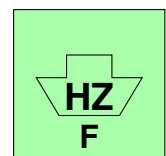
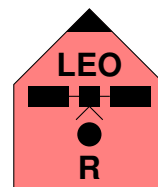
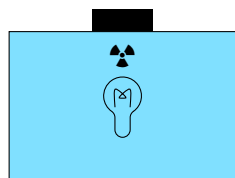
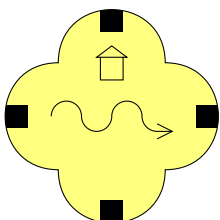
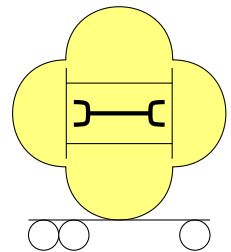
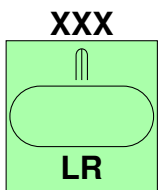
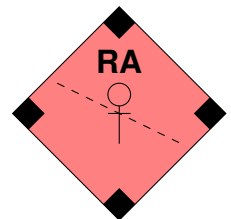
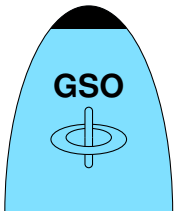
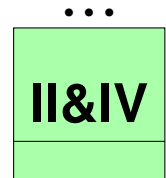


# MilSymb

Damian Crosby

April 29, 2018



## Revision History

<b>Revision</b>	<b>Date</b>	<b>Author(s)</b>	<b>Description</b>
1.0	29/04/2018	Damian Crosby	Creation

## Acknowledgments

The author would particularly like to thank the following members of the T<sub>E</sub>X 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 adapted from a [work](#) on Wikimedia Commons by [Kathovo](#) under the [CC BY-SA 3.0](#) licence.
- The Structure of 1<sup>st</sup> Marine Division (Figure [28](#)) recreation is based on an [image](#) created by [Noclador](#) under the [CC BY-SA 3.0](#) licence.

## Licence

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# 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 environment.

### 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.

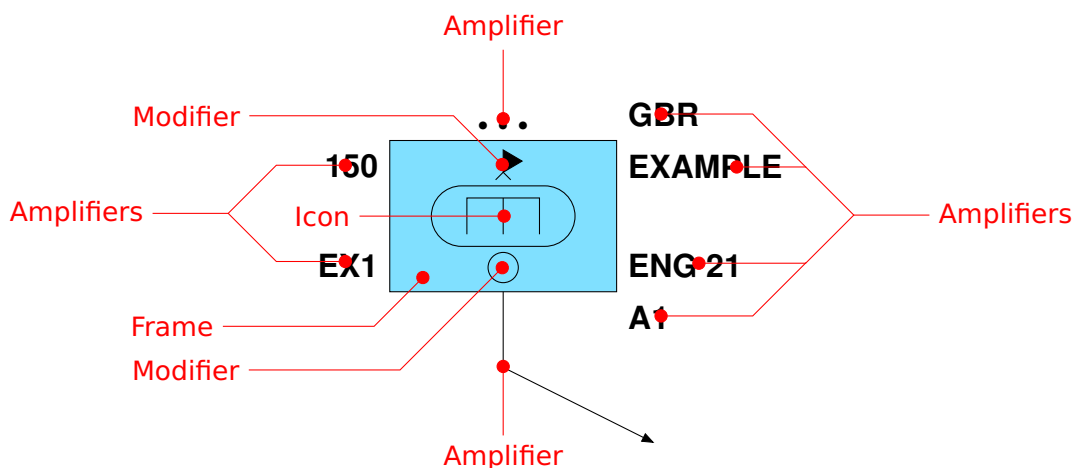


Figure 1: Annotation of symbol components.

- 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	■											

<sup>1</sup>Not functional when the no frame option is used.

<sup>2</sup>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.

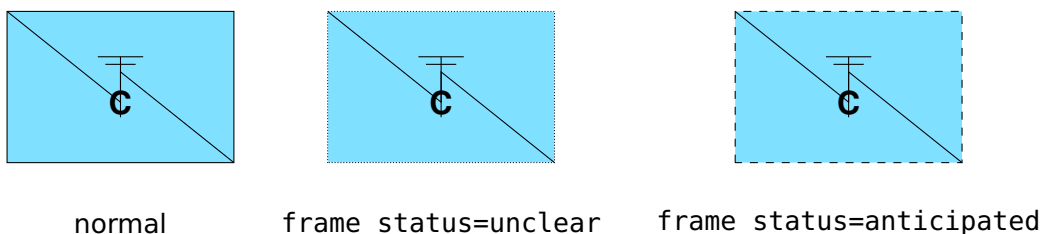
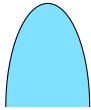




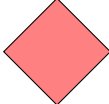



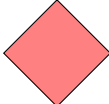

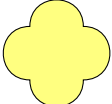
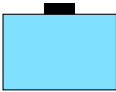
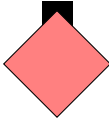


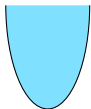


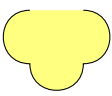
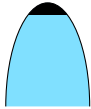



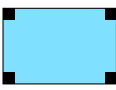
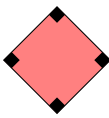

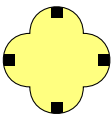


Figure 2: Example of the frame status key in use.

**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-\(C\)](#).

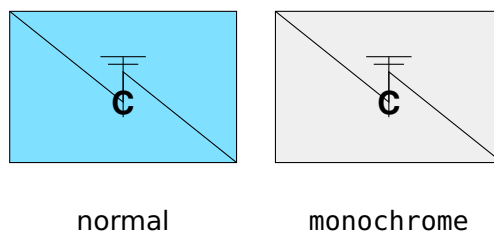


Figure 3: Example of the monochrome key in use.

