

FIRE MISSION TABLE	Number of Fire Missions
Battalions with guns 90mm or less	7
Mixed Battalions and battalions up to 125mm calibre	6
Battalions with larger calibre artillery	4
Battalions with rocket launchers	3

The above represents several factors. Firstly, it encourages the use of lighter and more common artillery. Secondly, it also presumes that heavier divisional or corps artillery is also supporting other formations of the division.

Only dedicated forward observer stands may request fire from artillery drawn from a division's divisional assets.

Smoke ammunition, unless pre-planned, is limited to two rounds of fire per weapon. This applies to all weapons irrespective of the weapon being on or off table. Each round of smoke ammunition counts as one of the fire missions available above.

8.2.1.1 SH Off-Table Artillery:

Only off-table artillery can conduct pre-planned or counter-battery fire.

Any artillery that is purchased without an on table observer stand can only be used for pre-planned fire or for counter-battery. Pre-planned fire by such battalions is only available to the attacker in Deliberate Attack Scenarios.

The points cost of artillery that remains off-table is reduced, refer section 10.2.

8.2.1.2 SH Improved British Artillery:

British and Commonwealth artillery has an observer for each two stand artillery "battalion" unless it is to be used only for counter-battery or pre-planned fire.

British and Commonwealth artillery improved considerably during the course of the war. To model this all British and Commonwealth divisional artillery is treated as US on the "Divisional Support" table from September 1942, that is a request is successful on a roll of 3 to 6.

From September 1942 each observer can request and control fire for all other "battalions" of the same artillery regiment. The player declares his intent and rolls for success. If successful, he has the fire for all guns of the regiment. If unsuccessful no artillery is available to any other FAO from the regiment. A change to the number of guns firing requires a new request roll.

8.2.1.3 SH Counter-Battery Fire:

Artillery allocated to counter-battery may not be used for pre-planned fire or for other on-table fire.

Prior to the start of the game each player defines which artillery battalions, or British and Commonwealth batteries, are assigned to counter-battery duty. These units may not participate in normal artillery fire and may only conduct counter-battery tasks. They should be the units equipped with the largest calibre or longest ranged weapons. Rocket units may not be assigned to counter-battery.

During the game counter-battery fire is conducted in the artillery fire phase after all other artillery fire by both sides has been completed. A D6 is rolled once for every enemy artillery battalion or battery that fired this turn, or fired counter-battery last turn, and that has not already been located. Any unit indirect firing 65mm Guns or larger or 120mm (4.2") mortars or larger may be located.

A score of five or greater is required to locate. Adjust the required score as follows:

Description	Modifier
If a British/Commonwealth/U.S. Counter Battery Observer present with the division.	-2
If a German/Soviet Counter Battery Observer present with the division.	-1
If the target unit has fired for two or more consecutive turns.	-1
If the target unit fired for the first time in the game or moved/unlimbered in the previous turn.	+1
If the target unit is infantry guns or mortars.	+1
If no Counter Battery Observer present.	+1

If the required score is greater than six then throw two D6 dice and combine the scores. An 11 or 12 results in successful location.

Once located a unit will be automatically spotted each time it fires, until it changes position by moving all its stands at least 6". Allocate available counter-battery units as desired to located enemy artillery units that fired this turn. Fire should be directed at enemy counter-battery units or large calibre artillery first then down the chain to lesser targets, firing on mortars and infantry guns only if no other targets are available. The firing unit will be assumed to spread its fire evenly between all the gun stands of the target. The counter-battery firer must have an equal or greater range than the target if the target is off-table. If the target is on table the counter-battery firer is always assumed to have sufficient range. Resolve indirect fire effect against target stands as normal, the location roll above replaces the response roll for normal indirect fire.

Corps or Army level artillery is limited to conducting counter-battery fire, or pre-planned fire. When engaged in counter-battery fire against on-table artillery the target must be artillery or mortars of at least 100mm or rocket launchers of any calibre.

The points cost of artillery that remains off-table is reduced, refer section 10.2.1.

8.2.2 SH Aircraft:

Only one aircraft model may be on table in any one turn.

Air Ground Control:

Only British and Americans may purchase Air Ground Controllers (AGC) and then only during 1944 and 1945. Refer to the AGC rules in SH for their use.

Pre-Planned:

In a Deliberate Attack scenario the attacker may pre-plan one flight of aircraft, a single model, except that Germans from 1940 to 1942 may pre-plan two flights or two models. In these situations the target point of the pre-planned air support missions are marked on a map including the turn of arrival. On the turn of arrival a D6 is rolled for each model. On a roll of 3-6 the air mission arrives. If one or more models fail to arrive re-roll the following turn. The aircraft engages enemy targets as selected by the attacker that are within a radius of 300mm of the target point. Stands within woods, unless on the edge, cannot be directly targeted but may be included in the aircraft's beaten zone. Stands that are camouflaged count as being in light entrenchments. Note, as stated earlier only one model aircraft may be on table per turn.

Random Mission:

All other aircraft arrive randomly. Each player with aircraft assigned to random missions throws a single D6 each air phase starting at the first turn of the game. When a six is scored, one aircraft will appear that phase. Roll each turn until no aircraft remain available. Aircraft will attack a random visible enemy battalion. Aircraft with rockets will attack any battalion. If armed with bombs any battalion that consists of 50% or more soft platoons such as infantry, guns and trucks. If armed with AT cannons any battalion that consists of 50% or more vehicle platoons either soft or armoured, including towed guns. If none match the requirements the aircraft will attack that which comes closest. For the purpose of calculating which battalion will be attacked by a random air attacks a stand is visible from the air if it is not hidden by woods or towns.

Opposing Aircraft:

Air superiority is defined by year in the following table. If at any stage during the game both players have successfully requested aircraft the side without air superiority loses the air strike and the aircraft is instead returned to stock. This simulates aircraft circling around avoiding enemy fighters. If neither side has air superiority, such as in 1942, and if both receive air support the aircraft of both players are returned to stock.

AIR SUPERIORITY	
Prior to 1939	Contested
1939-1941	Axis
1942	Contested
1943 (Western Front)	Allied
1943 (Eastern Front and Far East)	Contested
1944-1945	Allied

When an aircraft is aborted in two consecutive turns, due to enemy anti-aircraft fire, it does not return and instead is removed from play.

When attacks by aircraft attacks require a modified score that is greater than six to be successful, due to attack and AA modifiers, use two dice. The target is destroyed if the combined score is 11 or 12.

8.2.3 SH Minefields:

Minefields are for simplicity known to both players prior to command arrows being drawn. Hidden minefields are not used. Player purchased minefields are limited to only to two areas of minefields, irrespective of the size. Only one type of minefield can be used per area of minefield. The type must be noted by the player at deployment time but is not declared until the minefield is entered.

8.2.4 SH Sector Combat:

Only one round of combat is fought in each sector each turn. If stands from both sides remain after this round of combat they are locked in sector combat until the next turn of close combat. They cannot move, break-off, fire, request artillery support or conduct any other action. Any surplus stands over the three stand limit per side must retire out of the sector. They may not retire in to sectors that contain enemy. If they cannot retire they are destroyed.

If players choose to reinforce a deadlocked combat in the following movement phase only a maximum of three stands can be added regardless of how many stands are already in the sector.

8.2.5 SH Jungle:

Jungle terrain is impassable to all troops except infantry and infantry man-handled weapons. Roads negate jungle and may be used to move vehicles.

8.2.6 SH Stands Moving Off Table:

Stands that move off table may not return. Half the stands so exiting, rounded up, count as lost when determining morale checks and victory conditions unless exiting the enemy base line.

8.2.7 SH Camouflaged Positions:

In Deliberate Attack scenarios the defender may conceal vehicles by using camouflaged positions. Only three such vehicles can be so camouflaged. During the game they only provide spotting cover unless stands so camouflaged are under air attack in which case they count as light entrenchments.

8.2.8 SH Night Visibility:

Visibility is reduced to $\frac{1}{3}$ of normal distances during night moves and $\frac{1}{2}$ during dawn.

8.2.9 SH Aircraft Maximums:

A player is restricted to a total maximum number of aircraft as shown on the Aircraft Maximums chart.

AIRCRAFT MAXIMUMS:	Prior to 1939	1939	1940	1941	1942	1943	1944	1945
German (Europe)	-	3	3	3	2	2	1	1
German (Mediterranean)	-	-	-	3	2	2	1	1
British & Commonwealth (Europe)	-	1	1	-	2	3	3	3
British & Commonwealth (Mediterranean)	-	1	1	2	2	3	3	3
Italian (1)	1	1	1	2	2	1	1	1
French (2)	-	1	1	1	1	-	-	-
Polish and Belgian	-	1	1	-	-	-	-	-
Soviet Union	1	1	1	1	2	2	3	3
U.S.A. (Europe)	-	-	-	-	2	3	3	3
U.S.A. (Mediterranean)	-	-	-	-	2	2	2	3
British, Commonwealth & American (Far East)	-	-	-	1	1	2	2	3
Japanese (Far East)	2	2	2	2	2	1	1	1
All others	1	1	1	1	1	1	1	1

Aircraft Notes:

1. This includes Loyalist forces fighting for the Allies in 1944-45 and Fascist forces fighting for the Germans after September 1943.
2. Europe 1939-1940 and Vichy French only. Free French come under British and all French after 1943 come under U.S.A.
3. Europe includes France, Holland, and Russia. The Mediterranean includes North Africa, Italy and the Southern Balkans.

8.2.10 SH Aircraft Types:

The following table defines a range of aircraft by defence and attack factors.

