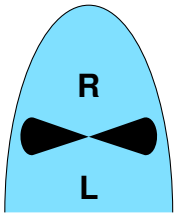
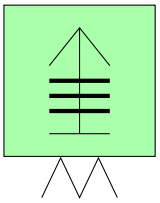
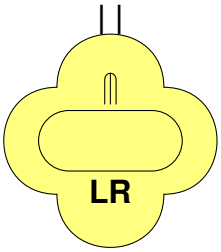
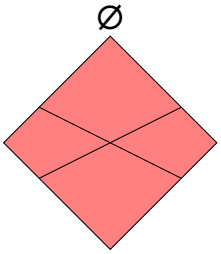
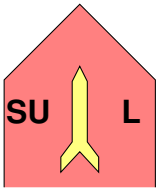
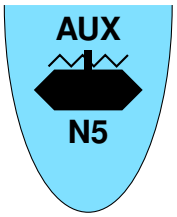


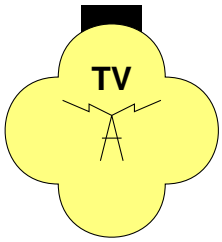








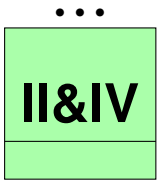


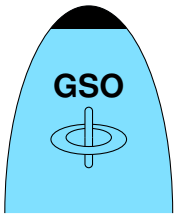


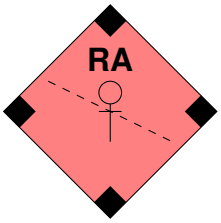
MilSymb

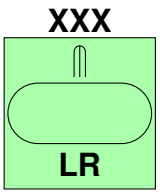
Damian Crosby

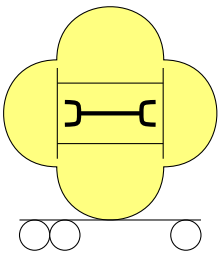
March 27, 2023

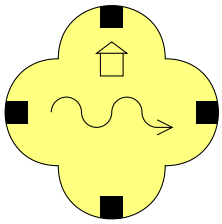


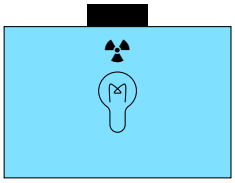


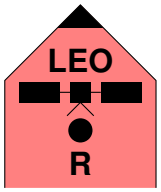


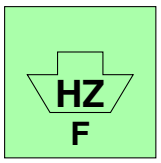












Revision History

Revision	Date	Author(s)	Description
1.0	2018-04-29	Damian Crosby	Creation.
1.01	2019-05-07	Damian Crosby	Added clarification on DVI output, added clarification that multiple class symbols are found in `multi`.
1.02	2020-03-15	Damian Crosby	Fixed scaling and placement errors in the speed `leader` key code, added note to define `scale` first in manual when using speed `leader`, fixed compilation issues in `landgroup` and `landheadqurters` to account for updated `xparse` package, fixed issue with `frame status` and `scale` keys not always being updated between commands, changed datestamps to be ISO 8601 compliant as per CTAN request.
1.03	2023-03-27	Damian Crosby	Hotfix to remove deprecated use of the `shapes.Symbols` TikZ library alias (now only case-sensitive `shapes.symbols` is permitted).

Acknowledgments

The author would particularly like to thank the following members of the TEX stack exchange community for their solutions to problems during this package's development:

- cfr
- Kpym
- Torbjørn T.
- Ulrike Fischer

Attributions

- The `combatant` icon in the **`MilSeaSurface`** command has been adapated from a work on Wikimedia Commons by Kathovo under the CC BY-SA 3.0 licence.
- The Structure of 1st Marine Division (Figure 28) receration is based on an image created by Noclador under the CC BY-SA 3.0 licence.

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Contents

1 Introduction

1.1 Package Summary

This package allows for the drawing of symbols from the *NATO Joint Military Symbology* library, as detailed in the document APP6-(C). It is designed to replicate the "building block" nature of the symbols in its command syntax using `pgf` keys, allowing the user to generate the entire symbol, including additional text fields, in one compact command.

1.2 Package Dependencies

The **`MilSymb`** package uses the following packages as dependencies:

- `tikz`
- `fontenc`
- `fix-cm`
- `arevmath`
- `marvosym`
- `acronym`
- `amssymb`
- `xifthen`
- `xparse`

1.3 Using `MilSymb`

To use **`MilSymb`** in your document, just include `\usepackage{milsymb}` in your preamble. **`MilSymb`** has only been tested on LaTeX, other TeX flavours will probably not work. All **`MilSymb`** symbols must be placed inside a TikZ environment, either as part of an inline `tikz` command or an `tikzpicture` enviroment. As with other packages that use TikZ or other postscript based drawing programs, DVI format is not directly supported, though some DVI viewers are able to display TikZ images by embedding postscript.

1.3.1 Package Options

Currently, there are no package options specified for **`MilSymb`**.

1.3.2 Symbol Construction

NATO Joint Military Symbology uses a "building block" philosophy when constructing military symbols, so each symbol can be broken into individual components. Only a brief overview will be given here, more information can be found in APP6-(C). These components are shown in Figure 1.

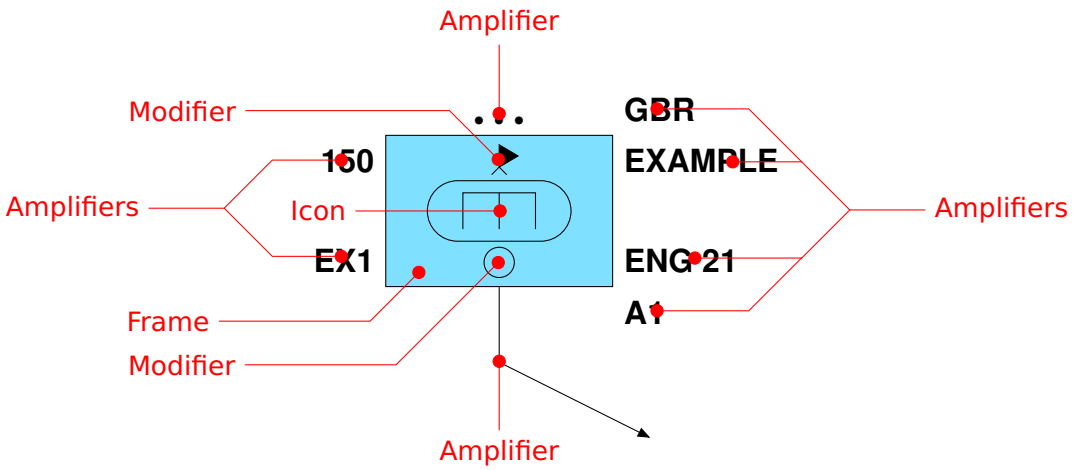


Figure 1: Annotation of symbol components.

- The **Frame** consists of a filled shape encompassing the icon and modifiers, denoting the type (land, sea surface, air, etc.) and faction (friendly, hostile, neutral, unknown) of the symbol. In some situations this is optional.
- The **Icon** denotes the entity the symbol represents (infantry, tank, mine, etc.). It is always placed in the centre of the symbol.
- The **Modifiers** are symbols that go above and below the icon (or to the left and right in the case of missile symbols, and just below the frame in the case of equipment symbols). These "modify" the entity with additional features or information (equipped with rocket launchers, extra heavy, etc.) These are usually optional.
- The **Amplifiers** are text and symbols that go outside the frame, and denote additional attributes of the symbol (country of origin, military echelon, speed and direction, etc.). These are always optional.

2 Symbol Commands

2.1 General Command Structure

The general structure of a **MilSymb** command is as follows. Syntax in *italics* is optional:

`\command[key, key=value]`*`(location)(name){label}`*

- `command` is the name of the command. All are prefixed with `Mil-`, and end with `Air`, `Missile`, `Land`, `Equipment`, `Installation`, `SeaSurface`, `SeaSubsurface`, `Mine`, `Space`, `Debris` and `Activity`. These mostly correspond to the categories found in APP6-(C), except for `Missile`, `Mine` and `Debris`, which have been broken off from `Air`, `SeaSubsurface` and `Space` for convenience. The `OwnShip` command is an exception to this rule, and does not have the `Mil-` prefix.
- key and key=value are the options used to build the symbol, such as faction, icons, modifiers, and amplifiers. Keys with no value define boolean switches, such as `unclear`. Keys with values can have one parameter, such as `faction`, or two parameters, such as `speed leader`. In the latter case, the syntax is key={value1}{value2}.
- `location` is an optional coordinate or coordinate reference to place the symbol. This is generally needed when placing multiple symbols in one `tikzpicture`.
- `name` is an optional reference label that acts just like the `name` property of a node in TikZ. It exposes standard rectangle node anchors such as `north` and `south`, allowing connectors to be drawn between symbols. This is useful when drawing organisation charts and similar (see Example 28).
- `label` is an optional text label that is added to the right of the symbol.

2.1.1 Shared Keys

These are all the keys that are shared by multiple **MilSymb** commands. Not all keys are shared by all commands, please see Table 2 for details about which keys are used by which commands.