**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.

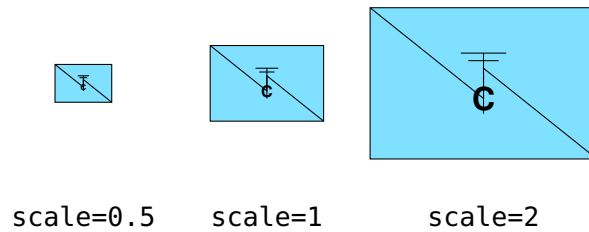


Figure 4: Example of the scale key in use.

**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-\(C\)](#).

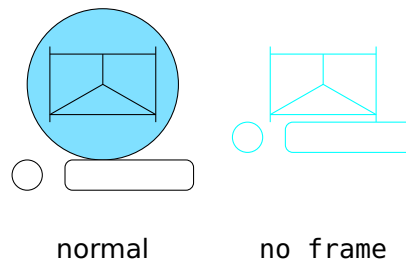


Figure 5: Example of the no frame key in use.

**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}`

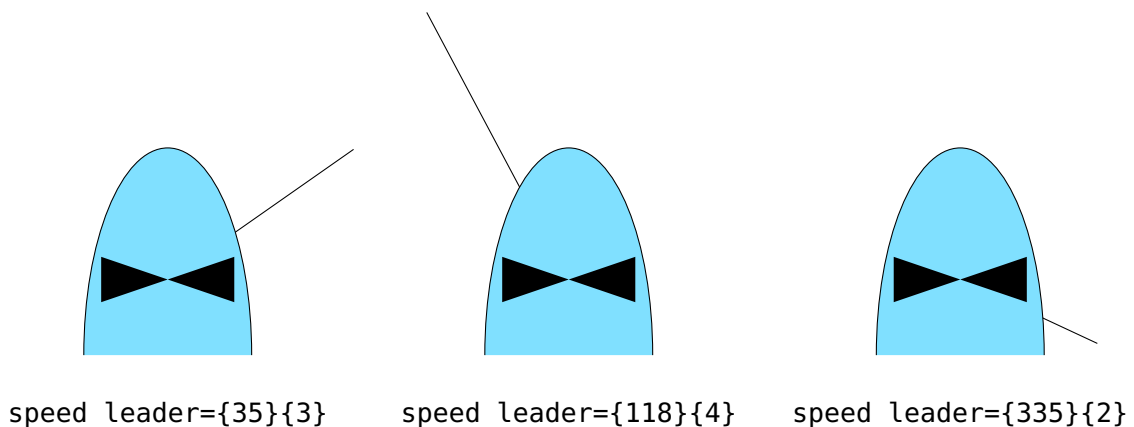


Figure 6: Example of the speed leader key in use.

**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}`

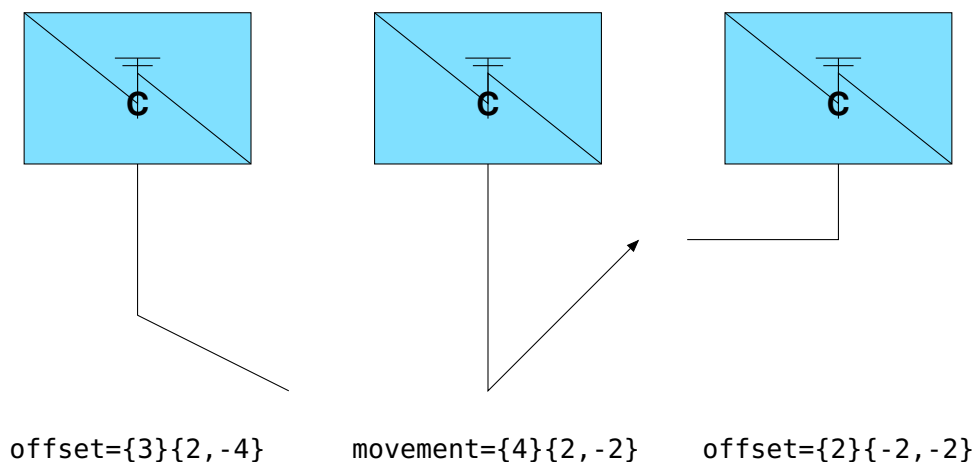


Figure 7: Example of the offset and movement key in use.

**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.

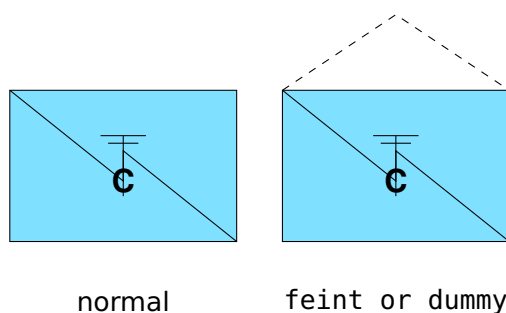


Figure 8: Example of the feint or dummy key in use.