AIRCRAFT TYPE	Defence	Bomb	Rocket	AT Cannons
JU-87 A-D (1939-1944)	4	2	-	-
JU-87G (1943+)	4	2	-	3
JU-88	4	3	-	-
HS-129	3	4	4	3
ME-110	4	4	-	3
DO-17	4	4	-	-
FW-190	4	4	-	4
Italian, Hungarian, Bulgarian or Romanian Stuka	4	3	-	-
Sturmovik	5	3	4	3
PE-2	4	4	-	-
Fairey Battle	4	4	-	-
Inferior fighter bombers including Fairey Swordfish, Gloster Gladiator, CR-32, CR-42 and most Japanese and other early war aircraft.	3	5	-	-
British Jabos: Including Typhoons & Hurricane IIC	4	4	4	3
Mosquito	5	4	4	3
American Jabos: Including P47 & P51	4	4	4	4
P38 Lightning	5	4	4	4

9.0 MODERN SPEARHEAD ADVANCED RULES:

9.1 MSH Official Advanced and Optional Rules:

The following Modern Spearhead rules are critical to the scenario system and should always be used when using Modern Spearhead.

Modern Spearhead Optional Rule	Status
3.7.1 Obligatory Movement	The Advanced Third World rule does not apply.
8.7 Short Range Ballistic Missiles	Not permitted.
12.3 Close Combat Flank/Rear Aspect	Applies.
14.0 Morale	Optional Morale Pass/Fail rule applies.
15.0 Engineering Tasks	Apply unless noted otherwise below.
15.3 Soviet Armoured Fighting Vehicles	Entrenchments must be purchase separately.
17.0 Weapons of Mass Destruction	Not permitted.
18.0 Hidden Movement	Not used. Special deployment rules provide limited hidden deployment.
20.1 (TO&E section)	Applies.

Modern Spearhead Advanced Rules (Version 1.00 28 th of July 2006)	Status
3.91 Dropping off Platoons Under Timed Orders	The advanced "Dropping off" rules apply. Only one company can be dropped off by helicopter or by amphibious landing. Transport for these missions can only be purchased by using an Option A or B reinforcement.
11.0 Helicopters	Applies.
13.6 Sector Combat	Applies, see also 9.2.4 below.
15.5.1 Bridging	Applies.
All other Advanced Rules in this document	Not used.

The Modern Spearhead Advanced Rules, Version 1.00 28th July 2006 are available from the official Modern Spearhead website.

9.2 MSH Special Advanced Rules:

The following advanced rules apply.

9.2.1 MSH Artillery & Heavy Mortars:

Individual support stands found at battalion level are not limited in the number of fire missions they may conduct. All other artillery and heavy mortar battalions, either on or off table, are limited in the number of indirect fire missions per battalion defined below. Weapon calibre is determined by the major weapon type in those battalions that have mixed weapons.

FIRE MISSION TABLE	Number of Fire Missions
Battalions with guns or mortars less than 125mm	7
Battalions with guns or mortars 125mm to 160mm	6
Battalions with guns or mortars over 160mm	4
Battalions with rocket launchers	3

Artillery or mortars drawn from the divisional TO&E may be purchased without an on table observer. Artillery or mortars drawn from formations above the division can not have forward observers and can only be used for counter battery or pre-planned fire.

Only off-table artillery can conduct pre-planned or counter-battery fire.

Smoke ammunition, unless pre-planned, is limited to two rounds of fire per weapon. This applies to all weapons irrespective of the weapon being on or off table. Each round of smoke ammunition counts as one of the fire missions available above.

Chemical smoke, and other advanced ammunitions such as ICM, PGM and RAP are only available to certain armies and at certain times. These specialist ammunitions must be purchased, refer section 10.3.

Artillery conducting one turn of fire with special munitions such as ICM, PGM, RAP and artillery delivered minefields count as an additional fire mission for the entire artillery battalion. For example, artillery firing ICM counts as two fire missions. Artillery firing ICM and with RAP counts as three fire missions.

Rocket launcher battalions are normally limited to three fire missions or two if one is using ICM or other specialised munitions. Rocket launchers that can only fire ICM, such as MLRS, may always conduct two ICM fire missions unless firing ICM RAP. However, if firing ICM without RAP at least one of these two fire missions must be either pre-planned or as counter battery.

Corps or Army level artillery is limited to conducting counter-battery fire, or pre-planned fire. When engaged in counter-battery fire against on-table artillery the target must be artillery or mortars of at least 100mm or rocket launchers of any calibre.

Corps or Army level artillery may engage on-table or off table SAM systems located through electronic warfare irrespective of their location assuming they are in range.

The points cost of artillery that remains off-table is reduced, refer section 10.3.1.

9.2.2 MSH Fixed Wing Aircraft:

Aircraft are organised into squadrons. Each squadron comprises aircraft of one type. An individual stand requesting air support, including AGCs, may only request support from one squadron in any one turn.

A player is restricted to a maximum number of four fixed wing aircraft in high intensity conventional scenarios and two in low intensity scenarios. Only two fixed wing aircraft models may be on table in any one turn.

All nations, except third world, may purchase AGCs. In addition all nations can use a non AGC stands to request of air support, refer MSH 10.2.1.

In a Deliberate Attack Scenario the attacker may pre-plan one squadron of aircraft, up to two models. In this situation the target point of the pre-planned air support mission is marked on a map including the turn of arrival. On the turn of arrival a D6 is rolled for each model. On a roll of 3-6 the air mission arrives. If one or more models fail to arrive re-roll the following turn. If they do not arrive then they are lost. The aircraft engages enemy targets as selected by the attacker that are within a radius of 250mm (300mm) of the target point. Stands within woods, unless on the edge, cannot be directly targeted but may be included in the aircraft's beaten zone.

When an aircraft is aborted in two consecutive turns, due to enemy anti-aircraft fire, it does not return and instead is removed from play.

When attacks by fixed wing aircraft attacks require a modified score that is greater than six to be successful, due to attack and AA modifiers, use two dice. The target is destroyed if the combined score is 11 or 12.

9.2.3 MSH Minefields:

Pre-positioned minefields, including dummy minefields, are for simplicity known to both players prior to command arrows being drawn. Hidden minefields, refer MSH 15.2, are not used.

In a Attack-Defence Scenarios player purchased minefields and dummy minefields are limited to two areas,

irrespective of the size. Only one type of minefield can be used per area of minefield. They can be dummy, anti-vehicle, anti-infantry or mixed, refer MSH 15.2.2. The type must be noted by the player at deployment time but are not declared until the minefield is entered.

Helicopters and artillery may be used to deploy minefields during the game. Both players know the position of such minefields.

9.2.4 MSH Sector Combat:

Only one round of combat is fought in each sector each turn. If stands from both sides remain after this round of combat they are locked in sector combat until the next turn of close combat. They cannot move, break-off, fire, request artillery support or conduct any other action. Any surplus stands over the three stand limit per side must retire out of the sector. They may not retire in to sectors that contain enemy. If they cannot retire they are destroyed.

If players choose to reinforce a deadlocked combat in the following movement phase only a maximum of three stands can be added regardless of how many stands are already in the sector.

9.2.5 MSH Jungle:

Jungle terrain is impassable to all troops except infantry and infantry man-handled weapons. Roads negate jungle and may be used to move vehicles.

9.2.6 MSH Stands Moving Off Table:

Stands that move off table may not return. Half the stands so exiting, rounded up, count as lost when determining morale checks and victory conditions unless exiting the enemy base line.

9.2.7 MSH Electronic Warfare:

Each player has seven electronic warfare missions. Additional electronic warfare missions may be purchased as part of a basic list or Option A or B reinforcement.

Only one electronic warfare mission can be used per turn. Where appropriate the effect is applied across the entire table, for example radio jamming.

Players, or competition organisers, should consider limiting Radar Location missions to selected countries until the 1970s. No electronic warfare missions are available in the 1950s.

9.2.8 MSH Off Table Surface to Air Missiles:

Only SAM found at divisional level, or higher, may be held off table.

The points cost of off-table SAM is reduced, refer 10.3.1.

Off table SAM may only provide air defence against fixed wing air attack, refer MSH 11.8. Depending on the individual weapon range one SAM platoon may be able to cover the entire table. Off table SAM should have their nominal position on the board edge marked. This may be important for weapons with limited range such as Rapier and Roland. Off table SAM are considered to be at least 12" behind this point. To determine the effective range subtract 12" from the weapon's maximum range. This produces the radius of the weapon system when determining if the weapon can engage on table aircraft.

Should off-table SAM be attacked, following detection by radar location electronic warfare missions, use the full range of the SAM system when calculating counter battery range limitations.

9.2.9 MSH On-table Anti-Aircraft Assets:

On table anti-aircraft systems may be allocated out by platoon to fighting battalions. When attached in this way treat each attachment as a company when determining attachment limits.

Man portable SAM, such as Redeye, SA-7, SA-14, or Blowpipe, as well as anti-aircraft artillery up to and including 23mm towed guns are not usually provided with radar. In addition, some very old anti-aircraft artillery systems, such as ZSU-57-2s, may also lack radar. These systems cannot be located by radar location electronic warfare missions, jammed, or targeted with counter battery fire.

9.2.10 MSH Helicopters Squadrons:

Attack helicopter squadrons that are not attached to fighting battalions count as Small Support Battalions, refer section 7.2.1. They do not test morale.

Attack helicopters may be refuelled and return later.

Transport helicopters can conduct multiple transport missions to transport elements from a single battalion to a single landing zone. Additional missions, used to transport a separate battalion, require the purchase of additional transport helicopters.