Command	Shared Key											
	faction	main	upper	lower	frame status	monochrome	scale	no frame	speed leader	offset, movement	feint or dummy	headquarters
MilAir								■		■	■	■
MilMissile		■	■	■				■		■	■	
MilLand								■	■			2
MilEquipment			■	■	1				■			■
MilInstallation				■				■	■			2
MilSeaSurface								■		■	■	■
MilSeaSubSurface								■		■	■	■
MilMine		■	■	■	1				■	■	■	■
MilSpace								■		■	■	■
MilActivity				■				■	■		■	■
MilDebris	■	■	■	■	■	■		■	■	■	■	■
OwnShip	■	■	■	■	■	■		■	■	■	■	■

[1]Not functional when the `no frame` option is used.
[2]Only functional when `faction=friendly`.

Table 2: Table of which keys are used in which commands.

2.1.1.1 `main` This key defines the icon to use in the centre of the frame. See the individual command icon and modifier tables for the list of available values.

2.1.1.2 `upper` This key defines the modifier to use above the icon defined by `main`. See the individual command icon and modifier tables for the list of available values.

2.1.1.3 `lower` This key defines the modifier to use below the icon defined by `main`. See the individual command icon and modifier tables for the list of available values.

2.1.1.4 `frame status` This key modifies the border of the frame to allow for the expression of both the full set of "standard identities", and the planned status as seen in APP6-(C). The `unclear` value creates a black and white dotted line to display the alternate identities of each faction (assumed friend for friendly, suspect for hostile and pending for unknown, neutral should not use this value). The `anticipated` value create a longer dashed line to display the planned status. If the `frame status` key is not set, a standard solid border is used.

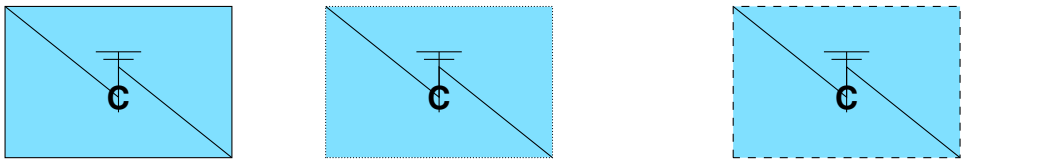
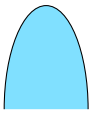
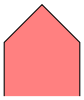
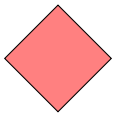
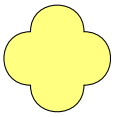
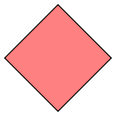
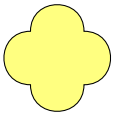
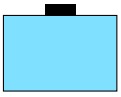
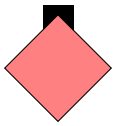
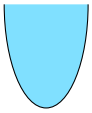
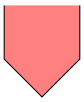
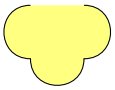
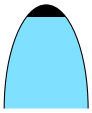
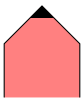
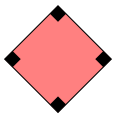
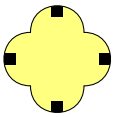


Figure 2: Example of the `frame status` key in use.

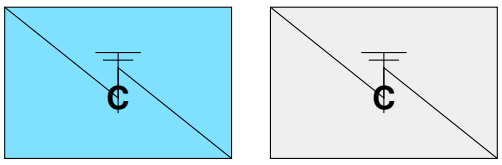
2.1.1.5 `faction` This key selects the military faction of the symbol relative to the user, which determines the colour and shape of the frame, or the colour of the icon and modifiers if `no frame` is specified. The values available are `friendly`, `hostile`, `neutral` and `unknown`.

Command	Faction Frame			
	Friendly	Hostile	Neutral	Unknown
`MilAir + MilMissile`				
`MilLand`				
`MilEquipment* + MilSeaSurface`				
`MilInstallation`				
`MilSeaSubsurface + MilMine*`				
`MilSpace`				
`MilActivity`				

*Can be used without a frame using the `no frame` option.

Table 3: Table of all the **`MilSymb`** command frames.

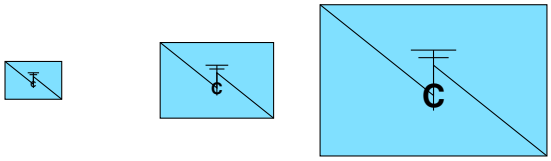
2.1.1.6 `monochrome` This boolean switch key allows the symbol to be generated in a monochrome format. All faction colours are instead rendered as an off-white colour as specified in APP6-(C).



normal `monochrome`

Figure 3: Example of the `monochrome` key in use.

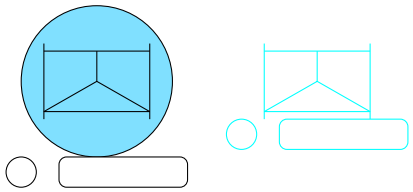
2.1.1.7 `scale` This key allows you to scale the resulting symbol by a multiple. By default (`scale=1`) the boundary octagon is precisely 1cm in diameter.



scale=0.5 scale=1 scale=2

Figure 4: Example of the scale key in use.

2.1.1.8 no frame This boolean switch key allows for specific commands (namely **MilEquipment** and **MilMine**) to be used without a faction frame. Instead, the icon and modifiers are recoloured with a fluorescent version of the faction colour, as per APP6-(C).



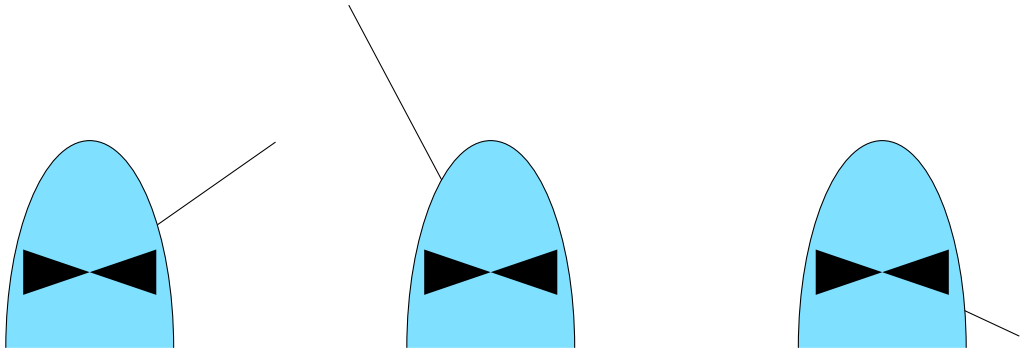
normal no frame

Figure 5: Example of the no frame key in use.

2.1.1.9 speed leader (Amplifier) This key draws a line from the centre of the symbol at a specified heading for a specified length. This is used to denote the speed (length) and direction (heading) of the symbol. This key takes two arguments, the first is the length and the second is the heading, as shown below:

speed leader={*heading*}{*length*}

When using this key along with the scale key, the scale key should be defined first. This is because the speed leader key immediately executes code that uses the scale key.



speed leader={35}{3} speed leader={118}{4} speed leader={335}{2}

Figure 6: Example of the speed leader key in use.

2.1.1.10 offset, movement (Amplifier) This key draws a "leader line" down from the centre of the symbol, then another to a specified position *offset* from the centre of the symbol. The offset key should be used to denote precise location, and the movement key should be used to indicate direction of movement (in the case of the movement key, the line is tipped by an arrow). *They should not be used simultaneously.* This key takes two arguments, each enclosed in curly braces, the first is the length of the "leader line" extending below the symbol, then the second is a pair of TikZ coordinates (with no brackets) indicating the specified position *offset* from the centre of the symbol,

as shown below:

```
offset={leader length}{offset}
movement={leader length}{offset}
```

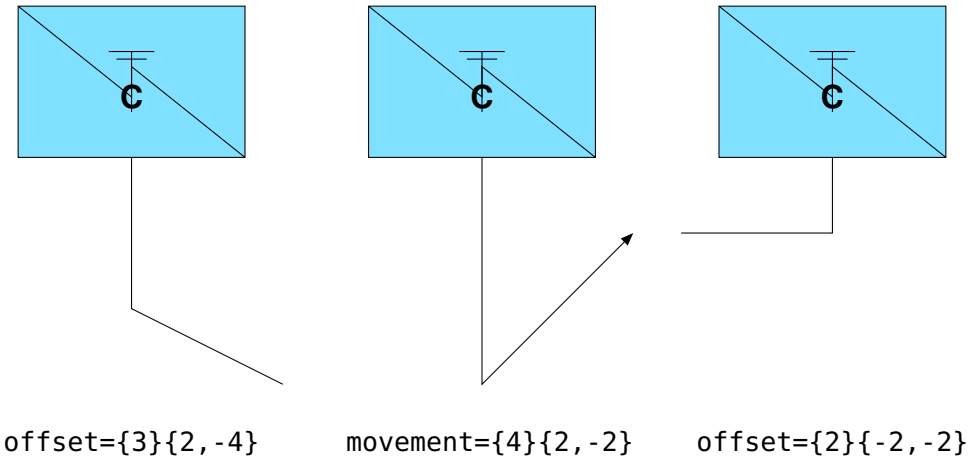


Figure 7: Example of the `offset` and `movement` key in use.