**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 headquarters amplifier, 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, by 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}
```

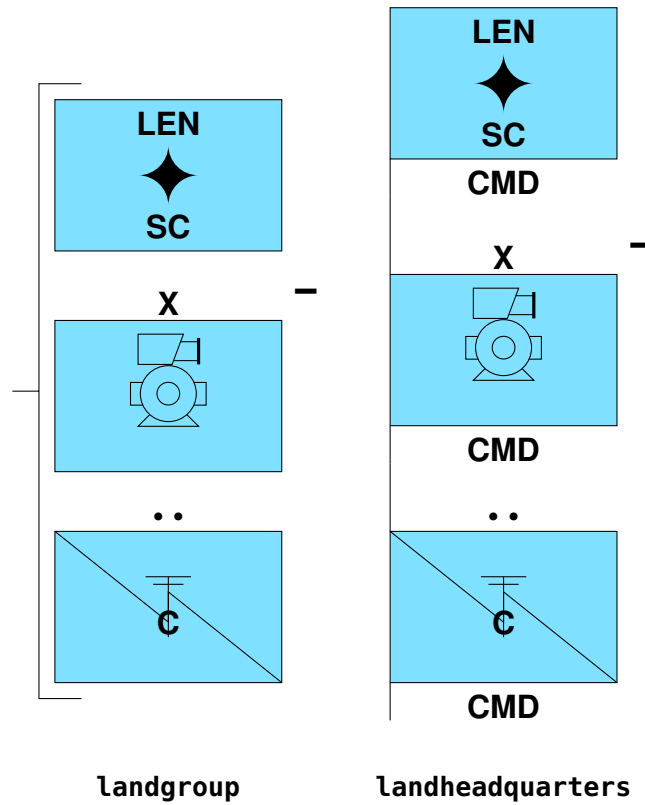


Figure 10: Example of **landgroup** and **landheadquarters** grouping.


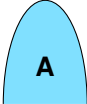




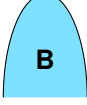




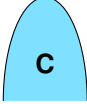




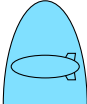




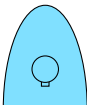




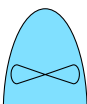




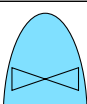



















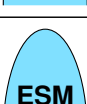




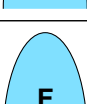




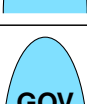




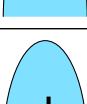




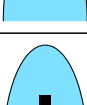



## 2.2 Air Command (MilAir)

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

Value	Glyph	Examples			
air decoy					
airborne command post					
airborne early warning					
anti submarine warfare					
anti surface warfare					

attack					
bomber					
cargo					
civilian airship					
civilian balloon					
civilian fixed wing					
civilian rotary wing					
civilian					
combat search and rescue					
communications					
electronic support measures					
fighter					
government					
jammer					
medic					

military airship					
military balloon					
military fixed wing					
military rotary wing					
military					
mine countermeasures					
passenger					
patrol					
personnel recovery					
reconnaissance					
search and rescue					
special operations forces					
suppression of enemy air defence					
tanker					
trainer					


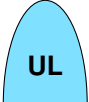




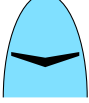




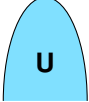




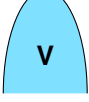














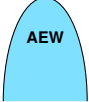




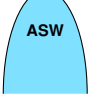









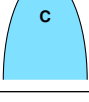







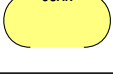

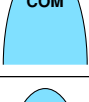








ultra light					
unmanned aerial vehicle					
utility					
vertical short takeoff and landing					
very important person					

Table 5: Table for main values in the **MilAir** command.

### 2.2.1.2 upper

Value	Glyph	Examples			
airborne command post					
airborne early warning					
anti submarine warfare					
anti surface warfare					
cargo					
combat search and rescue					
communications					
electronic support measures					



escort					
government flight					
intensive care					
jammer					
jammer					
medical evacuation					
mine countermeasures					
passenger plane					
patrol					
personnel recovery					
photographic					
reconnaissance					
search and rescue					
special operations forces					
suppression of enemy air defenses					


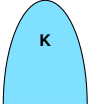




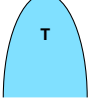




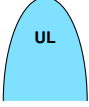




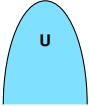









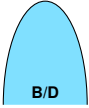



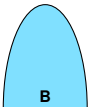




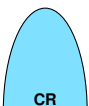




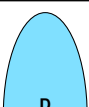













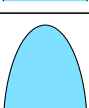



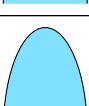


tanker					
trainer					
ultra light					
utility					
very important person					

Table 6: Table for upper values in the **MilAir** command.

### 2.2.1.3 lower

Value	Glyph	Examples			
boom and drogue					
boom only					
close range					
drogue only					
heavy					
light					
long range					
medium range					











medium					
short range					

Table 7: Table for lower values in the **MilAir** command.

## 2.2.2 Amplifiers

**2.2.2.1 Text Fields** **MilAir** has 5 text field amplifiers, as shown in Figure 11. Table 9 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-\(C\)](#).

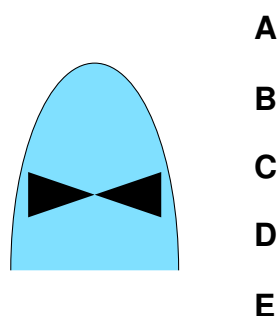


Figure 11: Location of **MilAir** text field amplifiers.

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

\*when applicable.

Table 9: 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

Value	Glyph	Examples			
air					
anti ballistic					
ballistic					
cruise					
space					
sub surface					
surface					

Table 10: Table for left values in the **MilMissile** command.

### 2.3.1.2 right

Value	Glyph	Examples			
air					
launched					
missile					
space					
sub surface					
surface					

Table 11: Table for right values in the **MilMissile** command.

## 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


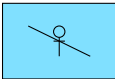
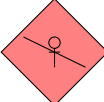



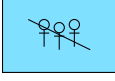
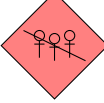

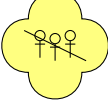

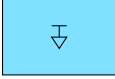
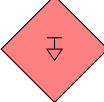

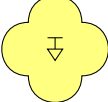


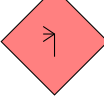









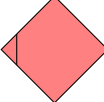



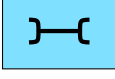
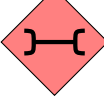

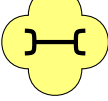







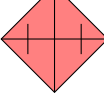

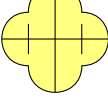


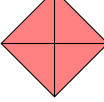

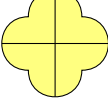







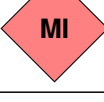




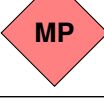




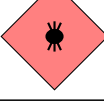

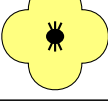

