FM 100-60

OPFOR

ARMOR- AND MECHANIZED-BASED OPPOSING FORCE

ORGANIZATION GUIDE

HEADQUARTERS, DEPARTMENT OF THE ARMY

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ARMOR- AND MECHANIZED-BASED OPPOSING FORCE:

ORGANIZATION GUIDE

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Preface

This manual is one of a series that describes a capabilities-based Opposing Force (OPFOR) for training U.S. Army commanders, staffs, and units. The manuals in this series are—

- FM 100-60. *Armor- and Mechanized-Based Opposing Force: Organization Guide.*
- FM 100-61. *Armor- and Mechanized-Based Opposing Force: Operational Art.*
- FM 100-62. *Armor- and Mechanized-Based Opposing Force: Tactics.*
- FM 100-63. *Infantry-Based Opposing Force: Organization Guide.*
- FM 100-64. *Infantry-Based Opposing Force: Operations and Tactics.*
- FM 100-65. *Capabilities-Based Opposing Force: Worldwide Equipment Guide.*
- FM 100-66. *Opposing Forces in Stability and Support Operations.*

Together, these manuals outline an OPFOR that can cover the entire spectrum of military capabilities against which the Army must train to ensure success in any future conflict.

Applications of this series of manuals include field training, training simulations, and classroom instruction throughout the Army. All Army training venues should use an OPFOR based on these manuals, except when mission rehearsal or contingency training requires maximum fidelity to a specific country-based threat. Even in the latter case, trainers should use appropriate parts of this capabilities-based OPFOR to fill information gaps in a manner consistent with what they do know about a specific threat.

This manual provides a menu of possible organizational building blocks for an armor- and mechanized-based OPFOR. From this menu, users can build an order of battle appropriate to their training requirements. For each type of unit, the manual outlines basic unit structure and possibly a number of variations. For most units, the manual also lists principal items of equipment. Appendixes provide guidance and examples for users who wish to substitute other items of equipment for the baseline systems listed for a unit.

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Nomenclatures of weapons and equipment in this publication are in compliance with international standardization agreements (STANAGs) 2097 and 3236. Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Introduction

This organization guide is part of the field manual (FM) series 100-60 that documents the ***capabilities-based Opposing Force (OPFOR)***. This series provides a flexible OPFOR package that users can tailor to represent a wide range of potential threat capabilities and organizations. The overall package features an armor- and mechanized-based OPFOR module and an infantry-based OPFOR module. Each module contains field manuals that describe organizations, operations, and tactics. A separate field manual provides characteristics of worldwide military equipment available to the capabilities-based OPFOR in either of those two modules. A field manual describing other OPFORs in peace and conflict completes the package.

This introduction provides definitions of some basic terms used throughout the manual. For definitions of other key terms, the reader should refer to the index, where page numbers in bold type indicate the main entry for a particular topic. The referenced page often includes a definition of the indexed term.