9.2.11 MSH Order Changes:

Where a player has two or more Brigade HQs present on table he receives one order change for each brigade that has its full compliment of battalions. In all other situations players are limited to only one order change per turn. Refer also MSH 3.2.1 and 3.12.

9.2.12 MSH Camouflaged Positions:

In Deliberate Attack scenarios the defender may conceal vehicles by using camouflaged positions. Only three such vehicles can be so camouflaged. During the game they only provide spotting cover unless stands so camouflaged are under air attack in which case they count as light entrenchments.

10.0 POINTS SYSTEM:

10.1 General Conditions:

Trucks for off-table artillery and AA systems, as well as other on-table transport and tows that are used on table, must be purchased.

Command platoons always cost the same as normal platoons. The inability to 'fire' is offset by the command function. Infantry count as infantry or combat vehicles as the appropriate type. Other dismounted HQ's always count as infantry platoons for points cost and may require the purchase of transport vehicles.

10.2 World War II Spearhead:

10.2.1 SH National Quality Multipliers:

All ground units, including AGCs have their total cost multiplied by the following factors.

Calculate the cost of each battalion and then multiply the battalion total by the modifiers listed in the Nationality Quality Table below. Calculate divisional assets by company or battalion depending on the quantities selected.

Aircraft, Field Defences and Minefields are never multiplied by these costs.

Off table artillery use a multiplier 0.2 less than the normal value for that nationality and morale grade defined on the Nationality Quality Table. For example, off table German regular artillery are multiplied by 1.0 rather than 1.2.

World War II National Quality Table	Veteran	Regular	Green	Random
German	1.4	1.2	1.0	-
German HQ (1)	1.2	1.0	0.8	-
Italian	1.1	0.9	0.7	-
Japanese	1.3	1.1	0.9	-
British & Commonwealth and Finnish	1.2	1.0	0.8	-
French (2)	1.1	0.9	0.7	0.8
Russian	1.1	0.9	0.7	0.8
U.S.	1.2	1.0	0.8	-
All others	1.1	0.9	0.7	0.8

Notes:

1. This is for any non-German troops, such as Italians, who are treated as under German command, but retain their own equipment and identity.
2. This covers 1939-1940 French and 1940-43 Vichy French. 1941-43 Free French should be treated as British for all command/support request purposes, and all French after mid-1943 should be treated as U.S. for command/support purposes.

10.2.2 SH Generic Troops

The costs for the following generic troops are:

GENERIC TROOP TYPES & DEFENCES	Cost
Soviet Special Battalion Command (1)	10
Artillery FOO	10
Italian or French Counter Battery Observer (off-table)	5
German or Russian Counter Battery Observer (off-table)	10
British, Commonwealth or American Counter Battery Observer (off-table)	15
Air Force AGC (British and American 1944 & 1945 only)	10
Cavalry	5
Transport (2)	1
Light Entrenchments for infantry and infantry support weapons and off-table artillery	1
Heavy Entrenchments for infantry and infantry support weapons and on table light entrenchments for artillery and anti-tank guns.	2

GENERIC TROOP TYPES & DEFENCES	Cost
Camouflaged positions for anti-tank guns and tanks, without protection bonus.	1
Section of Minefields 3 ¾ " x 1 ¼"	5

Notes:

1. Soviet Special Battalion Command applies to those battalions that may have a command capability but are not required to have a dedicated command stand. This cost only applies if the battalions are to operate independently.
2. Transport whether horse drawn, soft mechanised vehicles and/or artillery tractors cost the same. Note that there is no extra cost for infantry equipped with bicycles.

10.2.3 SH Aircraft:

Aircraft are one-shot weapons, and their cost is not multiplied by the National Quality factors, although AGC when available, are.

The cost of an aircraft is determined by cross-referencing its defence factor with its weapon type and attack factor. One air support mission is equal to one model aircraft.

AIRCRAFT COSTS:	Bombs	Bombs	Bombs	Bombs	Rockets	AT Cannons	AT Cannons
Attack	2	3	4	5	4	3	4
DEF 3	18	15	9	6	12	12	9
DEF 4	21	18	12	9	15	15	12
DEF 5	24	21	15	12	18	18	15

10.2.4 SH Other Troops:

Other troop costs are defined by nationality.

German:

		Data Card Reference:		Official Data Card	
Tanks					
Pzkw I	4	Pzkw IIF or Luchs	7	Pzkw35t or 38t	9
Pzkw IIIE or IIIF	9	Pzkw IIIG	11	Pzkw IIIH (1)	12
Pzkw IIIJ	13	Pzkw IIIL or IIIM	15	Pzkw IIIN	13
Pzkw III Flamm	8	Pzkw IVD	10	Pzkw IVE or IVF1	12
Pzkw IVF2	19	Pzkw IVG	22	Pzkw IVH or IVJ	24
Pzkw V Panther	30	Pzkw VI Tiger I	27	Pzkw VI Tiger II	37
Assault Guns					
StuG IIIB or IIID	10	StuG IIIF/G (75/43)	19	StuG IIIG (75/48)	21
StuH 42	15	StuG IV	21	StuIG 33B	17
StuPz IV Brummbär	19	StuMrs Tiger	20		
Tank Destroyers					
JgdPz IV (75/48)	21	JgdPz IV (75/70)	25	JgdPz 38t Hetzer	23
PzJgr V Jagdpanther	32	PzJgr VI Elephant	34		
Jagdtiger (88/71)	38	Jagdtiger (128/55)	42		
SP Guns					
PzJgr IB	13	15cm Gw I or II or 38t	14	7.5cm Gw LS(f)	17
Marder II or III	17	PzJgr 38t (late MrIII)	17	PzJgr III/IV Nashorn	22
Sdkfz 6 Diana	12				
Anti-Tank Guns					
PzB 41	2	Pak 35	4	Pak 38	7
Pak 40	10	Pak 43	15		
Pak 296(r) 76mm (2)	9	Pak 36r 76mm (5*)	10		
Armoured Cars					
Sdkfz 221	3	Sdkfz 221 Modified	6	Sdkfz 222	6
Sdkfz 231, or 232	6	Sdkfz 233	7	Sdkfz 234/3	8
Sdkfz 234/1	6	Sdkfz 234/2 Puma	11		
Sdkfz 234/4	14	Sdkfz 250/9	7		
Anti-Aircraft					
20mm Flak 30	5	Quad Flak 38	9	88mm Flak 18 or 36	15
Zgkw 20mm (Sdkfz 10)	5	Zgkw 37mm (Sdkfz 7)	6	Zgkw Quad (Sdkfz 7)	9
FkPzIV Mblwagen 20mm	9	FkPzIV O/wind 37mm	11	FkPzIV W/wind Quad	14
Halftracks					
Sdkfz 250/1 or 251/1	2	Sdkfz 250/7 or 251/2	6	Sdkfz 250/8 or 251/9	11
Sdkfz 251/16	9	Sdkfz 251/17	10	Sdkfz 251/22 (75/46)	16
Artillery					
105/28 Howitzer	9	150/30 Howitzer	11	170/50 Medium Gun	15
Wespe	15	Hummel	17	15cm Gw LS(f)	15
Nebelwerfer	6	Sdkfz 251 Werfer	8	FK 296(r) 76mm (5*)	11

Infantry & Support Weapons

Rifles	6	SMG	6	HMG	6
Engineers	7	M/Cycles (Rifle/SMG)	7/6	75mm Recoilless Rifle	4
81mm Mortar	3	120mm Mortar	5		
75mm LIG 18	6	150mm SIG 33	11		

German Notes:

1. Pz III G with field modification of armour to III J standard (ie. 4/3), Common in North Africa from May to September 1942.

2. *Additional note on Soviet 76mm:* Large numbers that were captured were designated as FK 296(r), and although an artillery gun many were issued to Pak units as well as Artillery battalions. Those issued as ATGs we have designated as Pak 296(r) and they have the same characteristics as Soviet 76mm but may not use indirect fire (hence the reduced cost). Later many were upgraded to Pak 36(r) by rechambering for Pak40 ammunition, and these were also mounted on the Marder series. As a general rule Pak units with captured 76mm will be Pak 296(r) until near the end of 1942, at which time Pak 36(r) will become increasingly more common.

British:

Data Card Reference:

Official Data Card

Tanks

Light Mk6B	4	Light Mk6C	5		
A9 Cruiser Mk.I	9	A9 Cruiser Mk.I CS	8	A10 Cr Mk.II or IIA	10
A10 Cr Mk.IIA CS	8	A13 Mk.1 Cr Mk.III	9	A13 Mk.2 Cr Mk.IVA	11
A13 Mk.2 Cr Mk.IVCS	9	A15 Crusader I or II	11	A15 Crusader III	12
A15 Crusader CS	9	A27M Cromwell I	13	A27M Cromwell IV - V	15
A27M Cromwell VI (1)	13	A27M Cromwell VII	20	A27M Cromwell VIII	17
A30 Cr Challenger	25	A34 Cruiser Comet	24	M4 Sherman "Firefly"	25

Infantry Tanks

A11 Matilda I	6	A12 Matilda II	13	A12 Matilda CS	11
Valentine I - VIIA	12	Valentine VIII - X	16	Valentine XI	18
A22 Churchill I	12	A22 Churchill II	13	A22 Churchill III - IV	18
A22 Churchill V	16	A22 Churchill VI or NA75 (2)	20	A22 Churchill VII	22
A22 Churchill VIII	20	A22 Crocodile	25	A22 Churchill NACS	13
A22 Churchill AVRE	14				

Lend Lease Tanks

M3 Honey	9	M5 Stuart	10	M5 Recon Stuart	6
M3 Grant (or Lee)	13	Sherman I or II	20		
Sherman IB 105mm	17	Sherman (76mm)	24		