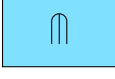
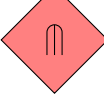


Value	Glyph	Examples			
above corps support					
administrative					
air and naval gunfire liaison company					
air assault with organic lift					
air defence					
air traffic services					
ammunition					
amphibious					
analysis electronic warfare					
analysis					
anti tank anti armour					
armoured engineer					

armoured					
aviation composite fixed wing and rotary wing					
aviation fixed wing					
aviation rotary wing					
band					
broadcast transmitter antenna					
chemical biological radiological nuclear defence					
civil affairs					
civilian military cooperation					
civilian police					
combat service support					
combat support					
combat					
combined arms					
corps support					

counter intelligence					
criminal investigation division					
direction finding electronic warfare					
direction finding					
diving					
dog					
drilling					
electronic ordnance disposal					
electronic ranging					
electronic warfare					
engineer					
environmental protection					
field artillery observer					
field artillery					
finance					

fire protection					
geospatial support					
government organization					
headquarters					
individual					
infantry					
information operations					
intercept electronic warfare					
intercept					
internal security force					
interrogation					
jamming electronic warfare					
jamming					
joint fire support					
judge advocate general					



killing victim					
killing victims					
labour					
laundry					
liaison					
main gun system					
maintenance					
material					
medical treatment facility					
medical					
meteorological					
military intelligence					
military police					
mine					
missile					

morale welfare and recreation					
mortar					
mortuary affairs					
motorized					
naval					
observer					
ordnance					
organisation or group					
personnel services					
petroleum oil and lubricants					
pipeline					
postal					
psychological operations broadcast					
psychological operations					
public affairs					

quartermaster					
radar					
radio relay					
radio teletype centre					
radio					
reconnaissance					
religious support					
replacement holding unit					
sea air land					
search electronic warfare					
search					
security					
self propelled field artillery					
sensor					
shore patrol security police					


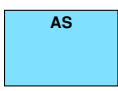
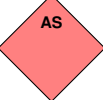



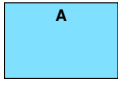
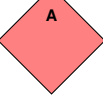




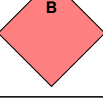

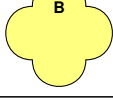

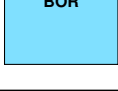
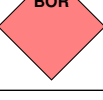




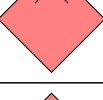

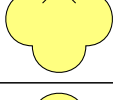


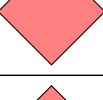

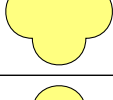


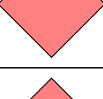

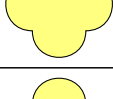


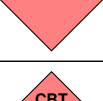

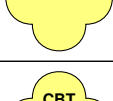


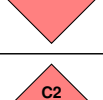

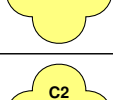


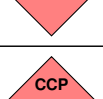

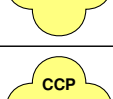


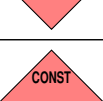

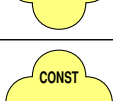

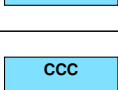
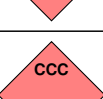

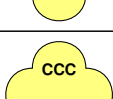

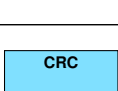
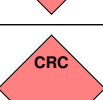

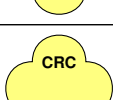

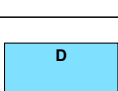
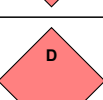

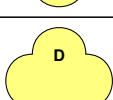





signal radio relay					
signal radio teletype centre					
signal radio					
signal tactical satellite					
signal					
sniper					
special forces					
special operations forces					
spy					
supply					
surveillance					
survey					
sustainment					
tactical mortar					
tactical satellite					

topographic					
transportation					
unmanned systems					
victim of an attempted crime					
video imagery					
water purification					
water					

Table 12: Table for main values in the **MilLand** command.

#### 2.4.1.2 upper



Value	Glyph	Examples			
Mil medical role 1					
Mil medical role 2					
Mil medical role 3					
Mil medical role 4					
air assault					
area					

assassination					
attack					
biological					
border					
bridging					
chemical					
close protection					
coerced or impressed recruit					
combat					
command and control					
communications contingency package					
construction					
cross cultural communication					
crowd and riot control					
decontamination					

detention					
direct communications					
displaced persons refugees and evacuees					
diving					
division					
dog					
drilling					
electro optical					
enhanced					
execution					
explosive ordnance disposal					
fire direction centre					
force					
foreign fighters					
forward					

gang member or gang					
government organisation					
ground station module					
hijacking					
kidnapping					
landing support					
large extension node					
leader or leadership					
maintenance					
meteorological					
mine countermeasure					
missile					
mobile advisor and support					
mobile subscriber equipment					
mobility support					



movement control centre					
multinational specialized unit					
multinational					
multiple rocket launcher					
murder victims					
naval					