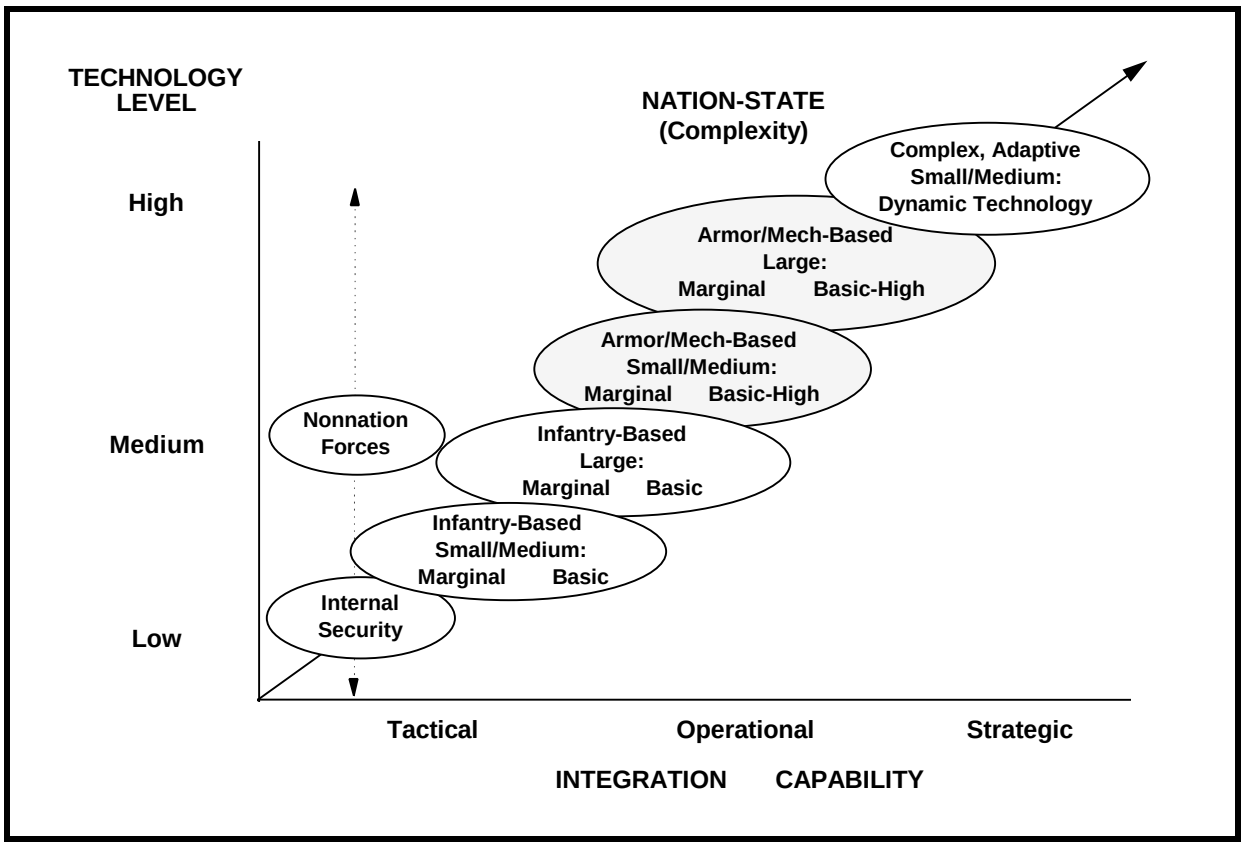
OPFOR VERSUS THREAT

The OPFOR is a training tool for preparing the Army to respond to a variety of threats. The following paragraphs explain the difference between an OPFOR and a threat and the relationships between the two.

Threat and Country-Based OPFOR

In simplest terms, a ***threat*** is a potential adversary. It can be any specific foreign nation or organization with intentions and military capabilities that suggest it could become an adversary or challenge the national security interests of the United States or its allies. As the Army moves into the twenty-first century, it is no longer possible to identify one or two nations or forces as the potential adversaries against which it needs to train on a regular basis.

When conflict is imminent, or when U.S. forces need to train for a particular contingency, training may focus on a specified threat force. This rehearsal for an actual mission or operation can involve a ***country-based OPFOR***. Such an OPFOR should portray the specified, real-world threat force with the greatest possible fidelity based on the best available classified and unclassified information. Cases may exist in which constraints on the use of classified information preclude the use of actual threat data. Sometimes certain threat information may not be available at any level of classification. In such cases, trainers could fill in gaps by using those parts of the capabilities-based OPFOR that are most consistent with what they do know about a specific threat.



Spectrum of worldwide military capabilities.

Capabilities-Based OPFOR

In more typical cases, however, the U.S. Army simply needs to train against an OPFOR that represents a particular level of capability rather than a particular country. [1] The ***capabilities-based OPFOR*** is a realistic and flexible armed force representing a composite of varying capabilities of actual worldwide forces. It constitutes a baseline for training or developing U.S. forces in lieu of a specific threat force. This baseline includes doctrine, tactics, organization, and equipment. It provides a challenging, uncooperative sparring partner representative, but not predictive, of actual threats.