Tank Destroyers:

Archer	16	M10 Wolverine (3)	22	M10 Achilles	24
M3 75mm GMC ½Track	10				

Anti-Tank Guns

2pdr	4	6pdr	6	17pdr (incl. Pheasant)	12
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Armoured Cars

Rolls Royce	4	Marmon Herrington	4	Mar/Hrgtn (Modified)	7
Humber Scout Car	3	Humber II or Guy I	5	Humber IV	8
Daimler Scout Car	3	Daimler II	9	AEC III	12
Staghound I	8	Staghound II	4	Staghound III	12

Anti-Aircraft

Bofors AA Gun	5	Morris SP Bofors	5	Light Tank Mk.6 AA	4
Crusader III AA Mk.1	11	Crusader III AA Mk.2 (4)	6	Humber AA	5

Halftracks and APCs

Recon Carrier	4	Carrier Platoon	6	Dis. Combat Engineers	8
M3 or M5 ½Track	2	Ram Kangaroo APC (5)	3		

Artillery

18pdr Field Gun	6	25pdr Gun/Howitzer	6	4.5" Medium Gun	9
5.5" Gun/Howitzer	11	6" Howitzer	11	60pdr Medium Gun	11
Bishop 25pdr	12	Sexton 25pdr	13	M7 Priest 105mm	16

Infantry & Support Weapons

Rifles	5	SMG	5	HMG	5
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Engineers	6	Motorcycles (All)	6
3" Mortar	3	4.2" Mortar	5

British Notes:

1. The Cromwell VI is designated as Cromwell V on the data cards (The Cromwell V is actually a Cromwell IV, but built with welded armour). The A27L Centaur range were all converted to Cromwell standard or used for special purpose vehicles, hence they are not included.
2. The Churchill VI is a Churchill IV with a 75mm Gun (AT 6, AI 5, Range 12"), they represented about 50% of Churchills used in NW Europe and 90% of those used in Italy! The Churchill NA75 also comes into this category, a Churchill IV with a Sherman 75mm fitted and used in Italy 1943-45.
3. Standard US M10 with 3" Gun used for a couple of months in Normandy (before being upgraded to Achilles), and also used extensively in Italy. (Note that the US M4A1(76mm) Sherman was also used in Italy in 1944).
4. As Crusader III AA Mk.1 but with 3/3 armour and 2x20mm guns - Use Humber AA specifications for Direct Fire and Flak rating.
5. Turretless Ram tank, 3/3 armour and carries 1 Infantry Platoon. Direct Fire as Infantry, otherwise as M3 Grant specifications, operates as APC (see rule 5.7.1).

American:

Data Card Reference:

Official Data Card

Tanks

M3 Stuart	9	M5 Stuart	10	M8 HMC	8
M24 Chaffee	15	M3 Lee	13	M4 Sherman	20
M4's with 105mm	17	M4's with 76mm	24	M4 Calliope	22
M4 Jumbo (75mm)	22	M4 Jumbo (76mm)	26	M26 Pershing	28

Tank Destroyers

M2 GMC ½Track 37mm	8	M3 GMC ½Track 75mm	10		
M10 GMC Wolverine	22	M18 GMC Hellcat	20	M36 GMC Jackson	23

SP Guns

M6 GMC Dodge (37mm)	4				
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Anti-Tank Guns

37mm ATG	4	57mm ATG	7	3" ATG	10
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Armoured Cars

M8 Greyhound	7	M20 Command Car	4		
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Anti-Aircraft

AAMG	3	40mm Bofors	5		
M13 or M14 ½Track	4	M15 ½Track	8	M16 ½Track	6

Halftracks and APCs

M3 Scout Car	4	M3 or M5 ½Track	2	M4 Mortar ½Track	6
Jeep (0.3" MG)	3	Jeep (0.5" HMG)	4		

Artillery

75/16 Howitzer	5	105/23 Howitzer	9	155/20 Howitzer	11
8" Howitzer	13	T30 HMC ½Track (75mm)	11	T19 ½Track (105mm)	15
M7Priest (105mm)	16	M12 or M40 (155mm)	18		

Infantry & Support Weapons

Rifles & Armd Inf Rifles	5	SMG	5	HMG	5
Engineers	6	Motorcycles (All)	6		
81mm Mortar	3	107mm (4.2") Mortar	5		

Soviet:

Data Card Reference:

Official Data Card

Tanks

BT5	9	BT5A	7	BT7	10
BT7A	8	T26B or S	9	T28	9
T35	8	T34A	17	T34B or C	20
T34/85	25	T40S	7	T60	8
T70	9	KV1	18	KV1A	21
KV1C	23	KV1S	19	KV85	24
KV2	16	IS2	32		

Assault Guns & Tank Destroyers

SU85	21	SU100	26		
SU122	15	SU152	18		

SP Guns

SU57	11	SU76	13		
ISU122	30	ISU152	24		

Anti-Tank Guns

45/46 ATG	5	45/66 ATG	7	57/73 ATG	8
100/55 ATG	13				

Armoured Cars

BA10	9	BA20 or BA64	3	BA32	9
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Anti-Aircraft

AA MG	3	37mm AA	5		
Quad 0.5" Truck	5	M13 or M14 ½Track	4		

Halftracks and APCs

M3 White S/Car	2	M3 or M5 ½Track	2		
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Artillery

76/41 Field Gun	11	122/22 Howitzer	11	152/29 Howitzer	12
Katyusha	9				

Infantry & Support Weapons

Rifles	5	SMG	5	HMG	5
Engineers	6	Motorcycles (All)	6		
81mm Mortar	3	120mm Mortar	5	76/16 Infantry Gun	5

Italian:

Data Card Reference:

Official Data Card

Tanks

L3/33 or L3/35	4	L3 Modified	6	L6/40	6
M11/39	8	M13/40	9	M14/41	10
M15/42	11	P26/40	14	Carro Commando	5

Assault Guns

Semovente L40 da 47/32	8	Semo' M40 da 75/18	8	Semo' M41 da 90/53	20
Semovente M42 da 75/34	10	Semo' M43 da 105/25	15	Semo' M43 da 75/46	23

SP Guns

C'mtta Morris 65mm	5
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Anti-Tank Guns

37mm (Pak35)	4	47/32 Gun	5
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Armoured Cars

Autoblinda 40	3	Autoblinda 41	6	AB Sahariana	4
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Anti-Aircraft

20/65 Breda	4	75/46 Ansaldo	12		
Autocannone SP 75/27	5	Autocannone SP 90/53	13	F15 Ford SP 20/65	5

Artillery

75/27 Field Gun	6	100/17 Howitzer	8	105/32 Field Gun	9
149/19 Howitzer	11	149/40 Medium Gun	11		

Infantry & Support Weapons

Rifles	5	SMG	5	HMG	5
Engineers	6	Motorcycles (All)	6		
20mm Solothurn ATG	4	81mm Mortar	3	65/17 Infantry Gun	5

French:

Data Card Reference:

Official Data Card

Tanks

Renault FT17 (MG)	3	Renault FT17 (37mm)	7	Renault R35 or R40	8
FCM 36	10	Char B1	11	Char B1bis	12
Char D1	9	Char D2	10		
AMR 33VM	4	AMR 35ZT	6	AMR 35ACG	9
Hotchkiss H35, H38 or H39	9	Somua S35	10		

SP Guns

Laffly Chasseur de Char 6

Anti-Tank Guns

25mm ATG	3	37mm ATG	4	47mm ATG	5
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Armoured Cars

Panhard 7 AMR ½Track 4

Anti-Aircraft

20/60 AA 3 20/72 or 25/72 AA 4

Halftracks & APCs

Renault UE (1) 2 Lorraine Carrier 1

Artillery

75/36 Field Gun	6	105/19 Howitzer	9	105/36 Field Gun	9
155/15 Howitzer	11	155/38 Field Gun	11		

Infantry & Support Weapons

Rifles	5	SMG	5	HMG	5
Engineers	6	Motorcycles (All)	6	81mm Mortar	3
37/20 Infantry Gun	3	65/20 Infantry Gun	5		
75/12 Infantry Gun	5	75/28 Infantry Gun	6		

French Notes:

1. Armoured (2/2) Gun Tractor for ATGs.

Polish:

Data Card Reference:

WWII Polish Data Card 1.0

Tanks

Renault FT17 (37mm)	7	Renault R-35	8	7TPjw	8
Vickers E	5	TKS/TK3	5		

Anti-Tank Guns

Bofors 37mm ATG	4				
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Armoured Cars

wz 34	7				
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Anti-Aircraft

Bofors 40mm AA	5				
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Artillery

wz 97	6	wz 14/19	8		
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Infantry & Support Weapons

Rifles	5	SMG	5	HMG	5
Engineers	6	Motorcycles (All)	6		
81mm Mortar	3				

10.3 Modern Spearhead:

10.3.1 MSH National Quality Multipliers:

All ground units, including AGCs and helicopters have their total cost multiplied by the following factors.

Calculate the cost of each battalion and then multiply the battalion total by the modifiers listed in the Nationality Quality Table below. Calculate divisional assets by company or battalion depending on the quantities selected.

Fixed Wing Aircraft, Field Defences and Minefields are never multiplied by these costs.

Off table artillery and off table AA systems uses a multiplier 0.2 less than the normal value for that nationality and morale grade defined on the Nationality Quality Table. For example, off table NATO 1 regular artillery are multiplied by 0.9 rather than 1.1.