node centre					
non-governmental organization member or non-governmental organization					
nuclear					
operations					
piracy					
radar					
radiological					
rape					
religious or religious organisation					



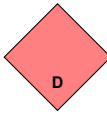

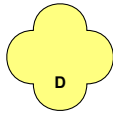

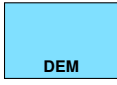
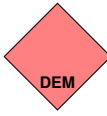

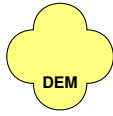


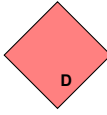

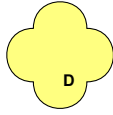


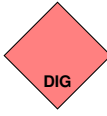




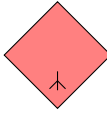




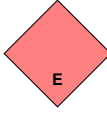

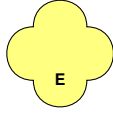


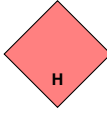

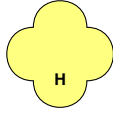


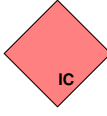

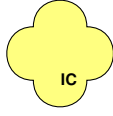


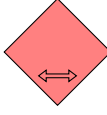

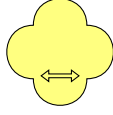


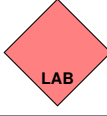

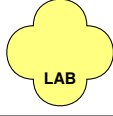


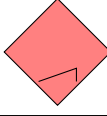




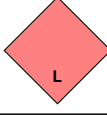




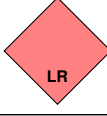

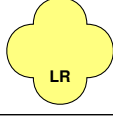


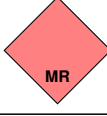




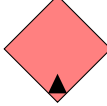


runway					
search and rescue					
security					
sensor control module					
sensor					
signals intelligence					
single rocket launcher					
single shelter switch					
smoke					
sniper					
sound ranging					
special weapons and tactics					
survey					
tactical exploitation					
target acquisition					



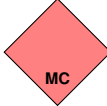



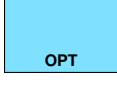
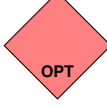




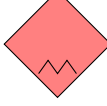



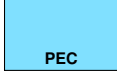





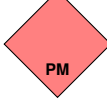



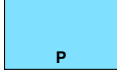
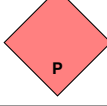




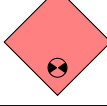



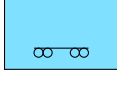
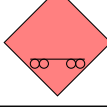

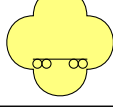


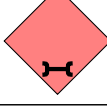

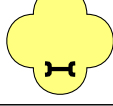


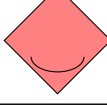

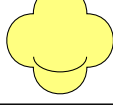


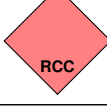

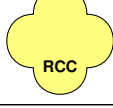


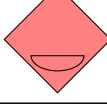

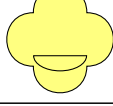


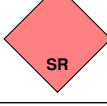



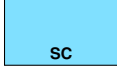
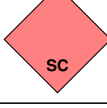

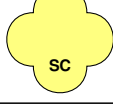


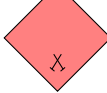


targeted individual or organisation					
terrorist or terrorist organisation					
topographic					
utility					
video imagery					
willing recruit					

Table 13: Table for upper values in the **Milland** command.

#### 2.4.1.3 lower

Value	Glyph	Examples			
airborne					
arctic					
battle damage repair					
bicycle equipped					
clearing					
close range					
control					

decontamination					
demolition					
dental					
digital					
enhanced location reporting system					
equipment					
heavy					
intensive care					
intermodal					
laboratory					
launcher					
light					
long range					
medium range					
mountain					

multi channel					
optical					
pack animal					
patient evacuation coordination					
preventative maintenance					
psychological					
radio relay line of sight					
railroad					
recovery maintenance					
recovery unmanned systems					
rescue coordination centre					
riverine					
short range					
single channel					
ski					

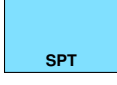
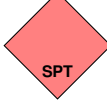



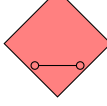



strategic					
support					
tactical					
towed					
troop					
vertical of short takeoff and landing					
veterinary					
wheeled					

Table 14: Table for lower values in the **MilLand** command.

## 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 15 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 15: Echelon levels and corresponding symbols.

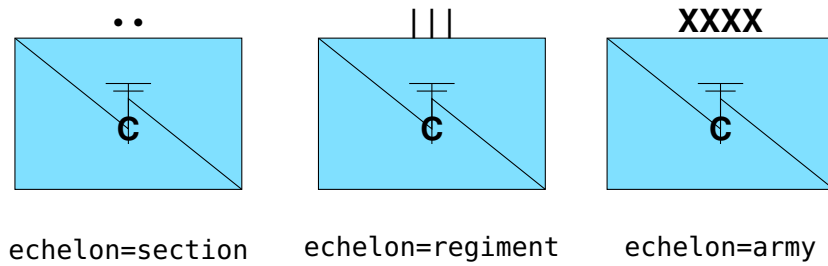


Figure 12: Example of the echelon key in use.

**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.

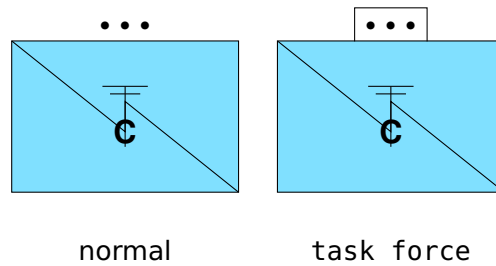


Figure 13: Example of the task force key in use.

**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.

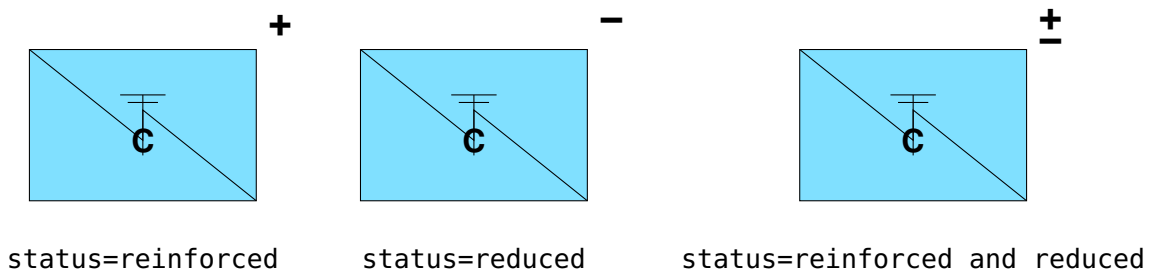


Figure 14: Example of the status key in use.

**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 16 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).

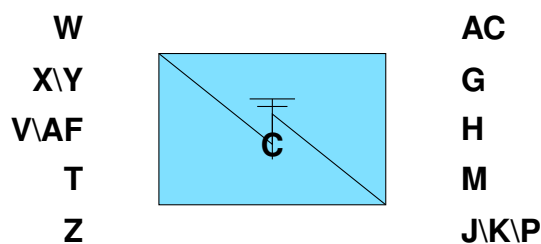


Figure 15: Location of MilLand text field amplifiers.

<b>Location</b>	<b>Key</b>	<b>Description</b>
<b>AC</b>	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.
<b>G</b>	staff comments	Free text. Can be used by staff for information required by commander.
<b>H</b>	additional information	Free Text.
<b>M</b>	higher formation	Number or title of higher echelon command of unit being displayed.
<b>J</b>	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: <ul style="list-style-type: none"> <li>A. Completely reliable.</li> <li>B. Usually reliable.</li> <li>C. Fairly reliable.</li> <li>D. Not usually reliable.</li> <li>E. Unreliable.</li> <li>F. Reliability cannot be judged.</li> </ul> Credibility of Information: <ul style="list-style-type: none"> <li>1. Confirmed by other sources.</li> <li>2. Probably true.</li> <li>3. Possibly true.</li> <li>4. Doubtful.</li> <li>5. Improbable.</li> <li>6. Truth cannot be judged.</li> </ul>