The capabilities-based OPFOR represents a break from past practices in two principal respects. First, the armor- and mechanized-based and infantry-based OPFOR modules are not simply unclassified handbooks on the armed forces of a particular nation. Rather, each module has its basis in the doctrine and organization of various foreign armies. These OPFOR modules are ***composites*** deliberately constructed to provide a wide range of capabilities. Secondly, the modules do not provide a fixed order of battle. Rather, they provide the ***building blocks*** from which users can derive an infinite number of p otential orders of battle, depending on their training r equirements.

[1] Another definition of ***threat*** is in terms of a capability rather than a country. This could be any advanced tec hnology or system possessed by a militarily significant country, including western or developing countries. The proliferation of such foreign systems or technologies could pose a threat to the U.S. Army or its systems.

The primary purpose of the field manuals in the 100-60 series is to provide the basis for a realistic and versatile OPFOR to meet U.S. military training requirements. They can support training in the field, in classrooms, or in automated simulations. However, users other than trainers also may apply the information in these manuals when they need an unclassified threat force that is not country-specific.

ARMOR- AND MECHANIZED-BASED OPFOR MODULE

Field Manual 100-60 depicts the forces of a developed country that devotes extensive resources to maintaining a military capability that rivals that of the United States. The name of that country is ***the State***. It can have a strategic capability, with strategic air and air defense forces and strategic missile forces. It probably has a nuclear capability. Unless the State is landlocked, it can have a blue-water navy and naval infantry (marines).

In the armor- and mechanized-based OPFOR, ground forces are the largest component. The formal name of this branch of the armed forces, which corresponds to the U.S. Army, is the ***Ground Forces***. These Ground Forces comprise several standing divisions and separate brigades, most of which are subordinate to standing armies or corps. Most of these forces are, in turn, subordinate to army groups. Army groups, armies, and corps can vary widely in strengths and capabilities. Even multiple army groups may come under a series of theater headquarters that orchestrate complex, large-scale operations.

The armor- and mechanized-based OPFOR can conduct a strategic operation involving the combined forces in a theater. These forces may comprise—

- Several army groups.
- Strategic nuclear forces (strategic missile forces and strategic aviation).
- Strategic air armies.
- National air defense forces.
- A naval fleet.
- Naval infantry forces.
- Airborne forces.
- Special-purpose forces.
- National space forces.

Trainers may use any or all of these elements in an OPFOR order of battle as required.

Armor- and mechanized-based forces are the norm throughout the industrialized world. Such armies normally mount at least 40 percent of their ground forces in armored vehicles. They tend to modernize selected systems to match the best systems deployed by their neighbors. In terms of equipment and size, they range from small forces fielding outmoded equipment to large, capable forces fielding state-of-the-art weapons. For the most part, they still base their tactics and doctrine on either their own experience or that of their arms/doctrine suppliers. Many of these nations produce and export weapons and technology up through state-of-the-art-systems. If not, they have the financial resources to purchase such systems. Significant technologies that mark this class are in fire support and target acquisition.

Size and Capability

The armor- and mechanized-based OPFOR module includes a range of potential forces that can vary in size and capability. ***Small-to-medium armor- and mechanized-based forces*** cover a wide range of technology and capability, from developing states through small, professional armies. ***Large armor- and mechanized-based forces*** often have more sophisticated weaponry. They field self-propelled artillery and multiple rocket launchers; artillery-delivered precision munitions; medium-to-heavy tanks; and limited thermal capability. These forces may or may not have nuclear weapons but at least have the capability to produce or acquire them. The more advanced states have the logistics and command structures necessary to conduct continuous operations, and joint operations are the norm. Armor- and mechanized-based forces can conduct large-scale, combined arms operations. Some such forces are capable of sustained power-projection operations.

The high-technology end of the armor- and mechanized-based OPFOR approaches the level termed ***complex, adaptive forces***. From developed nations, these most technically and tactically advanced forces can choose quality over quantity. As they modernize, they can reduce in size and still maintain a high level of military capability. These forces normally have a complex structure, with more specialized units operating highly sophisticated equipment. They are also capable of adapting to dynamic situations and seizing opportunities on the battlefield. However, such a force is exceedingly expensive to equip, train, and maintain.