Modern Spearhead National Quality Table	Veteran	Regular	Green
NATO 1	1.3	1.1	0.9
NATO 2	1.2	1.0	0.8
WARPAC 1	1.1	0.9	0.7
WARPAC 2	1.0	0.8	0.6
Third World	0.9	0.7	0.5

10.3.2 MSH Generic Troops

Engineers in Modern Spearhead TO&Es are often not shown as combat teams in the data cards. They may be transported by truck or APC depending on the specific TO&E. Treat them as the most similar combat team, additional engineering cost apply.

The costs for the following generic troops are defined in the following table:

GENERIC TROOP TYPES	Cost
Provide Chemical Smoke capability for two rounds of fire to one artillery stand.	2
Provide ICM, Mines or PGM capability for one round of fire to one artillery stand. This additional cost applies even if the weapon system can only fire ICM.	3
Provide RAP capability for one round of fire to one artillery stand.	2
Artillery FOO.	10
Additional single Electronic Warfare Mission.	15
Air Force AGC (not available to Third World).	10
Truck or other soft skinned vehicle.	1
Armoured vehicle, such as an MTLB, when used to tow artillery piece or anti-tank gun.	2
Upgrade a combat team to light engineers when not specifically defined on data cards.	3
Upgrade a combat team to combat engineers when not specifically defined on data cards.	4
Provide mine plough or rollers for tanks when specifically available.	1

FIELD DEFENCES	Cost
Light Entrenchments for infantry, infantry combat teams and infantry support weapons and off-table artillery and SAMs	1
Heavy Entrenchments for infantry and infantry support weapons and on table light entrenchments for artillery and anti-tank guns and armoured vehicles.	2
Camouflaged positions for anti-tank guns and tanks, without protection bonus.	1
Section of minefields 3 ¾ " x 1 ¼".	4
Section of dummy minefields 3 ¾ " x 1 ¼".	2
Provide minefields for delivery by one helicopter.	10

10.3.3 MSH Aircraft:

Fixed wing aircraft are one-shot weapons. Specialised ground attack aircraft equipped with more than just cannon have their highest points cost multiplied by 1.5 to reflect their increased effectiveness.

The cost of an aircraft is determined by cross-referencing its defence factor with its weapon type and attack factor. One air support mission is equal to one model aircraft.

Aircraft	Cannon	Cannon	Cannon	Cannon
Defence & Attack	2	3	4	5
DEF 3	18	15	12	9
DEF 4	21	18	15	12
DEF 5	24	21	18	15
DEF 6	27	24	21	18

Aircraft	Rocket/ICM	Rocket/ICM	Rocket/ICM	Rocket/ICM
Defence & Attack	2	3	4	5
DEF 3	21	18	15	12
DEF 4	24	21	18	15
DEF 5	27	24	21	18
DEF 6	30	27	24	21

Aircraft	Bomb	Bomb	Bomb	Bomb
Defence & Attack	2	3	4	5
DEF 3	21	18	12	9
DEF 4	24	21	15	12
DEF 5	27	24	18	15
DEF 6	30	27	21	18

Aircraft	SB/ARM	SB/ARM	SB/ARM	SB/ARM
Defence & Attack	2	3	4	5
DEF 3	27	24	21	18
DEF 4	30	27	24	21
DEF 5	33	30	27	24
DEF 6	36	33	30	27

Aircraft	Napalm	Napalm	Napalm
Defence & Attack	2	3	4
DEF 3	24	21	18
DEF 4	27	24	21
DEF 5	30	27	24
DEF 6	33	30	27

10.3.4 MSH Data Card References:

Other troop costs are defined by nationality and align with specific published data cards.

Data cards used to calculate values can be found in the main Modern Spearhead rule book. The base data cards have been updated using the errata available from the Official Modern Spearhead website prior to calculation. The Data card errata can be found at: <http://modernspearhead.net/index.html>

In addition the following data cards have been used:

Nationality	Data Card
Belgian	http://members.tripod.com/collinsj/Revised%20Belgian%20MSHDC.rtf
Canadian	http://collinsj.tripod.com/DC_CAN_US.rtf
Danish	http://members.tripod.com/collinsj/Danish_MSHDC.rtf
Dutch	http://members.tripod.com/collinsj/dc_ne_a4.rtf
Soviet (updated)	http://modernspearhead.net/files/MSH_Warpac_DC_v0990.pdf
Swedish	http://members.tripod.com/collinsj/Swe_MSHDC.rtf
Yugoslavian	http://members.tripod.com/collinsj/Yugoslav_MSHDC.rtf

Then following notes apply to all the following points values:

- (T) Denotes Transport Helicopter. Transport helicopters are not able to be used as attack helicopters and can not loiter over the battlefield.
- Combat teams include infantry except where noted by **. In this situation infantry are purchased separately.
- (NOE) denotes Nape of Earth capable.
- (NBW) denotes Night & Bad Weather capable.

10.3.5 MSH Cold War and Post Cold War European:

American:

Version: 22nd September 2009

Data Card Reference:

Official Data Card with Errata Update

Tanks					
M1A2 Abrams	41	M60A2	21	M48 to M48A1	21
M1A1 HAP Abrams	41	M60A1 USMC upgrade	31	M47 Patton	21
M1A1 Abrams	38	M60A1	25	M103	22
M1 Improved Abrams	37	M60	25	M26 / M46 Pershing	18
M1 Abrams	36	M48A5	25	Sheridan	17
M60A3 (1983+)	30	M48A3	21	M41 Walker Bulldog	15
M60A3 (1980-83+)	26	M48A2	21		
Anti-Tank & Tank Destroyers					
LAV-AT	20	M901A2 ITV (1981+ TOW I Imp)	19	Jeep mounted TOW (TOW IIA)	19
V-150 Fire Support	13	M150	18	Jeep mounted TOW (TOW I Imp)	18
V150 TOW	19	M50 Ontos	12	Jeep mounted TOW (TOW I)	17
M901A2 ITV (1988+ TOW IIA)	20	HMMWV Hummer	20		
Reconnaissance Vehicles					
M3A1 Bradley CFV (TOW IIA)	21	LAV-C	3	Jeep Recon	3
M3A1 Bradley CFV (TOW I Imp)	20	V150 Recon	7	M113 ACAV	3
LAV-25	11	HMMWV Recon	3		
Combat Teams					
M2A2/M2A3 Bradley II	20	M113A1 or A2 (DRGN II)	8	M577 Command (HQ Only) **	3
M2A1 Bradley I	19	M113A1 or A2 (DRGN I)	7	LVTP_7 USMC Upgrade	12
V150 Commando	8	M113A1 (1965+ LAW)	6	LVTP-7 (DRGN I)	8
M113A3 (DRGN III)	11	M113A1 (1960+ LAW)	6	LVTP-5	5
AFV & APC Support Vehicles					
M106 Mortar	11	V150 Mortar	10		
LAV-M	10	M125 Mortar	8		
Artillery					
M110A1 & M110A2	20	M109	15	M114A2 t	11
M110	20	M108	13	M102 t	8
M107	22	M52	13	M18 t	8
M109A1 & M109A2	16	M198 t	12	M993 MLRS	26
Air Defence					
M3 Bradley Line Backer	24	MIM-104 Patriot	33	M727 Improved Hawk	32
LAV-AD	19	M730 Chaparral	17	M727 Hawk	29
Avenger	19	V150 Vulcan	17	MIM-23B Hawk t	21
Stinger Team	9	M163A2	17	M42 Twin 40 Duster	14
Redeye Team	6	M167 t	9	M55 Quad Trailer t	5
Engineers					
M728 CEV	23	M60 AVLB	10	Dis. Engineers	6
M9 ACE CEV	3	M48 AVLB	10	Dis. Combat Engineers	9
M132A1	5				

Infantry & Support Weapons

Infantry (1990)	8	Infantry (1965)	5	106mm Mortar t	6
Infantry (1982)	6	Infantry (1960)	5	81mm Mortar	4
Infantry (1971)	5	Infantry (1950)	5	60mm Mortar	4

Helicopters

AH-64 Apache (NOE & NAW)	62	UH-60 Blackhawk (T & NOE)	12	CH-53 S/Stallion (T)	11
AH-64 Longbow (NOE & NAW)	62	OH-58 Kiowa Warrior (NOE)	49	CH-47 Chinook (T)	11
AH-1 SuperCobra	53	OH-58 Kiowa (T & NOE)	9	CH-54 Tarhe (T)	9
AH-1 HueyCobra	53	AH-6 Defender (T & NOE)	9		
RAH-66 Comanche	57	UH-1 Uroquois (T)	7		

Belgian:Version: 22nd September 2009

Data Card Reference:

Jake Collins' Website: Belgian 1.11

Tanks

Leopard 1A5(BE)	35
Leopard 1(BE)	26
M47 Patton	20

Anti-Tank & Tank Destroyers

Jgpz 4-5 Kanone	19	Jeep Entac	14	M113A1-B-MIL	15
Striker	19	Jeep (106mm RR)	20	AIFV-Milan Antichar*	17
Jeep Milan	15	AMX-VCI Antichar	15		

Reconnaissance Vehicles

Scorpion	11
Scimitar	13

Combat Teams

AIFV-B	14	Spartan	9
M113A1-B	8	AMX-VCI	7
Pandur 6x6	6	M75	7

AFV & APC Support Vehicles

M106 Mortar	11	M125 Mortar	10
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Artillery

M110A2	20	M108	13	M101 t	8
M109A2	16	M115 t	13		
M44	14	LG1 Mk II t	10		

Air Defence

Gepard	21	M16	9
RH202 (t)	3	Mistral*	11
M167 t	9	I-HAWK t	32

Engineers

M48 AVLB	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Infantry (1975-90)	5	107mm Mortar t	6	Milan I (Foot)	15
120mm Mortar t	6	81mm Mortar	5		