<b>K</b>	combat effectiveness	Effectiveness of unit or equipment displayed. <ul style="list-style-type: none"> <li>1. Fully operational.</li> <li>2. Substantially operational.</li> <li>3. Marginally operational.</li> <li>4. Not operational.</li> </ul>
<b>P</b>	identification	Identification modes and codes.
<b>W</b>	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.
<b>X</b>	altitude value	Altitude as displayed on the global positioning system (GPS).
<b>Y</b>	location	Latitude and longitude; grid coordinates.








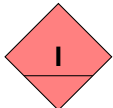









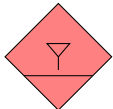




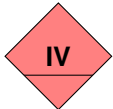

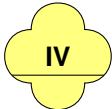


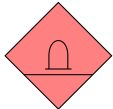




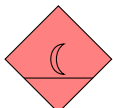




<b>AF</b>	common identifier	Example: Paladin for the M109A6 howitzer or Leopard for the KPz-70 tank. (Use NATO code name for hostile common identifiers.)
<b>Z</b>	speed	Displays speed in nautical miles per hour or kilometres per hour.

Table 16: 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 17. 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					
<b>NATO Supply Classes</b>						
1	I					
2	II					
3	III					
4	IV					
5	V					
<b>US Supply Classes</b>						
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 17: Table of Supply Icons.

\*can only be used as a single value.

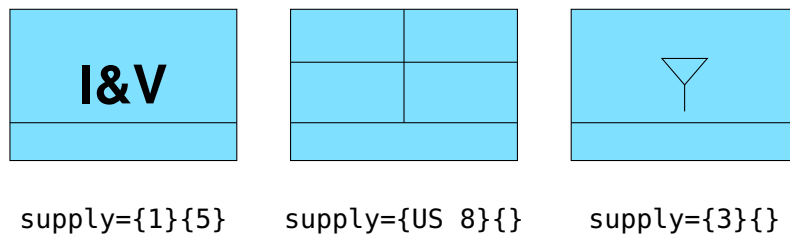


Figure 16: Example of Supply symbols.

#### 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.*

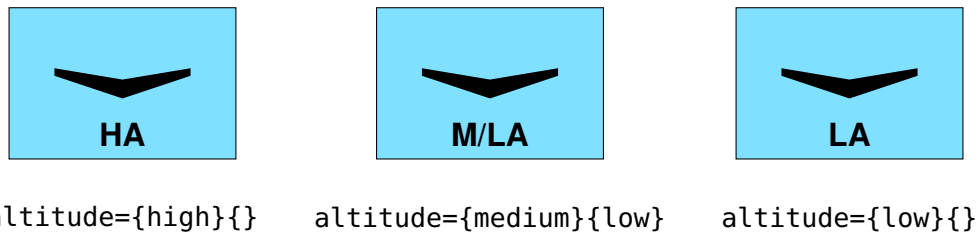


Figure 17: Example of the altitude key in use.

## 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

Value	Glyph	Examples			
air defence gun					
air defence missile launcher					
antennae					
anti tank gun					
anti tank missile launcher					
anti tank rocket launcher					
antipersonnel land mine					
antitank land mine					
armoured fighting vehicle command and control					

armoured fighting vehicle					
armoured medical personnel carrier					
armoured personnel carrier					
armoured protected recovery vehicle					
armoured protected vehicle					
automatic rifle					
bomb					
booby trap					
bridge mounted on utility vehicle					
bridge					
bus					
chemical biological radiological nuclear equipment					
computer system					
direct fire gun					
drill mounted on vehicle					

drill					
earthmover					
fixed bridge					
flame thrower					
folding girder bridge					
generator set					
grenade launcher					
heavy grenade launcher					
heavy machine gun					
heavy tank					
hollow deck bridge					
howitzer					
improvised explosive device					
land mine					
laser					

light grenade launcher					
light machine gun					
light tank					
machine gun					
medical evacuation armoured protected vehicle					
medical evacuation					
medical vehicle					
medium grenade launcher					
medium machine gun					
medium tank					
mine clearing equipment					
mine clearing vehicle					
mine laying equipment					
mine laying vehicle					
missile launcher					

mobile emergency physician					
mortar					
multifunctional earthmover					
multiple rocket launcher					
non lethal grenade launcher					
non lethal weapon					
petroleum oil and lubricants vehicle					
psychological operations equipment					
radar					
recoilless gun					
rifle					
semi automatic rifle					
semi trailer truck					
sensor emplaced					
sensor					

single rocket launcher					
single shot rifle					
surface to surface missile launcher					
tank recovery vehicle					
tank					
taser					
train locomotive					
utility vehicle					
water cannon					
water vehicle					

Table 18: Table for main values in the **MilEquipment** command.

### 2.5.1.2 Mobility

Value	Glyph	Examples			
amphibious					
barge					
over snow					



pack animal					
railroad					
sled					
towed					
tracked					
wheeled and tracked					
wheeled cross country					
wheeled limited mobility					
wheeled semi trailer					

Table 19: Table for mobility values in the **MilEquipment** command.

## 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 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-\(C\)](#).

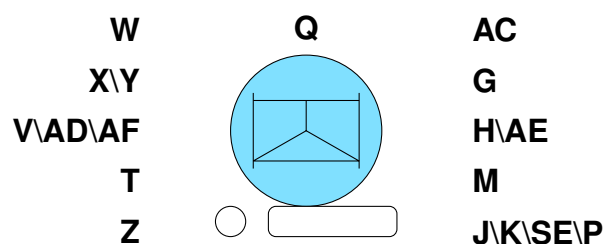


Figure 18: Location of **MilEquipment** text field amplifiers.

<b>Location</b>	<b>Key</b>	<b>Description</b>
<b>Q</b>	quantity	Identifies the number of items present.
<b>AC</b>	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.
<b>G</b>	staff comments	Free text. Can be used by staff for information required by commander.
<b>H</b>	additional information	Free Text.
<b>M</b>	higher formation	Number or title of higher echelon command of unit being displayed.
<b>J</b>	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:  <ul style="list-style-type: none"> <li>A. Completely reliable.</li> <li>B. Usually reliable.</li> <li>C. Fairly reliable.</li> <li>D. Not usually reliable.</li> <li>E. Unreliable.</li> <li>F. Reliability cannot be judged.</li> </ul> Credibility of Information:  <ul style="list-style-type: none"> <li>1. Confirmed by other sources.</li> <li>2. Probably true.</li> <li>3. Possibly true.</li> <li>4. Doubtful.</li> <li>5. Improbable.</li> <li>6. Truth cannot be judged.</li> </ul>
<b>K</b>	combat effectiveness	Effectiveness of unit or equipment displayed.  <ul style="list-style-type: none"> <li>1. Fully operational.</li> <li>2. Substantially operational.</li> <li>3. Marginally operational.</li> <li>4. Not operational.</li> </ul>