2.1.1.11 `feint or dummy` (Amplifier) This boolean switch key draws the *feint or dummy* amplifier on the symbol. See APP6-(C) for further information about its use.

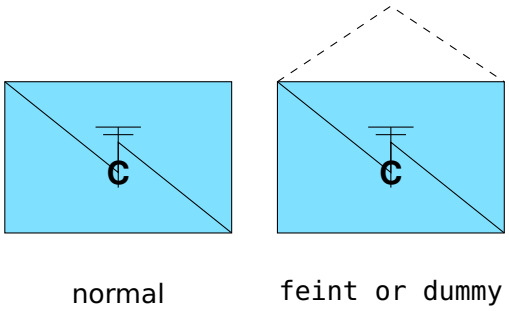


Figure 8: Example of the `feint or dummy` key in use.

2.1.1.12 `headquarters` (Amplifier) This key draws a line down from the south east corner of a `friendly` **`MilLand`** or **`MilInstallation`** frame, and then an optional text field below the frame. This is used to denote if the symbol is stationed at a headquarters or some other kind of military base. The key can be provided with no value, which will produce a blank headquaters amplifer, which is a line drawn downwards from the south-west of the symbol frame, or with a set of values that insert acronyms next to the line. Table 4 lists all the options available.

Value	Acronym
`assault command post`	ASLT
`command group`	CMD
`forward command post`	FWD
`main command post`	MAIN
`rear command post`	REAR
`tactical operations centre`	TOC
`tactical command post`	TAC

Table 4: Headquarters acronyms.

`headquarters` (no value) `headquarters=tactical operations centre`

Figure 9: Example of the `headquarters` key in use.

2.1.2 Text Fields

Most **MilSymb** commands (apart from **MilDebris** and **OwnShip**) have a set of text amplifiers that go around the edge of the symbol. These are set by individually named keys specified in the **Text Fields** subheading of each command entry. Some symbols have multiple text fields in the same location, be default no spaces are inserted between these fields, so spaces must be entered manually as appropriate.

2.1.3 Full Frame Icons

In some commands (**MilLand**, **MilInstallation** and **MilActivity**) some icons (as set by `main`) will take up the entire frame. These are referred to as "full frame" icons. Modifiers (as set by `upper` and `lower`) should not be used when a full frame icon has been selected.

2.1.4 Grouping

For **MilLand** and **MilInstallation** symbols with the `faction` key set to `friendly`, there is the option to group several commands together to indicate several entities in one location. **MilSymb** provides two LaTeX environments to achieve this, **landgroup** and **landheadquarters**. **landgroup** is designed to be used with normal **MilLand** symbols, and **landheadquarters** is designed to be used with symbols that have a headquarters amplifier. Within the environments, each command should be the argument inside an `\item{...}` command (note that it is not the same as the `\item` that is used in bulleted and numbered lists in LaTeX , it has an argument in curly braces rather than just a command). *Do not use the `scale` key within a **MilSymb** command when grouping them. Instead, use the `scale` key at the environment level.* See this example:

```
\begin{landgroup}[scale=2]
\item{\MilLand[faction=friendly,
main=signal radio teletype centre,
echelon=section]}
\item{\MilLand[faction=friendly,
main=diving,
upper=video imagery,
echelon=brigade,
status=reduced]}
\item{\MilLand[faction=friendly,
main=sensor,
upper=large extension node,
lower=single channel]}
\end{landgroup}
```

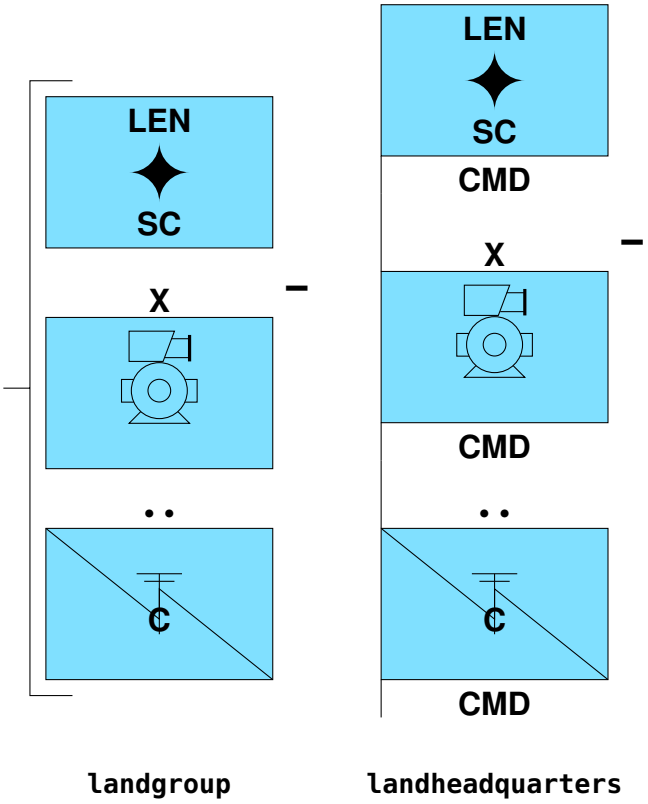


Figure 10: Example of **landgroup** and **landheadquarters** grouping.

2.2 Air Command (`MilAir`)

This command covers symbols for air assets and their activities. Refer to *Chapter 2, Section 2 and 3* in APP6-(C) for further information.

2.2.1 Icons and Modifiers

2.2.1.1 `main`

2.2.1.2 upper

2.2.1.3 `lower`

2.2.2 Amplifiers

2.2.2.1 Text Fields **`MilAir`** has 5 text field amplifiers, as shown in Figure 11. Table 6 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

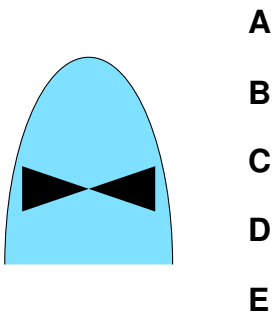


Figure 11: Location of **`MilAir`** text field amplifiers.

Location	Key	Description	Prefix*
A	`track number`	System Track Number.	TN
B	`call sign`	Airframe Number or Mission Call Sign.	
C	`position and movement`	Course [degrees]/Speed [knots] or Bearing [degrees]/Distance [nautical miles] Height [feet/flight level].	C/S, B/D
D	`nation`	Nation's Name: A 3-letter code indicating the object's country of origin (STANAG 1059).	
E	`additional information`	For friendly units: Sensor or Weapon load, endurance, etc. For other Units: Credibility of Information.	

*when applicable.

Table 6: Description of **`MilAir`** text field amplifiers.

2.3 Missile Command (`MilMissile`)

This command is a special application of **`MilAir`** for missiles. *Instead of setting an icon using `main`, a predefined "missile" icon is used. Modifiers are then added to the left and right instead of above and below.* Refer to *Chapter 2, Section 4* in APP6-(C) for further information.

2.3.1 Modifiers

Instead of using `upper` and `lower` keys to define the modifiers, `left` and `right` keys are used to reflect the position of the modifier.

2.3.1.1 `left`

2.3.1.2 `right`

2.3.2 Amplifiers

2.3.2.1 Text Fields

Text fields for **`MilMissile`** are identical to **`MilAir`**.

2.4 Land Command (`MilLand`)

This command covers symbols for land units, individuals, and organizations. Refer to *Chapter 3, Section 2* in APP6-(C) for further information.

2.4.1 Icons and Modifiers

2.4.1.1 `main`

2.4.1.2 upper

2.4.1.3 `lower`

2.4.2 Amplifiers

2.4.2.1 Echelon This amplifier denotes the "level of command" of the symbol (in the case of infantry this usually denotes the size of the unit). Table 7 lists all the options available.

Value	Symbol
team	∅
squad	•
section	••
platoon	•••
company	|
battalion	||
regiment	|||
brigade	X
division	XX
corps	XXX
army	XXXX
army group	XXXXX
theatre	XXXXXX
command	+ +

Table 7: Echelon levels and corresponding symbols.

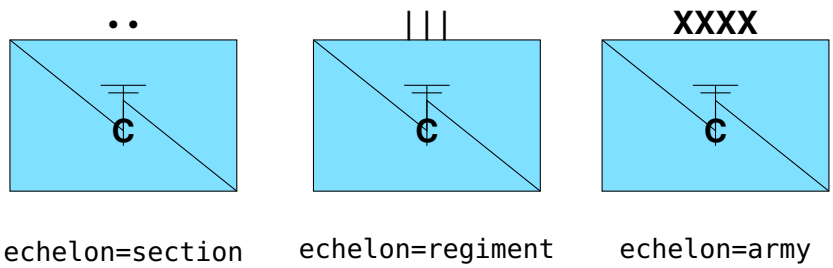


Figure 12: Example of the `echelon` key in use.