Helicopters

A109-BA (NOE)	46	Allouette II (T)	7
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British:Version: 22nd September 2009

Data Card Reference:

Official Data Card with Errata Update

Tanks

Challenger II	43	Chieftain V	27	Centurion III	21
Challenger I (Upgrade)	40	Chieftain II	26	Centurion II	21
Challenger I	40	Centurion XIII	26	Conqueror	25
Chieftain (Stillbrew)	36	Centurion VII	25		
Chieftain IX	29	Centurion VII	25		

Anti-Tank & Tank Destroyers

Spartan MCT Milan 2	21	Ferret Vigilant	13	FV432 with Milan II	20
Spartan MCT Milan	17	FV432 Wombat	13	Saxon with Milan I	16
Striker Swingfire	19	Landrover Wombat	13	Saxon with Milan II	20
FV438 Swingfire	19	Wombat (t)	11		
Ferret Beeswing	19	FV432 with Milan I	16		

Reconnaissance Vehicles

Scimitar	13	Spartan	3	Saladin	10
Scorpion	11	Fox	11	Ferret	3

Combat Teams

Warrior	16	FV432 ('67-88 LAW & MAW)	7	FV439 Humber Pig	4
Sultan (HQ Only) **	3	FV432 ('62-66 LAW)	6	Saxon (LAW & MAW)	6
FV432 Trojan II	10	Spartan	7		
FV432 Trojan I	6	FV603 Saracen	5		

AFV & APC Support Vehicles

FV432 (Mortar)	8	Saxon (81mm Mortar)	8
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Artillery

AS-90 A2	20	M109A1	16	M119 Light Gun (105mm)	10
AS-90 A1	18	M109	15	5.5" Gun/Howitzer (t)	10
M110A2	20	FV433 Abbott	14	25pdr Gun/Howitzer (t)	7
M107	22	FH70 (t)	13	M993 MLRS	26

Air Defence

Stormer	26	Rapier (t)	16	Blowpipe	5
Rapier FSC (t)	18	Javelin	10	FV432 Blowpipe	8
Rapier Tracked	23	Spartan Blowpipe	9		

Engineers

Chieftain ARVE	23	Stalwart **	2	Chieftain AVLB	10
Centurion AVRE('78-'93)	22	Dis. Engineers	6		
Centurion AVRE ('57-78)	15	Dis. Combat Engineers	9		

Infantry & Support Weapons

Infantry (1988)	5	Infantry (1950)	5	4.2" Mortar (t)	6
Infantry (1967)	5	Milan II	19	81mm Mortar (t)	4
Infantry (1960)	5	Milan I	15		

Helicopters

Lynx Mk7 (NOE)	52	Wessex (T)	9	Scout/Gazelle (T & NOE)	9
Puma (T)	9	Chinook (T)	11		

Canadian:Version: 22nd September 2009

Data Card Reference:

Jake Collins' MSH Website

Tanks

Leopard C2	36	Leopard C1	27	Centurion Mk 3	19
Leopard C1A1	30	Centurion Mk 11	24		

Anti-Tank & Tank Destroyers

M150	18	M113 ADATS	19		
M113A2 TUA	20	LAV TUA	20		

Reconnaissance Vehicles

Lynx	3	Cougar	12	Coyote	13
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Combat Teams

M113A3	7	M113 (1980 MAW)	6	M577 Command (HQ Only) **	3
LAV-111 Kodiak	10	Grizzly	6		

AFV & APC Support Vehicles

M125 Mortar	8				
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Artillery

M109A1 & M109A2	16	C3 105mm t	10	LG1 Mk2 t	10
Bison 81mm Mortar	9	C2 105mm t	8	M777 t	13

Air Defence

Blowpipe	5	Javelin	10	Javelin in LAV	13
Blowpipe in M113	8	Javelin in M113	13		
Blowpipe in Grizzly	8	Javelin in Grizzly	13		

Engineers

Leopard AVLB Beaver	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Infantry (1969-90)	5	81mm Mortar t	4		
Eryx	13				

Helicopters

OH-58 Kiowa (T) (NOE)	9	CH-146 Griffon (T) (NOE)	9		
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Danish:Version: 22nd September 2009

Data Card Reference:

Jake Collins' MSH Website

Tanks

Leopard 2A5DK	40	Centurion Mk V 2	24	Leopard 1A5DK	35
Leopard 2A4	39	Centurion Mk V 2DK	25	M41DK1	22
Centurion Mk III	19	Leopard 1A3	27	M41	15

Anti-Tank & Tank Destroyers

M150	18	Landrover/Jeep mounted TOW	17	Jeep (106mm RR)	10
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Reconnaissance Vehicles

Jeep Recon	3	Mowag Eagle	3
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Combat Teams

M113A2 Mk I DK	11	M113A1	7	CV9035DK	16
M113 G3 DK	9	Piranha III	7		

AFV & APC Support Vehicles

M106 Mortar	11	M125 Mortar	8
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Artillery

M109A3	16	M109	15	M114 t	11
M270A1 MLRS	26	FH77BD	21	M115 t	13

Air Defence

Redeye Team	6	Stinger Team	9	40mm AA t	3
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Engineers

Biber AVLB	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Infantry (1970)	5	120mm Mortar t	6	81mm Mortar	4
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Helicopters

AS550C2 Fennec (NOE)	48	Hughes 500 (T)	9	EH101 (T)	9
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Dutch:Version: 22nd September 2009

Data Card Reference:

Jake Collins' MSH Website

Tanks

Leopard 2A6	41	Leopard 1V	27	AMX-13/90	16
Leopard 2A5	40	Centurion V	24	AMX-13/75	15
Leopard 2 A4	39	Centurion II	18		
Leopard 2NL	39	AMX-13/105	21		

Anti-Tank & Tank Destroyers

YPR-765 PRAT (TOW IIA)	22	YP-408 PWAT (TOW I Imp)	19	Fennek MRAT	20
YPR-765 PRAT (TOW I Imp)	21	AMX-13 TOW	20	Jeep (106mm RR)	10
YP-408 PWAT (TOW IIA)	20	Jeep mounted TOW (TOW I)	17		

Reconnaissance Vehicles

M113 C&R (1975+)	9	YPR-765 CO	4	Land Rovers	3
M113 C&R (1966+)	3	AMX VCI	3	Fennek	4

Combat Teams

CV9035	16	YPR-765 PRI/I (DRGN I)	8	M113 (DRAG II)	7
Sisu XA-188 6x6	8	YPR-765 PRCO **	2	M113 (DRAG I)	6
YPR-765 PRI (DRGN II)	12	YP-408 PWI-S (DRGN II)	7	M113 (LAW/MAW)	6
YPR-765 PRI (DRGN I)	10	YP-408 PWI-S (DRGN I)	6	M577 Command **	3
YPR-765 PRI/I (DRGN II)	9	YP-408 PWI-S (LAW/MAW)	6		

AFV & APC Support Vehicles

M106 Mortar	11				
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Artillery

M110A1 & M110A2	20	M109	15	FH-70	13
M107	22	AMX-PRA	13	M993 MLRS	26
PzH2000	20	M115 t	13		
M109A1 & M109A2	16	M114 t	11		

Air Defence

PRTL (Cheetah)	21	0.5 Quad t	3	Fennek PMADS	17
M727 Improved Hawk	29	Redeye Team	6		
40mm AA t	21	Stinger Team	9		

Engineers

Leopard AVLB	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Infantry (1975-90)	5	120mm Mortar t	6		
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Helicopters

BO-105 (NOE)	48	Allouette III	44	CH-47 Chinook (T)	11
AH-64 Longbow (NOE) (NAW)	62	AS532 Cougar (T)	9		

French:Version: 22nd September 2009

Data Card Reference:

Official Data Card with Errata Update

Tanks

Leclerc	39	AMX30 (1976+)	26	AMX-13 ATGW (HOT 1)	17
AMX-40	36	AMX30 (1966-89)	25	AMX-13 ATGW (SS-12)	17
AMX-32	31	M47 Patton	21	AMX-13 ATGW (SS-11)	16
AMX-30B2 (1992+)	31	AMX-13 (105mm)	21	AMX-13 (1952-69)	16
AMX-30B2 (1982-92)	27	AMX-13 (90mm)	16		

Anti-Tank & Tank Destroyers

ACMAT APC	14	VCAC Mephisto	21	Jeep (Milan)	15
VAB HOT	20	AMX VCI	15	Jeep (SS-11)	16
Panhard VCR	19	VBL "Jeep"	20	Jeep (106mm RR)	10

Reconnaissance Vehicles

AMX-10RC	19	AML-90 Panhard	15	LOHR VLA	3
ERC-90 Panhard	16	AML-60 Panhard	9	Jeep Recon	3

Combat Teams

AMX-10P (Marines Milan III)	18	AMX-10P (1972 -79 MAW)	13	VAB (1976-1981)	7
AMX-10P (Mech Inf)	15	ACMAT	4	AMX VCI	7
AMX-10P (1979+ MAW)	14	VAB (1981+)	8		

AFV & APC Support Vehicles

ACMAT	7	VPM	8	VBL	10
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Artillery

F1 GCT	19	TR-155 t	13		
F3	18	Pack Howitzer t (105mm)	10		

Air Defence

AMX-30 Roland	29	VAB AA	13	40mm AA t	3
AMX-30 Crotale	33	Improved Hawk t	24	20mm AA Cebere t	6
AMX-13 DCA	15	Hawk t	21	20mm AA Tarasque t	3