Thus, the differences between the infantry-based and armor- and mechanized-based OPFOR modules are largely ***scenario-dependent***. A particular training scenario may not require a large array of standing forces or justify the extensive use of mechanized infantry or tank forces. If not, the infantry-based forces of FM 100-63 may better fit training needs. Sometimes trainers may find it necessary to draw some elements from both organization guides in order to constitute the appropriate OPFOR order of battle.

Compared to Infantry-Based OPFOR

The infantry-based OPFOR differs from the armor- and mechanized-based OPFOR primarily in terms of size, technological level, and the ability to integrate arms into operations. The infantry-based OPFOR represents the armed forces of a developing country with limited resources. The name of that country would also be *the State*. In this case, the State's military structure still consists primarily of the Ground Forces. However, these Ground Forces are primarily infantry (dismounted or motorized), with relatively few mechanized infantry and tank units and perhaps some airborne infantry units. Compared to the armor- and mechanized-based OPFOR, these forces have fewer standing divisions and brigades. Rather than constituting several standing armies or corps, these divisions and separate brigades are subordinate to military regions and districts. At most, the State could mobilize and deploy one army-size force capable of conducting large-scale operations against a neighboring country whose armed forces are also infantry-based.

Aside from the Ground Forces, the State's armed forces may include any or all of the following components:

- The Air Force, including the Air Defense Command.
- The Special Operations Command, with commando and special-purpose forces.
- The Navy, consisting of a small, brown-water force.

This OPFOR can also include less capable forces, such as internal security forces, the militia, and reserves. This menu of possible forces allows U.S. military trainers to tailor the OPFOR order of battle to meet virtually any training requirement involving an infantry-based force.

Infantry-based forces are common throughout the developing world. They have some armor but rely on dismounted or motorized infantry for the bulk of their combat power. At the most, they conduct set-piece operations, integrating arms at the tactical level. None of these forces is capable of meeting the most advanced armies on an even footing in conventional battle.

Infantry-based forces, too, can vary in size and capability. ***Small-to-medium infantry forces*** have marginal integration capability (ability to conduct tactical-level combat actions with limited fire support) or basic integration capability (ability to conduct battalion-level tactical combined arms actions). In terms of technology, both groups import most of their systems. ***Large infantry forces*** can conduct extensive set-piece operations over broad frontages. However, they are capable of projecting military power only within their region. The key technologies that can allow this are self-propelled artillery and offensive chemical and biological warfare. The State may or may not have chemical and biological weapons, but has the capability to produce or acquire them. A country with large infantry forces can have extensive, basic weapons industries, or it may still import most systems. Although this larger force may have improved communications, the OPFOR must rely on outside states for use of communications satellites.

When opposed by an adversary of similar capabilities, an infantry-based OPFOR can conduct conventional, force-oriented combat. However, when faced with a large, technologically advanced army, it is likely to attempt to redefine the terms of conflict and pursue its aims through terrorism, insurgency, or partisan warfare. In the case of intervention by an external power or coalition, this strategy aims to undermine the enemy's will to continue the conflict without the necessity of defeating his main forces on the battlefield.[2]

Field Manual 100-63 depicts infantry-based forces of a country that is divided geographically into an unspecified number of military regions, each with a number of subordinate military districts. This OPFOR stations most combat forces within military districts that can vary widely in their strengths and capabilities. The guide allows for standing divisions, but districts with separate brigades would be much more common and in keeping with the spirit of the infantry-based OPFOR concept. If the trainer finds himself building multiple standing divisions and armies, FM 100-60 may better suit his training needs.

Compared to Other OPFORs in Peace and Conflict

[2] Throughout the FM 100-60 series, the term ***enemy*** refers not to the OPFOR but rather to the enemy of the OPFOR.

Compared to either OPFOR module described above, other OPFORs in peace and conflict are less well defined. By their very nature, they are unpredictable. They differ from an armor- and mechanized-based or infantry-based OPFOR primarily in size, technological level, and the ability to integrate arms into operations. In this case, most military forces have lower capability than an infantry-based OPFOR.