<b>SE</b>	signature equipment	Identifies a detectable electronic signature “!” for hostile equipment.
<b>P</b>	identification	Identification modes and codes.
<b>T</b>	unique designation	An alphanumeric designator that uniquely identifies a particular model of equipment (number).
<b>V</b>	type of equipment	Identifies unique designation (such as AH-64 for attack helicopter).

<b>W</b>	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.
<b>X</b>	altitude value	Altitude as displayed on the global positioning system (GPS).
<b>Y</b>	location	Latitude and longitude; grid coordinates.
<b>AF</b>	common identifier	Example: Paladin for the M109A6 howitzer or Leopard for the KPz-70 tank. (Use NATO code name for hostile common identifiers.)
<b>Z</b>	speed	Displays speed in nautical miles per hour or kilometres per hour.
<b>AD</b>	platform type	Electronic intelligence notation (ELNOT) or communications intelligence notation (CENOT).
<b>AE</b>	equipment teardown time	Equipment teardown time in minutes.

Table 20: 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

Value	Glyph	Examples			
ammunition cache					
black list location					
broadcast transmitter antenna					
chemical biological radiological nuclear					
civilian telecommunications					
electric power					

food distribution					
grey list location					
mass grave site					
medical treatment facility					
medical					
mine					
naval					
nuclear					
printed media					
safe house					
transportation					
transportation					
water treatment					
water					
white list location					

Table 21: Table for main values in the **MilInstallation** command.

2.6.1.2 Upper

Value	Glyph	Examples			
biological					
chemical					
coal					
geothermal					
hydroelectric					
natural gas					
nuclear energy					
nuclear					
petroleum					
radio					
railroad					
telephone					
television					



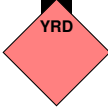


yard					
------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

Table 22: Table for upper values in the **MilInstallation** command.

## 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 23 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).

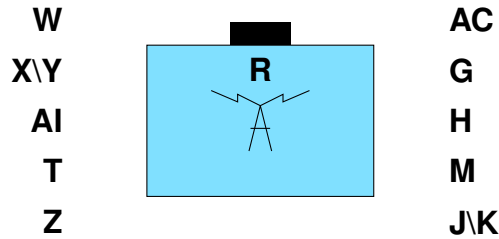


Figure 19: Location of **MilInstallation** text field amplifiers.

Location	Key	Description
<b>AC</b>	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.
<b>G</b>	staff comments	Free text. Can be used by staff for information required by commander.
<b>H</b>	additional information	Free Text.
<b>M</b>	higher formation	Number or title of higher echelon command of unit being displayed.

<b>J</b>	evaluation rating	<p>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).</p> <p>Reliability of Source:</p> <ul style="list-style-type: none"> <li>A. Completely reliable.</li> <li>B. Usually reliable.</li> <li>C. Fairly reliable.</li> <li>D. Not usually reliable.</li> <li>E. Unreliable.</li> <li>F. Reliability cannot be judged.</li> </ul> <p>Credibility of Information:</p> <ul style="list-style-type: none"> <li>1. Confirmed by other sources.</li> <li>2. Probably true.</li> <li>3. Possibly true.</li> <li>4. Doubtful.</li> <li>5. Improbable.</li> <li>6. Truth cannot be judged.</li> </ul>
<b>K</b>	capacity of installation	Capacity of installation displayed.
<b>T</b>	unique designation	An alphanumeric designator that uniquely identifies a particular installation (name).
<b>W</b>	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.
<b>X</b>	altitude value	Height in feet of equipment or structure on the ground.
<b>Y</b>	location	Latitude and longitude; grid coordinates.
<b>Z</b>	speed	Displays speed in nautical miles per hour or kilometres per hour.
<b>AI</b>	installation composition	<p>Indicates the component type of the installation:</p> <ul style="list-style-type: none"> <li>• Development.</li> <li>• Research.</li> <li>• Production.</li> <li>• Service.</li> <li>• Storage.</li> <li>• Utility.</li> </ul>











































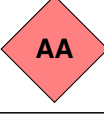




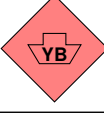




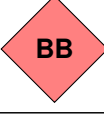







Table 23: Description of **MilInstallation** text field amplifiers.

## 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

Value	Glyph	Examples			
ammunition ship					
amphibious assault ship					
amphibious assault					
amphibious assault ship helicopter					
amphibious command ship					
amphibious transport					
amphibious warfare ship					
auxiliary flag ship					
auxiliary ship					
barge					
battleship					
cargo					



carrier					
civilian boat					
civilian jetski					
civilian rigid hull inflatable boat					
civilian speedboat					
civilian unmanned surface water vehicle					
civilian					
combat support ship					
combatant					
container ship					
convoy					
corvette					
cruiser guided missile					
destroyer					
dredge					

drifter					
ferry					
fishing vessel					
frigate					
harbour tug					
hazardous material transport ship					
heavy lift					
hospital ship					
hovercraft					
intelligence collector					
junk					
landing craft					
landing ship					
lash carrier					
launch					

law enforcement vessel					
littoral combatant ship					
military jetski					
military rigid hull inflatable boat					
military speedboat					
military unmanned surface water vehicle					
military					
mine countermeasure support ship					
mine countermeasures					
mine warfare vessel					
minehunter					
minelayer					