2.4.2.2 Task Force This amplifier denotes a temporary unit for a specific task or objective. If the `echelon` key is set, it will automatically size to enclose the echelon amplifier.

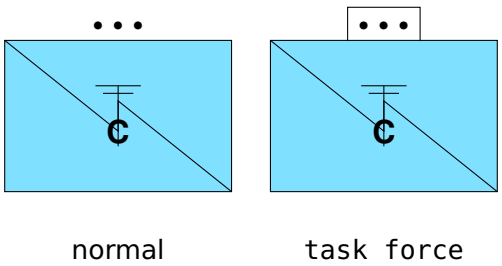


Figure 13: Example of the `task force` key in use.

2.4.2.3 Status This amplifier denotes the condition of the of the symbol. There are 3 options, `reinforced` indicates part of another unit is augmenting the capability of this unit, `reduced` means part of the unit has been detached to augment another unit, and `reinforced and reduced` means both situations have occurred. If this key is specified, the text field adjacent to it will be shifted right in order to accommodate the amplifier.

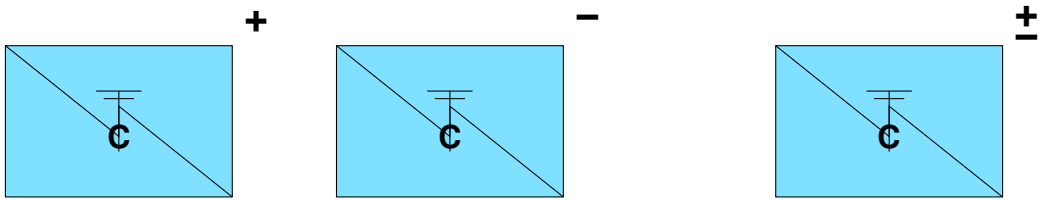


Figure 14: Example of the `status` key in use.

2.4.2.4 Text Fields **`MilLand`** has 14 text field amplifiers, as shown in Figure 18. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 8 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

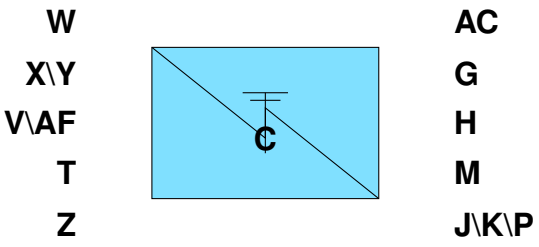


Figure 15: Location of **`MilLand`** text field amplifiers.

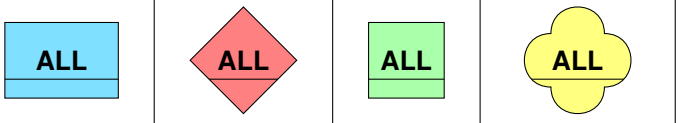
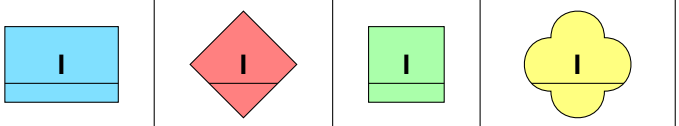
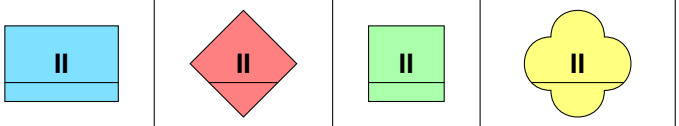
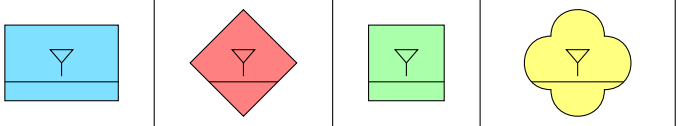
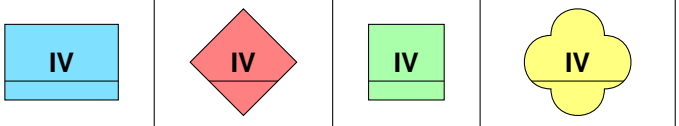
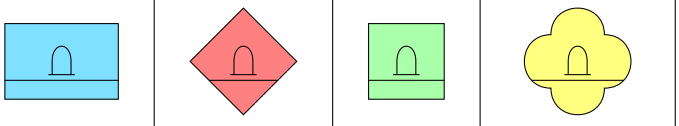
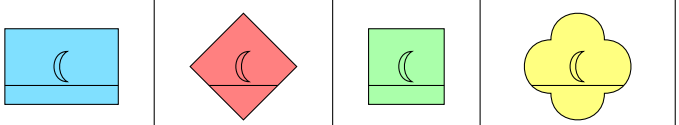
Location	Key	Description
AC	`country indicator`	A three-letter code that indicates the country of origin of the unit (STANAG 1059). In stability activities, this field can be used for factions or groups.
G	`staff comments`	Free text. Can be used by staff for information required by commander.
H	`additional information`	Free Text.
M	`higher formation`	Number or title of higher echelon command of unit being displayed.

J	`evaluation rating`	Degree of confidence that may be placed on the information represented by the symbol. It is shown as one letter and one number made up of Reliability of Source and Credibility of Information. (STANAG 2511). Reliability of Source: A. Completely reliable. B. Usually reliable. C. Fairly reliable. D. Not usually reliable. E. Unreliable. F. Reliability cannot be judged. Credibility of Information: 1. Confirmed by other sources. 2. Probably true. 3. Possibly true. 4. Doubtful. 5. Improbable. 6. Truth cannot be judged.
K	`combat effectiveness`	Effectiveness of unit or equipment displayed. 1. Fully operational. 2. Substantially operational. 3. Marginally operational. 4. Not operational.
P	`identification`	Identification modes and codes.
W	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or “O/O” for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.
X	`altitude value`	Altitude as displayed on the global positioning system (GPS).
Y	`location`	Latitude and longitude; grid coordinates.
AF	`common identifier`	Example: Paladin for the M109A6 howitzer or Leopard for the KPz-70 tank. (Use NATO code name for hostile common identifiers.)
Z	`speed`	Displays speed in nautical miles per hour or kilometres per hour.

Table 8: Description of **`MilLand`** text field amplifiers.

2.4.3 Supply Icons

An additional set of fullframe **MilLand** icons are used to denote classes of supply. **MilSymb** uses an additional `supply` key to construct these icons, which takes up to two values each enclosed in curly braces.*If only one value is used, then there must be a set of empty curly braces ({}) after the first value*. Each value is a supply class number, as listed in Table 9. The US uses different symbols and designations for their supply classes, their supply class numbers are prefixed with US (including the space). When one value is set, the symbol from the table will be used, and when two values are set, the roman numeral for the supply class is used, with an ampersand (&) inserted between the numerals. *This key should be used in place of the `main` key.*

Value	Roman Numeral	Glyph	Examples
`all*`	N/A		
NATO Supply Classes			
1	I		
2	II		
3	III		
4	IV		
5	V		
US Supply Classes			
US 1	I		

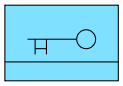
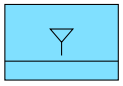
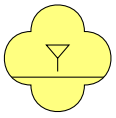
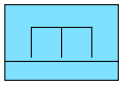
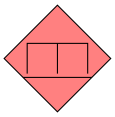
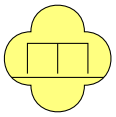
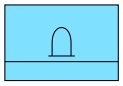
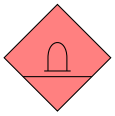
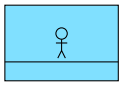
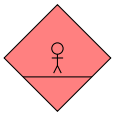
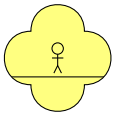
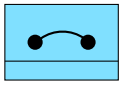
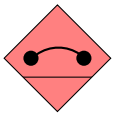
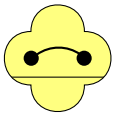
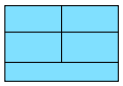
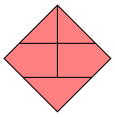
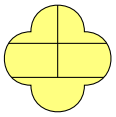
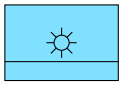
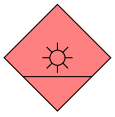
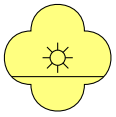
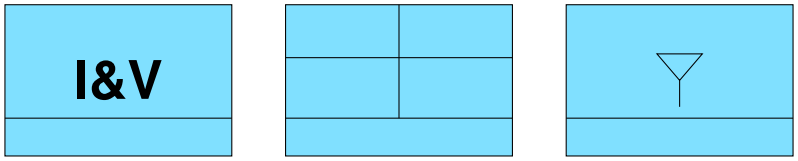
US 2	II					
US 3	III					
US 4	IV					
US 5	V					
US 6	VI					
US 7	VII					
US 8	VIII					
US 9	IX					
US 10	X					

Table 9: Table of Supply Icons.

*can only be used as a single value.