Field Manual 100-66 depicts a variety of such forces that U.S. forces may encounter. These may be the forces of a ***preindustrial nation or a nonnation group with limited assets***. Such groups cannot, or will not, invest in the weapons and technology necessary to keep pace with the best militaries in their regions. Rather than standing organizations with predictable structures, most of their military organizations are *ad hoc*. These forces range in size from irregular forces, constabularies, and internal security forces to light infantry units. There is no such thing as a standard light infantry force; they come in all shapes and sizes. The common thread is that they have little or no organic heavy equipment.

Like the lower end of the infantry-based OPFOR, these forces are likely to attempt to deal with a larger, more technologically advanced army through terrorism, insurgency, or partisan warfare. They do not try to meet such an enemy head-on in conventional combat. They prefer hit-and-run raids, ambushes, ruses, sabotage, and assassinations. They try to be unpredictable and invisible, employing methods not anticipated by their enemies. They do not fight by the rules of conventional warfare.

These OPFORs may also include forces that are better equipped and better trained. They may be part of or sponsored by a wealthy criminal element or have the backing of a wealthy outside power. They may still be small and lightly armed but could have sophisticated, state-of-the-art light weapons. They are light not out of austerity but for practical reasons, because the lightness of the equipment enhances mobility. They may also have high-technology communications and reconnaissance means.

There may be occasions where OPFORs in peace or conflict include a sophisticated military organization with heavier weapons. If the U.S. force is participating in a peacekeeping operation, for example, the OPFOR may be the recognized military of a belligerent nation. As such, it could include armor- and mechanized-based or infantry-based forces of the types found in FMs 100-60 and 100-63, respectively. Likewise, some types of OPFOR described in FM 100-66 can also appear during war.

ORGANIZATION CHARTS

Organization charts depict all possible subordinate units. If training objectives do not require the use of all elements shown in a particular organization, users can omit the elements they do not need. Aside from the basic organization, a chart may indicate possible variations and alternatives. Users must ensure that the size and composition of the OPFOR is sufficient to meet training objectives and requirements. However, total assets organic to an organization or allocated to it from higher levels should not exceed that which is ***realistic and appropriate*** to the training scenario. Skewing the force ratio in either direction negates the value of training.

Flexibility Within Realistic Limits

Some organization charts have blocks showing two or more ***alternatives*** for a particular type of subordinate unit. For example, a separate brigade might have either a signal battalion or a signal company. Therefore, one block in the brigade's organization chart reads " SIGNAL BATTALION/COMPANY." In most cases, the unit listed first is the norm, but the other alternative is an option. Many organization charts have footnotes that identify possible ***variations*** in organizational structure or equipment. These alternatives allow users to select the basic organization or the variation that best suits their training requirements.

Stacked blocks in the organization charts indicate multiple, identical units subordinate to a particular organization. ***Dashed blocks*** indicate units that may or may not be present in the type of organization shown. In some cases, the stacked blocks may involve a combination of solid and dashed blocks. This means that the parent unit normally has at least the number of subordinates indicated in solid blocks but may have as many as indicated by the dashed blocks. In some cases a footnote explains the conditions under which the different numbers of blocks are appropriate.

Focus on Maneuver Units

The organization charts in this guide focus on maneuver units. They begin with the largest maneuver units and work down to the smallest. When feasible, the guide breaks down subordinate maneuver units, as well as combat support and combat service support units, in greater detail.

The basic maneuver unit is the ***brigade***. Some armor- and mechanized-based forces, however, may call the same organization a ***regiment***. In this case, the difference in terminology is merely semantic and does not signify a different structure or capability.

Maneuver brigades exist in two basic types: the divisional brigade and the separate brigade. In OPFOR terminology, a ***divisional*** brigade is one that is always part of a division. A divisional brigade consists of three or—more likely—four maneuver battalions and a wide array of combat support and combat service support elements. In contrast, a ***separate*** unit is one that is not subordinate to a parent unit of the same arm. For example, a separate mechanized infantry brigade is not part of a mechanized infantry division (or any division, for that matter). It is directly subordinate to a corps or an army or perhaps even an army group. A separate brigade normally has five maneuver battalions. Aside from that, separate brigades have some of the combat support and combat service support assets normally found at division level. They need these in order to fight more independently, without relying on support from a parent division.