Engineers

AMX-30 EBG	20	Dis. Engineers	6		
AMX-30 Bridgelaye	10	Dis. Combat Engineers	9		

Infantry & Support Weapons

Infantry (1990)	8	Infantry (1970)	5	120mm Mortar (t)	6
Infantry (1980)	6	Infantry (1950)	5	81mm Mortar (t)	4

Helicopters

SA341L (Cannon) (NOE)	26	Allouette III	44	SA-330 Puma (T)	9
SA342 Gazelle (NOE)	52	Allouette II (T)	7	H-21C Piasecki (T)	7

Soviet Union and Warsaw Pact:Version: 22nd September 2009

Data Card Reference:

New Soviet Data Card available the
Official MSH website**Tanks**

T-90	38	T-72M (export)	25	T-55AM2	23
T-84U (Ukraine)	42	T-72 Ural-1	24	T-55A	19
T-80UM	34	T-72G (export)	23	T-55 (Early)	18
T-80UD	30	T-72	23	T-54AM	21
T-80UD Early	29	T-64BV	28	T-54	19
T-80U	31	T-64B	26	T-54 (Early)	18
T-80BV	29	T-64B (Original Version)	26	T-10M (Reserve)	19
T-80B	27	T-64A	24	T-10M	18
T-80	25	T-64	23	IS-3	18
T-72BM	30	T-62M1, D or MV	23	T-34/100 (Egypt)	17
T-72S or M1M (export)	29	T-62E	21	T-34/85	18
T-72B	28	T-62A or M	20	T-34/76	16
T-72M1 (export)	26	T62	20		
T-72A	25	T-55MV	22		

Anti-Tank & Tank Destroyers

IT-130	18	ASU-85	11	M-1955 100mm ATG (t)	10
IT-122	17	ASU-57	5	SD-44 85mm ATG (t)	9
ISU-152	15	2A45 125mm ATG (t)	14	57mm ATG (t)	4
ISU-122	17	T-12 100mm ATG Bastion (t)	12		
SU-100	14	T-12 100mm ATG (t)	11		

Anti-Tank Missile Vehicles

BMP-E Khrizantema	23	BRDM-2 Sagger C	18	BRDM-1 Swatter A	14
MT-LB Spiral-2	22	BRDM-2 Sagger	17	BRDM-1 Snapper	14
BTR-RD Spandrel	18	BRDM-1 Swatter C	16	GAZ-69 Snapper	14
BRDM-2 Spandrel	19	BRDM-1 Swatter B	16	IT-1 Drakon	23

Reconnaissance Vehicles

BRM-23	11	PT-76	10	BTR-40	3
BRM-1/BRM-1K	10	BRDM-2	3		
BMP-1 (Sagger)	12	BRDM-1	3		

Combat Teams

BMP-4/BMP-T	24	BMD-3 (AT-4)	13	BTR-60PB (RPG)	7
BMP-3	17	BMD-2 (AT-5)	14	BTR-60PK/PA/PU (RPG)	7
BMP-2D	16	BMD-2 (AT-4)	13	BTR-60P	7
BMP-2 (AT-5)	14	BTR-D	7	BTR-50PK/PU (AT-7)	8
BMP-2 (AT-4)	13	BMD-1P (AT-4)	9	BTR-50PK/PU (RPG)	8
BMP-1P (AT-5)	11	BMD-1	10	BTR-50P/PA	8
BMP-1P (AT-4)	10	BTR-80A	10	BTR-152 (RPG)	6
BMP-1 Upgrade (AT-3C)	10	BTR-80	7	MTLB (RPG)	8
BMP-1 (AT-3)	9	BTR-70 Upgrade (AT-7)	7		
BMD-3 (AT-5)	14	BTR-60PB/BTR-70 (AT-7)	7		

Combat Teams Anti-Tank Support

BTR-70/80/60PB AT (1989)	20	BTR-60PB AT (1974)	16	BTR-60PB AT (1965-70 SPG-9)	6
BTR-70/80/60PB AT (1984)	19	BTR-60PB AT (1973)	17		
BTR-60PB/70 AT (1979)	18	BTR-60PB AT (1970)	17		

Combat Teams Fire Support

BMP-2 AGS (AT-5)	15	BMP-1 AGS (AT-4)	13
BMP-2 AGS (AT-4)	14	BTR-80/70/60-PB AGS	6
BMP-1 AGS (AT-5)	14		

Combat Teams Anti-Aircraft Teams

BMP AA (SA-18)	18	BMP AA (SA-7)	14	BTR-80/70/60PB AA (SA-14)	12
BMP AA (SA-16)	15	BTR-80/70/60PB AA (SA-18)	17	BTR-80/70/60PB AA (SA-7)	13
BMP AA (SA-14)	13	BTR-80/70/60PB AA (SA-16)	14	BTR-60PB AA (HMG)	8

Combat Teams Warpac Czech, Polish, Romanian & Ukranian

OT-64C2 (AT-3C)	9	OT-64B (RPG)	7	MLI-84M Jderul (AT-3C)	12
OT-64C2 (RPG)	7	OT-64 (AT-3C)	9	TAB-77 Zimbru (AT-3C)	11
OT-64C1 (AT-3C)	9	OT-64 (RPG)	7	TAB-77 (RPG)	7
OT-64C2 (RPG)	7	OT-62C (RPG)	8	BTR-94 (AT-7)	11

Armoured Fire Support Vehicles

2S23 Nona-SVK	13	OT-62 TOPAS (82mm RR)	9
2S9 Anona / Nona-S	13		
BTR-50PK (82mm RR)	8		

Infantry

Russian Infantry (1990) (AT-7)	5	Russian Infantry (1982) (RPG-16)	6
Russian Infantry (1990) (RPG-16)	6	Russian Infantry (1970/60) (RPG-7)	6
Russian Infantry (1982) (AT-7)	5	Russian Infantry (1950)	5

Dismounted Infantry Anti-Tank & Fire Support

Kornet (AT-14) /SPG-9 (1994)	19	Konkurs (AT-5) / SPG-9 (1978 Alt.)	16	SPG-9 LPG	8
Malyutka-2 (AT-3) / SPG-9 (1992)	18	Fagot (AT-4) / SPG-9 (1976)	16	HMG	5
Faktoriya (AT-4) / SPG-9 (1989)	18	Fagot (AT-4) / SPG-9 (1979)	14	AGS-17 Plamyá	5
Konkurs (AT-5) / SPG-9 (1989 Alt.)	18	Malyutka-P (AT-3) / SPG-9 (1973)	16		
Faktoriya (AT-4) / SPG-9 (1978)	17	Malyutka (AT-3) / SPG-9 (1965)	15		

Infantry Anti-Aircraft

9K38 Iгла team (SA-18)	11	9K32 Strela-2M Team (SA-7B)	7
9K310 Iгла-1 team (SA-16)	8	9K36 Strela-2 Team (SA-7)	3
9K36 Strela-3 Team (SA-14)	7		

Infantry & Indirect Fire Support

2B11 & 2S12 Mortar (t)	6	2B14 Mortar	4
M-120 '43/55 Mortar (t)	6	BM-37 1937 Mortar	4
2B9 Vasilyek	6		

Engineers & Engineer Support & Amphibious Crossing Troops

TO-55 Flamethrower (1972)	19	Dis. Lt Engineers (Sappers)	5	GSP or PTS Ferry	7
GMZ Minelayer	10	Dis. Combat Engineers	8	PTS-M Ferry	5
MTK-1 UR-67 Mineclearer	10	MT-55 AVLB	10		
BTR-80/70/60 Sapper Combat Team	8	TMM or PMP Bridge	10		

Artillery & Rockets

2S7 Pion	25	2A65 Gun-Howitzer (t)	13	M-53 Mortar (t)	8
2S19 Mista-S	19	2A36 Field Gun (t)	14	M-160 Mortar (t)	7
2S5 Giatsint-S	20	D-20 Gun-Howitzer (t)	11	9A52 Smerch (BM-30)	37
2S3 Akatsiya	17	M-46 Field Gun (t)	13	9P140 Uragan (BM-27)	23

2S1 Gvodzika	15	D-30 Howitzer (t)	9	BM-24	16
2B16 Combination (t)	7	D-74 Howitzer (t)	12	9K51 Grad (BM-21)	19
M1955 Howitzer (t)	20	2S4 Tyulpan Mortar	15	BM-14	15
S-23 Field Gun (t)	17	M-240 Mortar (t)	10	RPU-14	11

Air Defence

9K38 Buk-1M-2 (SA-17 Grizzly)	36	9K33M3 Osa-AKM (SA-8 Gecko)	32	ZSU 57-2	11
9K330 Tor (SA-15 Gauntlet)	36	9K33 Osa (SA-8 Gecko)	26	S-60 (t)	3
9K35 Strela-10 (SA-13 Gopher)	23	2K12 Kub (SA-6 Gainful)	32	ZU-23-2 towed	3
9M82 & 9M83 (SA-12 Glad/Giant)	35	2K11 Krug (SA-4 Ganef)	32	BTR-152 ZPU-2	3
9K37M1 Buk-SAR (SA-11 Gadfly)	36	S-125 Neva & Neva-M (SA-3 Goa)	23	ZPU-4	3
9K37 Buk (SA-11 Gadfly)	36	S-75 Dvina (SA-2 Guideline)	19	ZPU-2	3
9K31M Strela-1M (SA-9 Gaskin)	23	2S6 Tunguska (SA-19 Grison)	30	ZPU-1	3
9K31 Strela-1 (SA-9 Gaskin)	21	ZSU 23-4 Shika	17		