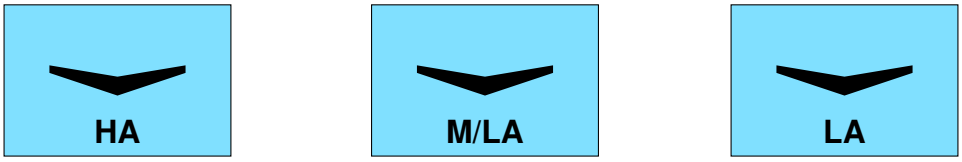


`supply={1}{5}` `supply={US 8}{}` `supply={3}{}`

Figure 16: Example of Supply symbols.

2.4.4 Altitude Modifier

`MilLand` defines a special lower modifier for altitude, which takes up to two values each enclosed in curly braces.*If only one value is used, then there must be a set of empty curly braces ({}) after the first value*. Each value is an altitude designation, `high` (HA), `medium` (MA) and `low` (LA), which inserts the acronym. Having two values will insert a slash (/) between them and removes the "A" suffix from the first acronym. *This key should be used in place of the `lower` key.*



`altitude={high}{}` `altitude={medium}{low}` `altitude={low}{}`

Figure 17: Example of the `altitude` key in use.

2.5 Equipment Command (`MilEquipment`)

This command covers symbols for land equipment. *The are no `upper` and `lower` keys, instead a `mobility` key sets a modifier to be displayed below the frame (or when the `no frame` key is set, adjacent to the bottom of the icon)*. This command also accepts the `no frame` key. See *Chapter 3, Section 3* in APP6-(C).

2.5.1 Icons and Modifiers

2.5.1.1 `Main`

2.5.1.2 Mobility

2.5.2 Amplifiers

2.5.2.1 Text Fields **MilEquipment** has 16 text field amplifiers, as shown in Figure 18. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 10 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

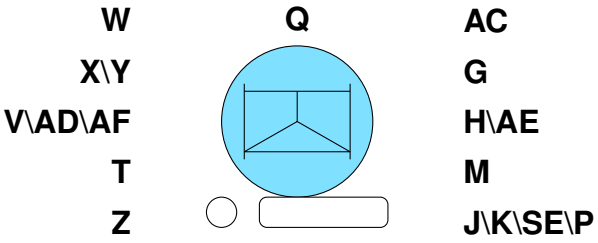


Figure 18: Location of **MilEquipment** text field amplifiers.

Location	Key	Description
Q	quantity	Identifies the number of items present.
AC	country indicator	A three-letter code that indicates the country of origin of the unit (STANAG 1059). In stability activities, this field can be used for factions or groups.
G	staff comments	Free text. Can be used by staff for information required by commander.
H	additional information	Free Text.
M	higher formation	Number or title of higher echelon command of unit being displayed.
J	evaluation rating	Degree of confidence that may be placed on the information represented by the symbol. It is shown as one letter and one number made up of Reliability of Source and Credibility of Information. (STANAG 2511). Reliability of Source: A. Completely reliable. B. Usually reliable. C. Fairly reliable. D. Not usually reliable. E. Unreliable. F. Reliability cannot be judged. Credibility of Information: 1. Confirmed by other sources. 2. Probably true. 3. Possibly true. 4. Doubtful. 5. Improbable. 6. Truth cannot be judged.

K	`combat effectiveness`	Effectiveness of unit or equipment displayed. 1. Fully operational. 2. Substantially operational. 3. Marginally operational. 4. Not operational.
SE	`signature equipment`	Identifies a detectable electronic signature "!" for hostile equipment.
P	`identification`	Identification modes and codes.
T	`unique designation`	An alphanumeric designator that uniquely identifies a particular model of equipment (number).
V	`type of equipment`	Identifies unique designation (such as AH-64 for attack helicopter).
W	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or "O/O" for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.
X	`altitude value`	Altitude as displayed on the global positioning system (GPS).
Y	`location`	Latitude and longitude; grid coordinates.
AF	`common identifier`	Example: Paladin for the M109A6 howitzer or Leopard for the KPz-70 tank. (Use NATO code name for hostile common identifiers.)
Z	`speed`	Displays speed in nautical miles per hour or kilometres per hour.
AD	`platform type`	Electronic intelligence notation (ELNOT) or communications intelligence notation (CENOT).
AE	`equipment teardown time`	Equipment teardown time in minutes.

Table 10: Description of **`MilLand`** text field amplifiers.

2.6 Installation Command (`MilInstallation`)

This command covers symbols for land installations, sites that incorporate permanent, semi-permanent, and temporary structures. *The `lower` key is not used as there are no lower modifiers.* See *Chapter 3, Section 4* in APP6-(C).

2.6.1 Icons and Modifiers

2.6.1.1 `Main`

2.6.1.2 Upper

2.6.2 Amplifiers

2.6.2.1 Text Fields **`MilInstallation`** has 12 text field amplifiers, as shown in Figure 19. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 11 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

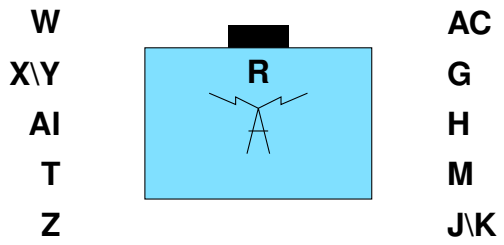


Figure 19: Location of **`MilInstallation`** text field amplifiers.

Location	Key	Description
AC	`country indicator`	A three-letter code that indicates the country of origin of the unit (STANAG 1059). In stability activities, this field can be used for factions or groups.
G	`staff comments`	Free text. Can be used by staff for information required by commander.
H	`additional information`	Free Text.
M	`higher formation`	Number or title of higher echelon command of unit being displayed.
J	`evaluation rating`	Degree of confidence that may be placed on the information represented by the symbol. It is shown as one letter and one number made up of Reliability of Source and Credibility of Information. (STANAG 2511). Reliability of Source: A. Completely reliable. B. Usually reliable. C. Fairly reliable. D. Not usually reliable. E. Unreliable. F. Reliability cannot be judged. Credibility of Information: 1. Confirmed by other sources. 2. Probably true. 3. Possibly true. 4. Doubtful. 5. Improbable. 6. Truth cannot be judged.
K	`capacity of installation`	Capacity of installation displayed.
T	`unique designation`	An alphanumeric designator that uniquely identifies a particular installation (name).

W	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or “O/O” for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.
X	`altitude value`	Height in feet of equipment or structure on the ground.
Y	`location`	Latitude and longitude; grid coordinates.
Z	`speed`	Displays speed in nautical miles per hour or kilometres per hour.
AI	`installation composition`	Indicates the component type of the installation: • Development. • Research. • Production. • Service. • Storage. • Utility.

Table 11: Description of **`MilInstallation`** text field amplifiers.

2.7 Sea Surface Command (`MilSeaSurface`)

This command covers symbols for units, equipment, and objects of maritime surface operations. See *Chapter 4, Section 1* in APP6-(C).

2.7.1 Icons and Modifiers

2.7.1.1 `Main`

2.7.1.2 Upper

2.7.1.3 `Lower`

2.7.2 Amplifiers

2.7.2.1 Text Fields **`MilSeaSurface`** has 6 text field amplifiers, as shown in Figure 20. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 13 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

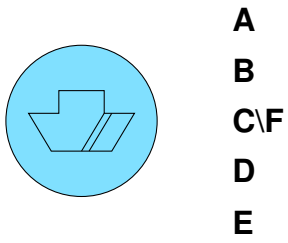


Figure 20: Location of **`MilSeaSurface`** text field amplifiers.

Location	Key	Description	Prefix*
A	`track number`	System Track Number.	TN
B	`name`	Ships Name, Hull Number or Task Organization Designator (military only), Mission / International call sign.	
C	`position and movement`	Course [degrees]/Speed [knots] or Bearing [degrees]/Distance [nautical miles].	C/S, B/D
D	`identification`	Country of origin (STANAG 1059 - 3-letter code) or Organization (e.g. UN, NATO, EU), Any other information (e.g. IFF / AIS).	
E	`additional information`	For friendly units: Sensor or Weapon load, endurance, etc. For other Units: Credibility of Information.	
F	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or “O/O” for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.	

*when applicable.

Table 13: Description of **`MilSeaSurface`** text field amplifiers.

2.8 Own Ship Command (`OwnShip`)

This command places a marker indicating the position of the vessel the user is on, if they are at sea. No keys are available other than `scale`. See *Chapter 4, Section 1, Table 4-7* in APP6-(C).

Figure 21: **OwnShip** command symbol.

2.9 Sea Subsurface Command (`MilSeaSubsurface`)

This command covers symbols for units, equipment, and objects of maritime sub surface operations. See *Chapter 4, Section 2* in APP6-(C).

2.9.1 Icons and Modifiers

2.9.1.1 `Main`

2.9.1.2 Upper

2.9.1.3 `Lower`

2.9.2 Amplifiers

2.9.2.1 Text Fields **`MilSeaSuburface`** has 6 text field amplifiers, as shown in Figure 22. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 15 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

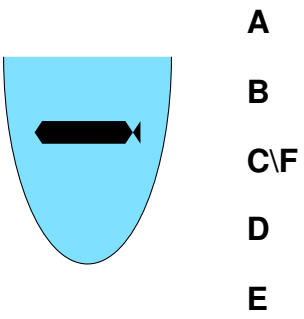


Figure 22: Location of **`MilSeaSubsurface`** text field amplifiers.