The first three chapters deal with maneuver divisions, brigades, and battalions, in that order. Since ***IFV-equipped mechanized infantry*** units are the most common in this armor- and mechanized-based OPFOR, these units come first within each of these chapters. Following these, in descending order of likelihood, come ***APC-equipped mechanized infantry*** and ***tank*** units. Even an armor- and mechanized-based OPFOR may have some (truck-mounted) motorized in-

fantry forces. However, except for showing the overall organization of a motorized infantry div i-sion, this FM refers the user to FM 100-63 for details on such motorized forces and their subord i-nates. This avoids duplication.

The final two chapters deal with larger force groupings at the operational level. This i n-cludes various options for army and corps structures, as well as army groups and other assets available from the national level. These chapters also describe possible subordinates other than the maneuver units co vered in the first three chapters.

Avoiding Repetition

It is also important to eliminate duplication within FM 100-60. Regardless of how many different places a given unit may appear as a subordinate of other, larger units, its own separate organization chart appears only once within this manual. Any subordinate unit common to both IFV- and APC-equipped mechanized infantry or tank units is not repeated. It appears following the organization chart for its most common parent unit, which is normally the first occurrence in the manual. Likewise, a unit that could be subordinate either to a division or to a separate brigade appears only once, normally in the division chapter. Obviously, divisional brigades are subord i-nate to divisions, and maneuver battalions are subordinate to brigades. Nevertheless, maneuver brigade organization charts appear only in the brigade chapter and battalions only in the battalion chapter.

Page References for Detail

In the main organization chart for any parent unit, subordinate units defined elsewhere in greater detail have ***page references*** beneath their respective block in the organization chart. This reference leads the user to the subordinate unit, even if its organization chart appears in another chapter or another part of the same chapter. To avoid excessive duplication, subordinate units common to several types of parent units receive detailed treatment only once, with subsequent cross-references back to that basic entry. Units without such page references do not have sepa-rate entries with further detail.

Occasionally, there may be a small subordinate unit that does not have its own organiz a-tion chart showing further subordinates. However, the user may find a page reference leading to the parent unit's spreadsheet table of principal items of equipment, which breaks down equipment totals by subordinate units.

In some cases there may be ***multiple page references*** under a particular block. This means that there is more than one option for the makeup of that organizational element. It may be that there is more than one possible type of the subordinate unit, with the page reference to the most likely type listed first. Multiple page references also appear when a block contains more than one possible subordinate. In this case, the page references beneath that block indicate the locations of the various options, for example "(*pp 1-61/2-46*)," listed in the same order in which the options appear in the block.

Headings

Headings within each chapter indicate the name of the specific unit depicted and of all organizations to which this type of unit may be subordinate. The heading always spells out the full name of the unit depicted, but normally uses an abbreviation for the parent unit(s). (See Glossary.) When a heading indicates that a particular unit is subordinate to an MIBR—without identifying it as (Div) or (Sep) or as (IFV) or (APC)—, that means it occurs in both divisional and separate mechanized infantry brigades regardless of whether they are IFV- or APC-equipped. Likewise, when an antitank gun battery shows subordination to an AT Bn—without specifying whether this is the AT Bn, MID, or the AT Bn, MIBR—, that means it can occur in either type of antitank battalion.

PRINCIPAL ITEMS OF EQUIPMENT

For organizations of brigade size or smaller, this book provides a table of principal items of equipment. Units above brigade/regiment level either have no fixed structure or have so many variations in possible structure that equipment totals are difficult to quantify. Therefore, the organization guide leaves such totals to users who build actual orders of battle for a specific OPFOR in a specific scenario. The OPFOR order of battle must meet the user's training requirements, based on the menu of possible organizational parts provided in this manual.