Helicopters

Ka-50 Hokum (NOE)	54	Mi-8T Hip H	41	Mi-10 Harke (T)	9
Ka-29 Helix B	47	Mi-8 Hip Gunship	41	Mi-8 (T)	11
M1-28N Havoc B (NOE & NBW)	61	Mi-2URN & URP	39	Mi-6 Hook (T)	23
Mi-24 P Hind F	50	Mi-2US Hoplite	18	Mi-4 Hound (T)	5
Mi-24 V Hind E	45	Ka-29 Helix (T)	8	Mi-2 Hoplite / W-3 (T)	5
Mi-24D Hind D	43	Mi-26 Halo A (T)	23	Mi-1 / SM-1 / SM-2	5

Swedish:Version: 22nd September 2009

Data Card Revision:

Jake Collins Website: Swedish 1.1

Tanks

Strv 122/Leopard 2A5	40	Strv 103B S-tank	22	Strv 81 Centurion Mk III	19
Strv 121/Leopard 2A4	39	Strv 104 Centurion	29	Strv 74	13
Strv 103C S-tank	26	Strv 101/102 Centurion	22		

Anti-Tank & Tank Destroyers

lkv 91	18	Jeep Bantam	14	Pvpj bv 2062*	10
lkv 102/103	10	Pvrbtgb Rb56	16	Pvpjtgb 1111*	9
Pvrbbv 551	19	Pvpj bv 2062 Rb56	18		
Pvrbbv 2063	20	Pvpjtgb 1111 Rb56	17		
Jeep TOW (TOW I Imp)	18	90mm RCL t*	7		

Reconnaissance Vehicles

Jeep Recon	3				
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Combat Teams

CV9040B (Strf90B)	17	SISU XA-180 6x6	9	Pbv 501 (BMP1)	9
CV9040 (Strf90)	16	Pbv 302	11		
SISU XA-200 6x6	10	Pbv 401 (MTLB)	9		

AFV & APC Support Vehicles

Bv 206 **	2				
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Artillery

Howitzer 15.5F t	11	FH-77 A/B Motzd t	12		
Bandkanon 1C	19	Howitzer 4140 t	8		

Air Defence

Lvkv90	19	RBS70	11	RBS77 t	26
20mm AA t	3	Lvrbv701	20		
Redeye	6	RBS90	14		

Engineers

MT-55 Bridgelayer	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Swedish Infantry (1990)	6	Carl Gustav	4	80mm Mortar	5
Swedish Infantry (1965)	5	120mm Mortar t	6		

Helicopters

Hkp9/BO-105 (NOE)	46	Hkp6/Bell 206 (T)	7	Hkp3/AB204 (T)	7
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West German:Version: 22nd September 2009

Data Card Reference:

Official Data Card with Errata Update

Tanks					
Leopard 2A5	40	Leopard 1A3	27	M48A5G2	25
Leopard 2A4 Improved	38	Leopard 1A1A1	27	M48A2	21
Leopard 2A1	37	Leopard 1A1 and 1A2	27	M47 Patton	21
Leopard 1A4	31				
Anti-Tank & Tank Destroyers					
Jg. Jaguar 1 (TOW IIA)	25	Jg. Jaguar (SS-11)	23	Wiesel	20
Jg. Jaguar 1 (HOT II)	25	Jgdpz Kanone (1981+)	19	Jeep(TOW)	17
Jg. Jaguar 1 (HOT I)	24	Jgdpz Kanone (1965-81)	17	Jeep (Recoilless Rifle)	8
Reconnaissance Vehicles					
Wiesel	9	Luchs	8	Hotchkiss	7
Combat Teams					
Marder 1A3 (1986+Milan III)	18	Marder (1970-1989 MAW LAW)	13	M113 (LAW)	6
Marder 1A2 (1979+ Milan I)	15	M113 (Milan I) (Note 1)	8	Fuchs TransPz **	3
AFV & APC Support Vehicles					
M113 (120mm Mortar)	11	M113 (81mm Mortar)	8		
Artillery					
PzHbtz 2000	18	M109A1	16	105mm Fld Howitzer (t)	8
M110A2	20	M109	15	LARS	14
M110	20	FH70 (t)	13		
Air Defence					
MIM-104 Patriot	33	Flak Panzer Gepard	21	RH202 (t)	3
Waffentrager Roland	29	Wiesel AA	12	Redeye Team	9
Engineers					
Leopard AVLB	10	Dis. Engineers	5	Dis. Combat Engineers	8
Infantry & Support Weapons					
Infantry (1988)	9	Infantry (1960)	5	120mm Mortar (t)	6
Infantry (1981)	6	Milan III	19	81mm Mortar (t)	4
Infantry (1970)	6	Milan I	15		
Helicopters					
B0-105 (NOE)	48	UH-1 Uroquois (T)	7	CH-53 S/Stallion (T)	11
PAH-1 (NOE)	46	CH-47 Chinook (T)	11		

Notes:

1. Based on a DEF of 3/2 5 and CED of 2.

Yugoslavian:Version: 22nd September 2009

Data Card Revision:

Jake Collins Website: Yugoslav 1.1

Tanks

M84A	28	T-55	18	M47 Patton	21
M84	25	T-54 (Model 1949)	18	T-34/85	16
T-55A	19	T-72M	25		

Anti-Tank & Tank Destroyers

M36B1	16	T-12 100mm ATG (t)	11	M80A LT	20
BOV-1 Sagger	18	SU-100	14		
M18	13	BRDM2 Sagger	17		

Reconnaissance Vehicles

BOV	3	BRDM-2	3	PT-76B	10
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Combat Teams

M80A	13	BTR-60PB	7	M3 Halftrack	7
M80	12	BTR-50PK/PU	8		
M60P	7	BTR-152	6		

AFV & APC Support Vehicles

M60PB (Hvy Wpns)	10				
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Artillery

D-30 Howitzer (t)	9	M63 Plamen t	12		
2S1 Gvodzika	15	M7 Priest	13		

Air Defence

SA-13 Strela-10M2	23	M-53/59 Praga	14	SA-7B Team	7
SA-9 Strela-1M	23	M75 t	3	SA-16 Team	8
BOV-3	11	ZSU 57-2	11	SA-18 Team	11

Engineers

MT-55 Bridgelayar	10	Dis. Engineers	6	Dis. Combat Engineers	9
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Infantry & Support Weapons

Infantry (1960)	5	82mm Mortar t	3	Sagger C (AT-3C)	16
HMG (1960)	5	120mm Mortar t	6	Sagger C (AT-3)	15

Helicopters

SA341/2 Gazelle	50	Mi-8 (T)	11		
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10.3.6 MSH Middle East:

Israeli:

Version: 22nd September 2009

Data Card Reference:

Official Data Card with Errata Update

Tanks					
Merkava III	41	M60A1	24	Ti-73	22
Merkava II	32	M48A5 (A3 Upgrades)	24	Ti-67	22
Merkava I	30	M48A3	21	AMX-13	15
Magach C	33	Centurion Sh'ot	28	M51 Isherman	21
Magach A or B	26	Panturion Upgrade	25	M50 Super Sherman	17
M60A3	25	Centurion Panturion	23	M4A3E8 Sherman	17
M60A1 Upgrade	25	Centurion Ben Gurion	22	Cromwell	16

Anti-Tank & Tank Destroyers					
M113 HVMS	20	RAM V-1 (106mm)	11	Jeep (106mm RR)	10
M150 Zelda Mapatz	19	Jeep Mapatz	19	M3 Tank Destroyer	13
M150 Zelad TOW	19	Jeep TOW (TOW I Imp)	18		
RAM V-1 TOW	19	Jeep TOW (TOW I)	17		

Reconnaissance Vehicles					
Jeep	3	RBV-1	3		

Combat Teams					
Centurion APC	14	M113 Zelda Mapatz	16	M577 Command (HQ Only) **	3
T-55 APC	11	M113 Zelda (DRGN II)	12	M3 Half Track (DRGN II)	7
BTR-60 or BTR-70	8	M113 Zelda (DRGN I)	10	M3 Half Track	6
RBV-1	8	M113 Modified (Zelda)	7		
RAM V-1 or V-2	9	M113	6		

AFV & APC Support Vehicles					
M4 160mm Mortar	13	M113 Zelda Mortar (120mm)	11	M3 Mortar (120mm)	11
Zelda Fire Support	7	M113 Mortar (81mm)	8	M3 Mortar (81mm)	8

Artillery					
M110	20	M50	15	130mm Field Gun t	13
M107	22	AMX-105A	14	122mm Howitzer t	9
M109A1	16	T19 Half Track	13	105mm Howitzer t	8
M109	15	160mm Mortar t	8	BM-24	16
L-33 Soltam	16	155mm Howitzer t	12	BM-21 (refer note 5)	19
M-52	13	152mm Howitzer t	11		

Air Defence					
MIM-104 Patriot	33	M727 Improved Hawk	32	M3 AA	11
M730 Chaparral	17	M727 Hawk	29	20mm Trailer t	3
M163A2	17	MIM-23B Hawk t	21		
M167 t	9	RAM V-1 AA	11		

Engineers					
M48 AVLB	10	Dis. Engineers	6	Dis. Combat Engineers	9

Infantry & Support Weapons					
Infantry (1990)	9	Infantry (1965)	5	81mm Mortar	4
Infantry (1985)	6	Infantry (1950)	5	3" Mortar	3

Infantry (1975)	5	120mm Mortar t	6
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Helicopters

AH-1 SuperCobra	53	UH-1 Uroquois (T)	7
AH-1 HueyCobra	53	CH-53 S/Stallion (T)	11
AH-6 Defender (T & NOE)	9	SA-312G S/Frelon (T)	9