Location	Key	Description	Prefix*
A	`track number`	System Track Number.	TN
B	`name`	Ships Name, Hull Number or Task Organization Designator (military only), Mission / International call sign.	
C	`position and movement`	Course [degrees]/Speed [knots] or Bearing [degrees]/Distance [nautical miles] Height [feet/metres].	C/S, B/D
D	`identification`	Country of origin (STANAG 1059 - 3-letter code) or Organization (e.g. UN, NATO, EU), Any other information (e.g. IFF / AIS).	
E	`additional information`	For friendly units: Sensor or Weapon load, endurance, etc. For other Units: Credibility of Information. For submarine contacts: Classification: • NONSUB • POSSUB LOW 1 or 2 • POSSUB HIGH 3 or 4 • PROBSUB • CERTSUB	
F	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or "O/O" for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.	

*when applicable.

Table 15: Description of **`MilSeaSubsurface`** text field amplifiers.

2.10 Sea Mine Command (`MilMine`)

This command is used to construct sea mine symbols. Instead of using the `main` key, this command uses the key `mine` to define the mine type, and the boolean switch `neutralised` to display the neutralised variant, as shown in Table 16. No modifiers are used. This command also accepts the `no frame` key. See *Chapter 4, Section 2, Table 4-17* in APP6-(C).

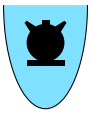
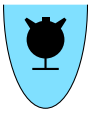
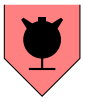
Value	Glyph		Examples			
	Normal	`neutralised`				
`free`						
`bottomed`						
`moored`						
`floating`						
`in other position`						
`rising`						

Table 16: Table of **`MilMine`** icons.

2.10.1 Amplifiers

2.10.1.1 Text Fields

Text fields for **`MilMine`** are identical to **`MilSeaSubsurface`**.

2.11 Space Command (`MilSpace`)

This command covers symbols for space assets, related activities and other relevant objects (debris) within earth orbit. See *Chapter 5, Section 1 and 2* in APP6-(C).

2.11.1 Icons and Modifiers

2.11.1.1 `Main`

2.11.1.2 Upper

2.11.1.3 Lower

2.11.2 Amplifiers

2.11.2.1 Text Fields **MilSpace** has 5 text field amplifiers, as shown in Figure 23. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 18 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

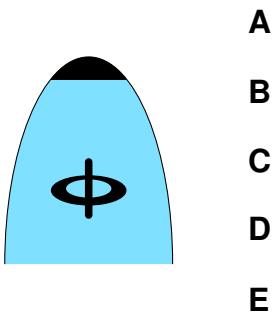


Figure 23: Location of **MilSpace** text field amplifiers.

Location	Key	Description	Prefix*
A	`track number`	Space System Track Number.	SSTN
B	`name`	Space System Name or Mission call sign.	
C	`position and movement`	Georef Position [degrees]/Inclination] or Trajectory, Height [feet/orbit].	
D	`nation`	Nation's Name: A 3-letter code indicating the object's country of origin (STANAG 1059).	
E	`additional information`	For friendly units: Sensor or Weapon load, specific orbit, footprint etc. For other Units: Credibility of Information.	

*when applicable.

Table 18: Description of **MilSpace** text field amplifiers.

2.12 Space Debris Command (MilDebris)

This command is used to construct symbols that represent space debris. No shared keys are used other than `scale`. This command uses the key `size` to define the debris size, and the boolean switch `man made` to display the variant for artificial debris, as shown in Table 19. See *Chapter 5, Section 3, Table 5-7* in APP6-(C).

Value	Glyph	
	Normal	**man made**
`small`		
`medium`		
`large`		

Table 19: Table of **MilDebris** symbols.

2.13 Activity Command (`MilActivity`)

This command covers symbols that provide the capability to depict stability activities and civil support activities across the continuum of operations. *The `lower` key is not used as there are no lower modifiers.* See *Chapter 6* in APP6-(C).

2.13.1 Icons and Modifiers

2.13.1.1 `Main`

2.13.1.2 `Upper`

2.13.2 Amplifiers

2.13.2.1 Text Fields **`MilActivity`** has 6 text field amplifiers, as shown in Figure 24. *Some of these amplifiers are placed adjacent to each other, spaces are not automatically inserted between them.* Table 20 gives the key and description of each field, along with the standard prefixes to use. This table is mostly identical to the one found in APP6-(C).

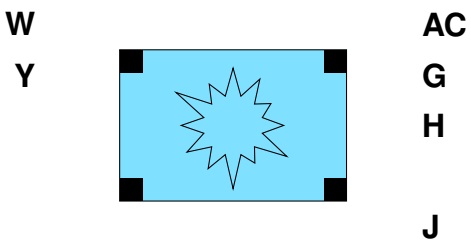


Figure 24: Location of **`MilActivity`** text field amplifiers.

Location	Key	Description
AC	`country indicator`	A three-letter code that indicates the country of origin of the unit (STANAG 1059). In stability activities, this field can be used for factions or groups.
G	`staff comments`	Free text. Can be used by staff for information required by commander.
H	`additional information`	Free Text.
J	`evaluation rating`	Degree of confidence that may be placed on the information represented by the symbol. It is shown as one letter and one number made up of Reliability of Source and Credibility of Information. (STANAG 2511). Reliability of Source: A. Completely reliable. B. Usually reliable. C. Fairly reliable. D. Not usually reliable. E. Unreliable. F. Reliability cannot be judged. Credibility of Information: 1. Confirmed by other sources 2. Probably true 3. Possibly true 4. Doubtful 5. Improbable 6. Truth cannot be judged.

W	`date-time group`	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYY) or “O/O” for on order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by two digits. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. The last two digits of the year are after the month. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds.
Y	`location`	Latitude and longitude; grid coordinates.

Table 20: Description of **`MilActivity`** text field amplifiers.

3 Custom Icons and Modifiers

3.1 `MilSymb` TikZ Picture Directory Structure

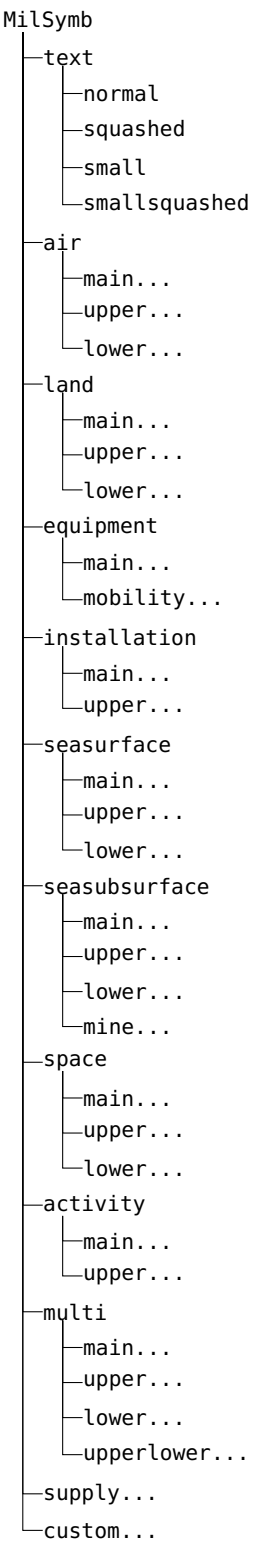


Figure 25: **MilSymb**TikZ Picture Directory Structure.

To add a custom icon or modifier, create a TikZ `.pic` in the `custom` directory using `tikzset`:

```
\makeatletter %required if using MilSymb@selectedfaction
\tikzset{
MilSymb custom/user icon/.pic={
  custom TikZ drawing commands go here...
```

```
} %comma after bracket is needed if defining multiple .pic.
}
\makeatother %required if using MilSymb@selectedfaction
\begin{tikzpicture}
  \MilLand[faction=hostile, main=user icon]
\end{tikzpicture}
```

You can also create your own sub directories, such as `custom/land/main/user icon`. This is recommended if you want to organise your custom shapes by symbol type and position.To use your icon or modifier in a command, simply use the path as the value for a icon or modifier key `\MilLand[faction=friendly, main=path/to/user icon]`. The `main`, `upper` and `lower` keys all accept custom values, as well as the `left`, `right` and `mobility` keys where applicable.

3.2 Drawing Bounds

As specified in APP6-(C), most icons and modifiers should fit within a template comprising of a regular octagon exactly **1** unit in width and **1** unit in height (with the exception of *fullframe* icons and a few others). In commands that specify upper and lower modifiers, the **main** icon should not exceed a height of **0.2** units above and below its origin (the two horizontal dotted line in Figure 26). Similarly, the modifiers should also not extend into the area **0.2** units above and below the origin of the **main** icon. The key value `faction=none` on any **`MilSymb`**command (apart from `OwnShip` or `MilDebris`, which do not have faction keys) will output this template instead of a frame.