For brigades and regiments, as well as selected battalions, this table takes the form of a ***spreadsheet*** that provides a quick overview of the holdings for subordinate units and equipment totals for the unit as a whole. When the organization chart indicates multiple, identical units subordinate to a particular organization (using stacked blocks), the spreadsheet column for that particular subordinate indicates equipment totals already multiplied by the number of such units present. The heading at the top of such a column indicates that multiplication by adding an annotation, for example "(x2)" or "(x3)," after the name of the subordinate unit type.

Footnotes in equipment lists may serve one of two purposes. A footnote linked to the equipment nomenclature in the "Equipment" column indicates additional information about that piece of equipment or a possible substitute for it. On the other hand, a footnote linked to a number in the "Total" column indicates possible variations in the quantity of that particular item of equipment.

Equipment totals include individual weapons only at maneuver battalion level and below. The same is true of night-vision devices (goggles and sights). These figures vary widely from unit to unit, although separate brigades tend to field more goggles in combat support and combat service support units than do divisional brigades. With the exception of maneuver units (battalion and below), accounting for the varying numbers of night-vision devices, especially the goggles worn by vehicle drivers, is difficult.

This guide provides example equipment types and the numbers of each type typically found in specific organizations. The purpose is to give users a good idea of what an OPFOR structure should look like. However, training requirements may dictate some modifications to

this baseline. Users should exercise caution in modifying equipment holdings, since this impacts an OPFOR unit's organizational integrity and combat capabilities.

Baseline Equipment

A developed country may equip its armor- and mechanized-based OPFOR either with indigenous systems or with systems imported from other, weapons-producing countries. For illustrative purposes, the equipment lists in this manual normally show systems produced by the former Soviet Union (FSU). There are two reasons for using FSU-produced equipment as the baseline. First, many potential threat countries have equipped their armed forces with systems the FSU and its successor states have built in large numbers and ***proliferated*** throughout the world. Second, this equipment is ***representative of a unit's or force's technological capability***. Listing these familiar, well-documented systems paints an immediate, concrete picture of that capability. Listing generic equipment descriptors, such as *medium tank* or *antitank guided missile,* would not create as clear an impression of capabilities. Moreover, generic descriptors would not lead to the development of consistent equipment sets. This organization guide, therefore, normally uses generic descriptors only when the choice of systems would not materially affect basic unit or force cap abilities.

Equipment Substitution

To achieve specific training objectives, or merely to provide variety in the training e nvironment, users can substitute other equipment for those listed as the baseline. Substitution matrices list a sampling of comparable and alternative systems that militarily significant countries, including the United States and its allies, produce or possess. The country of or igin or an actual country possessing such systems does not necessarily pose a threat to the United States, but an OPFOR with this capability could present a challenge in U.S. Army training.

The matrices contained in Appendix A suggested examples of appropr iate substitutions for major maneuver and fire support systems. Appendix B contains the matrices for e ngineer equipment. Appendix C lists examples of cargo trucks, trailers, and radios corr esponding to the generic descriptors used in equipment lists. Each appendix also provides general guidelines for the substitution pro cess.

Appendixes A, B, and C are guides; they cannot be all-inclusive, listing every co nceivable system available. In constructing an OPFOR order of battle, therefore, trainers may substitute systems not in the appendixes. For a wider selection of major systems from which to choose in the substitution process, users should see FM 100-65. However, they should follow the same general philosophy and the guidelines prescribed in the appendixes.

Chapter 1
Maneuver Divisions

Even an armor- and mechanized-based OPFOR may also have some motorized infantry divisions in its Ground Forces. (See p 1-86 and FM 100-63.) Aside from that, the Ground Forces have two basic types of maneuver divisions: the mechanized infantry division and the tank division. Both types are combined arms organizations. A mechanized infantry division has one tank brigade along with its three mechanized infantry brigades. The latter may comprise two IFV-equipped brigades and one APC-equipped brigade or vice versa. A tank division has one IFV-equipped mechanized infantry brigade along with its three tank brigades. Combat support and combat service support units are basically the same for all mechanized infantry and tank divisions. The only differences are variations in the composition of the self-propelled artillery regiment and the maintenance battalion, and the fact that the tank division has no antitank battalion.