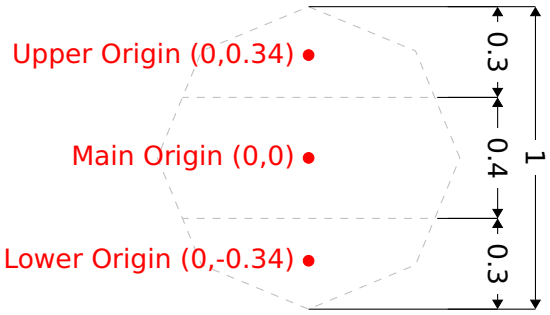


Figure 26: Dimensions of the octagon and origins of the icon and modifiers.

For the **`MilMissile`** command, the template is rotated 90˚anticlockwise, and the `left` and `right` keys correspond to the `upper` and `lower` keys respectively. The `mobility` origin is located **0.1** units below the `south` anchor of the frame.

3.3 Border Anchors

`MilSymb` defines an anchored bounding box named **`M`** around all frames. This has anchor points identical to the `rectangle` node in TikZ. These can be used as coordinates for drawing icons and modifiers relative to the edge of the frame.

3.4 Faction Variants

Most *fullframe* icons have slight variations depending on the faction frame that is being used. To facilitate this, you can create a set of four TikZ `.pic` in faction sub directories, like so:

```
custom/user icon/friendly/.pic
custom/user icon/hostile/.pic
custom/user icon/neutral/.pic
custom/user icon/unknown/.pic
```

3.5 Clipping

For **`MilLand`** symbols, clipping commands are available to trim any icon or modfier to the inside of the frame. Use `\clip` `\clip<faction>` within the drawing commands to clip anything specified after the command to the frame.

Then, insert `/\MilSymb@selectedfaction` directly after the `path/to/user icon` (so it forms `path/to/user icon/\MilSymb@selectedfaction`). `\MilSymb@selectedfaction` will be replaced by the name of the faction, and complete the path to the icon.

3.6 Using Existing Icons and Modifiers

To insert an existing icon or modifier into your custom icon use a nested `.pic` as so: `\pic{MilSymb category/position/name}`, where `command` generally refers to the **MilSymb** command it is used in as displayed in Figure 25, and `position` refers to . The exceptions are `supply`, which contains supply icons detailed in 9, `text` which provides common text templates as detailed in 3.6.1, and `multi` which is detailed in 3.6.2. `mine` is also contained in a sub-directory of `seasubsurface`, instead of its own directory. **MilDebris** does not use any icons or modifiers, all drawing syntax is contained within the command.

3.6.1 Text Templates

MilSymb uses 4 standard text templates for commonly used text in icons and modifiers. Use regular TikZ text syntax for any variations. You can use them by nesting a `.pic` as before, but adding `={text to display}` as a suffix, as in `\pic{MilSymb text/type={text to display}}`. Note that conventionally up to 3 characters are designed to be used with normal text, and up to 4 with "squashed" versions, in order to appear similar to APP6-(C)guidelines. Any more characters should use a smaller font.

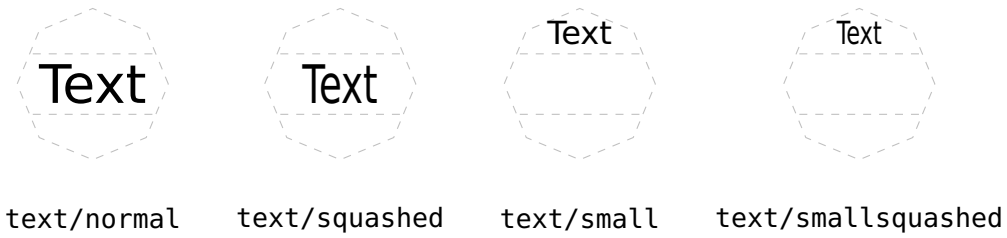


Figure 27: **MilSymb** text templates.

3.6.2 Multiple Class

Some **MilSymb** icons and modifiers are used in more than one command. In order to avoid code duplication, these are put in their own directory named `multi` with a single name, even though different aliases may be used in each command. The `upperlower` sub-directory is used to store modifier glyphs that are used in both the `upper` and `lower` positions.

?? PythonTeX ??

3.6.3 Hidden Glyphs

There are some `.pic` that are not used as an icon or modifier directly, but are used to construct other icons or modifiers because they are used multiple times.

?? PythonTeX ??

4 Examples

4.1 Front Cover

```
\thispagestyle{empty}
\begin{center}
\begin{tikzpicture}[remember picture]
\coordinate (NE) at ($(current page text area.north east)-(1.5, 1.5)$);
\coordinate (NW) at ($(current page text area.north west)-(-1.5, 1.5)$);
\coordinate (SE) at ($(current page text area.south east)-(1.5, -1.5)$);
\coordinate (SW) at ($(current page text area.south west)-(-1.5, -1.5)$);
\MilLand[faction=hostile, echelon=team, main=infantry, scale=2](NE)
\MilAir[faction=friendly, main=military fixed wing, upper=jammer, lower=light, scale=2](NW)
\MilSeaSurface[faction=neutral, main=hazardous material transport ship, lower=fast, scale=2](SE)
\MilActivity[faction=unknown, main=searching, upper=house to house, scale=2](SW)
\MilLand[faction=unknown, echelon=battalion, main=armoured, upper=missile, lower=long range, scale=2]($(NE)!0.33!(NW)$)
\MilEquipment[faction=neutral, main=heavy machine gun, mobility=pack animal, scale=2]($(NE)!0.66!(NW)$)
\MilSpace[faction=hostile, main=military earth observation satellite, upper=low earth orbit, lower=radar, scale=2]($(SE)!0.33!(SW)$)
\MilInstallation[faction=friendly, main=electric power, upper=nuclear energy, scale=2]($(SE)!0.66!(SW)$)
\MilSeaSubsurface[faction=friendly, main=snorkelling submarine, upper=auxiliary, lower=nuclear type 5, scale=2]($(NE)!0.2!(SE)$)
\MilLand[faction=neutral, echelon=platoon, main=supply, supply={2}{4}, scale=2]($(NE)!0.4!(SE)$)
\MilActivity[faction=hostile, main=attempted criminal activity, upper=rape, scale=2]($(NE)!0.6!(SE)$)
\MilEquipment[faction=unknown, main=tank recovery vehicle, mobility=wheeled semi trailer, scale=2]($(NE)!0.8!(SE)$)
\MilMissile[faction=hostile, left=sub surface, right=launched, scale=2]($(NW)!0.2!(SW)$)
\MilInstallation[faction=unknown, main=civilian telecommunications, upper=television, scale=2]($(NW)!0.4!(SW)$)
\MilSpace[faction=friendly, main=civilian space station, upper=geosynchronous orbit, scale=2]($(NW)!0.6!(SW)$)
\MilLand[faction=neutral, echelon=corps, main=armoured, upper=missile, lower=long range, scale=2]($(NW)!0.8!(SW)$)
\pgfresetboundingbox
\path[use as bounding box] (0,0);
\end{tikzpicture}
{\let\newpage\relax\maketitle}
\end{center}
```

4.2 1st Marine Division (USA)

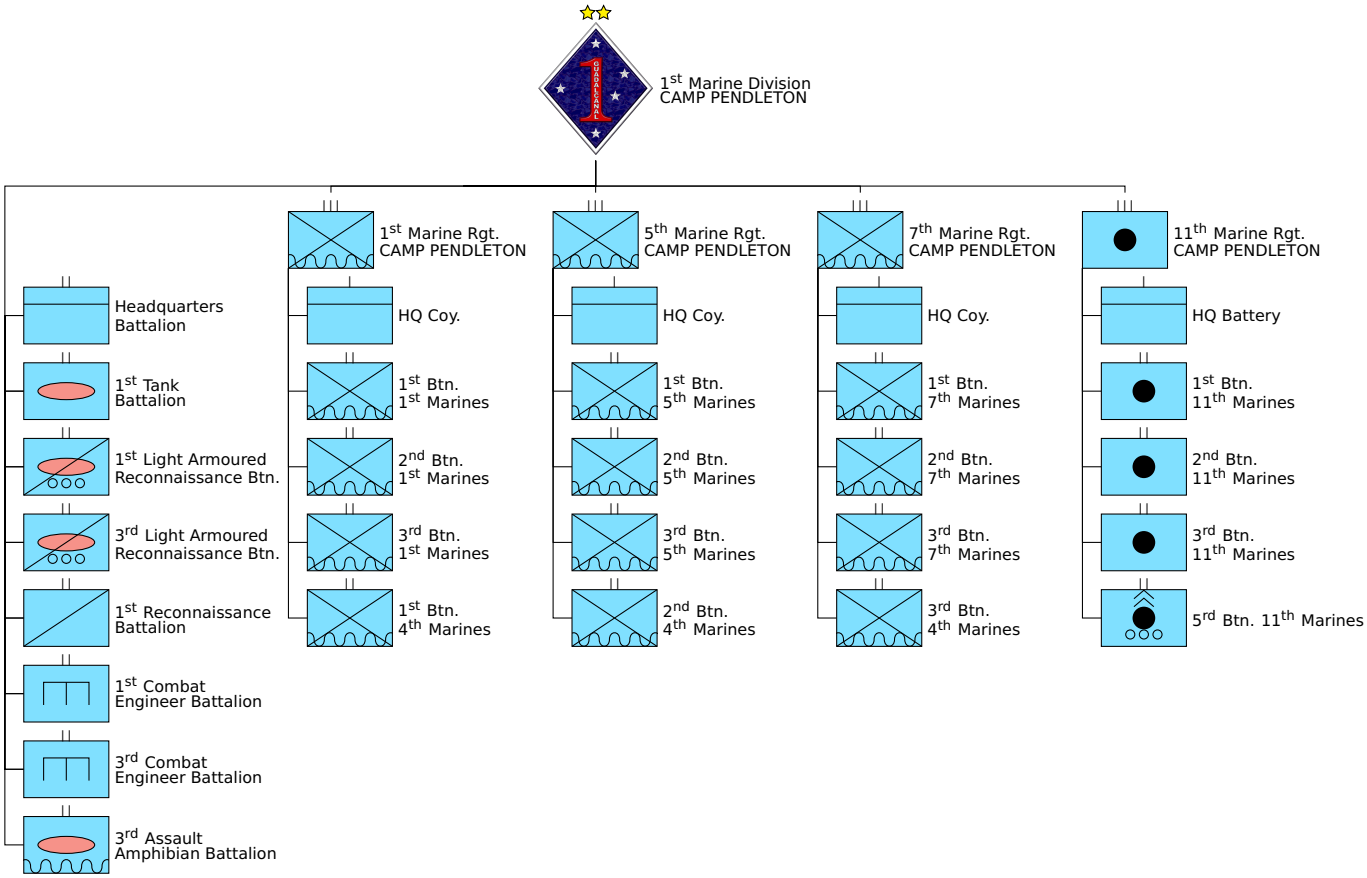


Figure 28: Recreation of Structure of 1st US Marine Division. Sourced from Wikipedia

```
\definecolor{salmon}{HTML}{F69289} %custom tank symbol colour
%custom icons
\makeatletter
\tikzset{
MilSymb custom/marine/.pic={
  \pic{MilSymb land/main/infantry/\MilSymb@selectedfaction};
  \clip \clipfriendly;
  \pic[yshift=-10.75]{MilSymb land/main/amphibious/\MilSymb@selectedfaction};
},
MilSymb custom/tank/.pic={
  \filldraw[fill=salmon]circle(0.5 and 0.15);
},
MilSymb custom/reconnaissance tank/.pic={
  \pic{MilSymb custom/tank};
  \pic{MilSymb land/main/reconnaissance/\MilSymb@selectedfaction};
},
MilSymb custom/amphibious tank/.pic={
  \pic{MilSymb custom/tank};
  \clip \clipfriendly;
  \pic[yshift=-10.75]{MilSymb land/main/amphibious/\MilSymb@selectedfaction};
}
}
\makeatother
\fontsize{6}{0}\selectfont
\begin{tikzpicture}
% grid of symbols
\node(H) at (7,0){\includegraphics[width=1.5cm]{manual_examples/772px-1st_Marine_Division_insignia}};
\node[right of=H, node distance=1.85cm, align=left](HT){1\textsuperscript{st} Marine Division\\ CAMP PENDLETON};
\node[above of=H, star,star points=5, star point ratio=0.5, rotate=180, xshift=-3, fill=yellow, draw] {};
\node[above of=H, star,star points=5, star point ratio=0.5, rotate=180, xshift=3, fill=yellow, draw] {};
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=marine](3.5, -2)(C11){1\textsuperscript{st} Marine Rgt. \\ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=marine](7, -2)(C21){5\textsuperscript{th} Marine Rgt. \\ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly,  echelon=regiment, main=marine](10.5, -2)(C31){7\textsuperscript{th} Marine Rgt. \\ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=field artillery](14, -2)(C41){11\textsuperscript{th} Marine Rgt. \\ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=headquarters](0, -3)(C02){Headquarters \\ Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=company, main=headquarters](3.75, -3)(C12){~\\ HQ Coy.}
\MilLand[scale=0.75, faction=friendly, echelon=company, main=headquarters](7.25, -3)(C22){~\\ HQ Coy.}
\MilLand[scale=0.75, faction=friendly, echelon=company, main=headquarters](10.75, -3)(C32){~\\ HQ Coy.}
\MilLand[scale=0.75, faction=friendly, echelon=company, main=headquarters](14.25, -3)(C42){~\\ HQ Battery}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=tank](0, -4)(C03){1\textsuperscript{st} Tank \\ Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -4)(C13){1\textsuperscript{st} Btn. \\ 1\textsuperscript{st} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -4)(C23){1\textsuperscript{st} Btn. \\ 5\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -4)(C33){1\textsuperscript{st} Btn. \\ 7\textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -4)(C43){1\textsuperscript{st} Btn. \\ 11\textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance tank, lower=wheeled](0, -5)(C04){1\textsuperscript{st} Light Armoured \\ Reconnaissance Btn.}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -5)(C14){2\textsuperscript{nd} Btn. \\ 1\textsuperscript{st} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -5)(C24){2\textsuperscript{nd} Btn. \\ 5\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -5)(C34){2\textsuperscript{nd} Btn. \\ 7\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -5)(C44){2\textsuperscript{nd} Btn. \\ 11\textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance tank, lower=wheeled](0, -6)(C05){3\textsuperscript{rd} Light Armoured \\ Reconnaissance Btn.}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -6)(C15){3\textsuperscript{rd} Btn. \\ 1\textsuperscript{st} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -6)(C25){3\textsuperscript{rd} Btn. \\ 5\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -6)(C35){3\textsuperscript{rd} Btn. \\ 7\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -6)(C45){3\textsuperscript{rd} Btn. \\ 11\textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance](0, -7)(C06){1\textsuperscript{st} Reconnaissance \\  Battalion}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -7)(C16){1\textsuperscript{st} Btn. \\ 4\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -7)(C26){2\textsuperscript{nd} Btn. \\ 4\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -7)(C36){3\textsuperscript{rd} Btn. \\ 4\textsuperscript{th} Marines}
 \MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery, upper=multiple rocket launcher, lower=wheeled](14.25, -7)(C46){5\textsuperscript{rd} Btn. 11\textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=engineer](0, -8)(C07){1\textsuperscript{st} Combat \\ Engineer Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=engineer](0, -9)(C08){3\textsuperscript{rd} Combat \\ Engineer Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=amphibious tank](0, -10)(C09){3\textsuperscript{rd} Assault \\ Amphibian Battalion}
%connecting lines
\draw [shorten >=0.25cm] (H.south) |- ($(H.south)!0.5!(C11.north)$) -| (C11.north);
\draw [shorten >=0.25cm] (H.south) |- ($(H.south)!0.5!(C11.north)$) -| (C21.north);
\draw [shorten >=0.25cm] (H.south) |- ($(H.south)!0.5!(C11.north)$) -| (C31.north);
\draw [shorten >=0.25cm] (H.south) |- ($(H.south)!0.5!(C11.north)$) -| (C41.north);
\draw (H.south) |- ($(H.south)!0.5!(C11.north)$) -|  ($(C02.west)+(-0.25, 0)$) -| (C02.west);
\draw (C11.south west) |- (C12.west);
\draw (C11.south west) |- (C13.west);
\draw (C11.south west) |- (C14.west);
\draw (C11.south west) |- (C15.west);
```

```
\draw (C11.south west) |- (C16.west);
\draw (C21.south west) |- (C22.west);
\draw (C21.south west) |- (C23.west);
\draw (C21.south west) |- (C24.west);
\draw (C21.south west) |- (C25.west);
\draw (C21.south west) |- (C26.west);
\draw (C31.south west) |- (C32.west);
\draw (C31.south west) |- (C33.west);
\draw (C31.south west) |- (C34.west);
\draw (C31.south west) |- (C35.west);
\draw (C31.south west) |- (C36.west);
\draw (C41.south west) |- (C42.west);
\draw (C41.south west) |- (C43.west);
\draw (C41.south west) |- (C44.west);
\draw (C41.south west) |- (C45.west);
\draw (C41.south west) |- (C46.west);
\draw (C02.west) -| ($(C02.west)+(-0.25, 0)$) |- (C03.west);
\draw (C03.west) -| ($(C02.west)+(-0.25, 0)$) |- (C04.west);
\draw (C04.west) -| ($(C02.west)+(-0.25, 0)$) |- (C05.west);
\draw (C05.west) -| ($(C02.west)+(-0.25, 0)$) |- (C06.west);
\draw (C06.west) -| ($(C02.west)+(-0.25, 0)$) |- (C07.west);
\draw (C07.west) -| ($(C02.west)+(-0.25, 0)$) |- (C08.west);
\draw (C08.west) -| ($(C02.west)+(-0.25, 0)$) |- (C09.west);
\end{tikzpicture}
```

5 Control Measures

Control Measures are planned to be included in the next major version of **MilSymb**. Please see the GitHub repository for further information.