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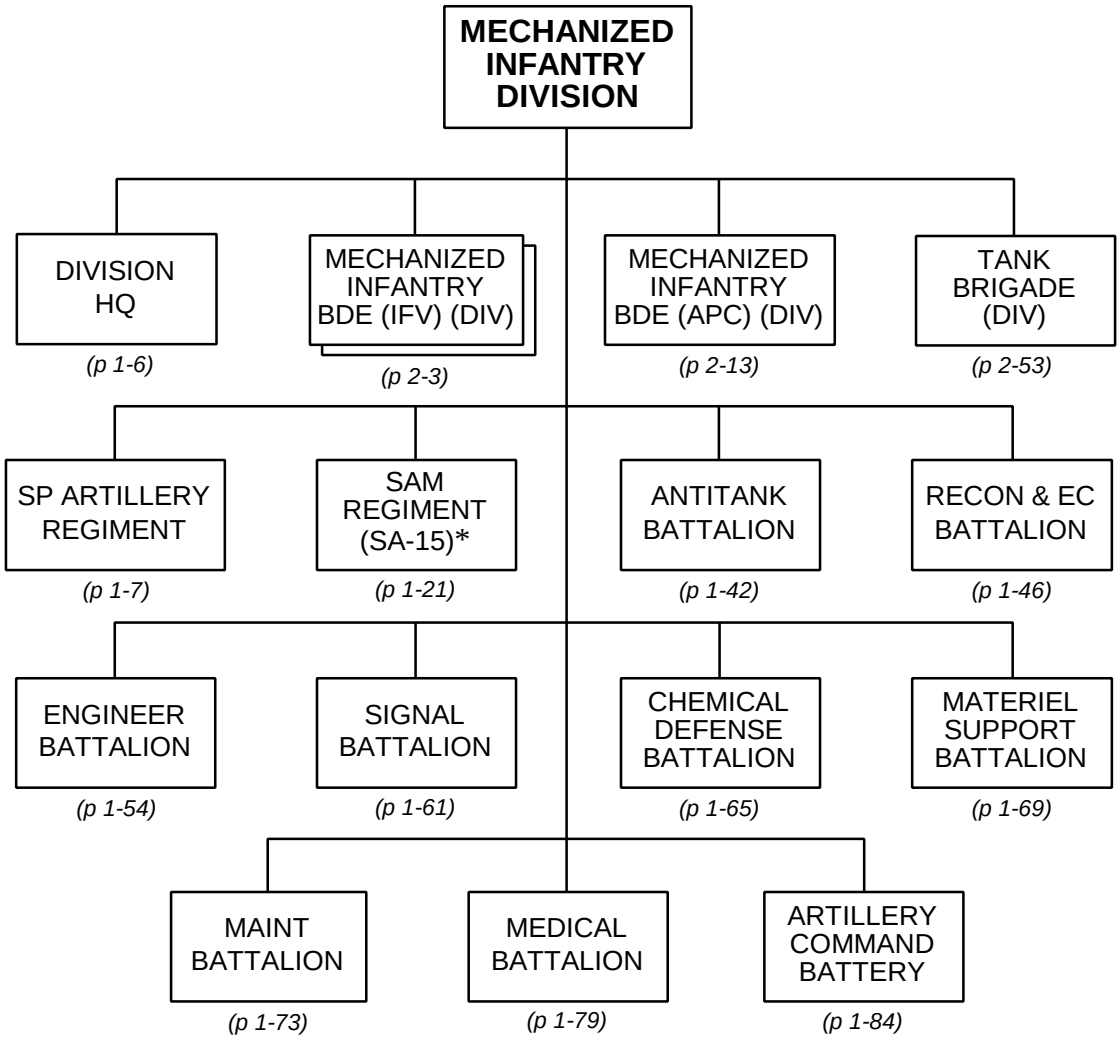
Mechanized Infantry Division (IFV-Heavy)



* Instead of the SA-15 SAM regiment, the tank division may have a SAM regiment equipped with the SA-6 (p 1-33) or SA-8 (p 1-29) or a 57-mm AA gun regiment (p 1-37).