minesweeper drone					
minesweeper					
multi purpose amphibious assault ship					

naval cargo ship					
navy task element					
navy task force					
navy task group					
navy task organisation unit					
navy task unit					
non combatant					
non self propelled barge					
ocean going tug					
ocean research ship					
oiler					
passenger ship					
patrol craft					
patrol ship					
patrol					

repair ship					
roll on roll off					
sailing boat					
sea surface decoy					
self propelled barge					
service craft					
ship					
stores ship					
submarine tender					
surface combatant					
survey ship					
tanker					
tow					
trawler					
tug					

Table 24: Table for main values in the **MilSeaSurface** command.

2.7.1.2 Upper

Value	Glyph	Examples			
anti air warfare					
anti submarine warfare					
ballistic missile					
drone equipped					
electronic warfare					
escort					
guided missile					
helicopter equipped					
intelligence surveillance reconnaissance					
medical					
mine counter measures					
mine warfare					
missile defence					

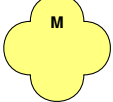




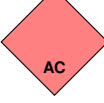




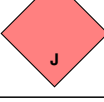

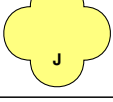


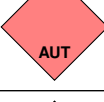




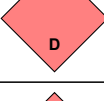

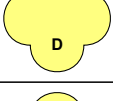


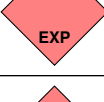




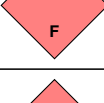

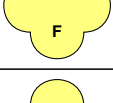


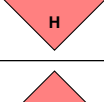

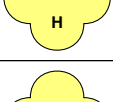


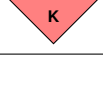

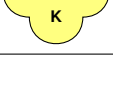
other guided missile					
remote multi mission vehicle					
special operations force					
surface warfare					
torpedo					

Table 25: Table for upper values in the **MilSeaSurface** command.

### 2.7.1.3 Lower

Value	Glyph	Examples			
air cushioned alternate					
air cushioned					
autonomous control					
dock					
expendable					
fast					
heavy					
hydrofoil					



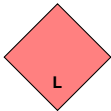

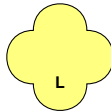


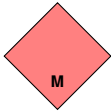



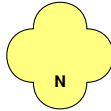

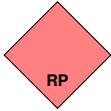

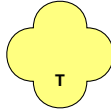
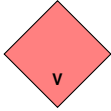
light					
logistics					
medium					
nuclear powered					
remotely piloted					
tank					
vehicle					

Table 26: Table for lower values in the **MilSeaSurface** command.

## 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 28 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-\(C\)](#).

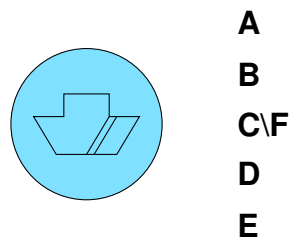


Figure 20: Location of **MilSeaSurface** text field amplifiers.



Location	Key	Description	Prefix*
<b>A</b>	track number	System Track Number.	TN
<b>B</b>	name	Ships Name, Hull Number or Task Organization Designator (military only), Mission / International call sign.	
<b>C</b>	position and movement	Course [degrees]/Speed [knots] or Bearing [degrees]/Distance [nautical miles].	C/S, B/D
<b>D</b>	identification	Country of origin (STANAG 1059 - 3-letter code) or Organization (e.g. UN, NATO, EU), Any other information (e.g. IFF / AIS).	
<b>E</b>	additional information	For friendly units: Sensor or Weapon load, endurance, etc. For other Units: Credibility of Information.	
<b>F</b>	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 28: 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-\(C\)](#).

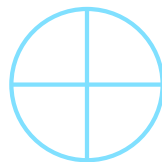


Figure 21: **OwnShip** command symbol.

## 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

Value	Glyph	Examples			
autonomous underwater vehicle					

bottomed sea mine decoy					
bottomed submarine					
civilian autonomous underwatervehicle					
civilian diver					
civilian seabed installation					
civilian submersible					
civilian					
improvised explosive device					
military diver					
military seabed installation					
military					
moored sea mine decoy					
non submarine					
other submersible					
sea mine decoy					

snorkelling submarine					
submarine					
surfaced submarine					
torpedo					
underwater decoy					
underwater weapon					
unexploded ordnance					

Table 29: Table for main values in the **MilSeaSubsurface** command.

### 2.9.1.2 Upper

Value	Glyph	Examples			
anti submarine warfare					
attack					
auxiliary					
ballistic missile					
certain submarine					
command and control					

guided missile					
intelligence surveillance reconnaissance					
mine countermeasures					
mine warfare					
other guided missile					
possible submarine high 3					
possible submarine high 4					
possible submarine low 1					
possible submarine low 2					
probable submarine					
special operations force					
surface warfare					

Table 30: Table for upper values in the **MilSeaSubsurface** command.

### 2.9.1.3 Lower

Value	Glyph	Examples			
air independent propulsion					

autonomous control					
diesel propulsion					
diesel type 1					
diesel type 2					
diesel type 3					
expendable					
nuclear propulsion					
nuclear type 1					
nuclear type 2					
nuclear type 3					
nuclear type 4					
nuclear type 5					
nuclear type 6					
nuclear type 7					
remotely piloted					

---

Table 31: Table for lower values in the **MilSeaSubsurface** command.

## 2.9.2 Amplifiers

**2.9.2.1 Text Fields** **MilSeaSubsurface** 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 33 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-\(C\)](#).

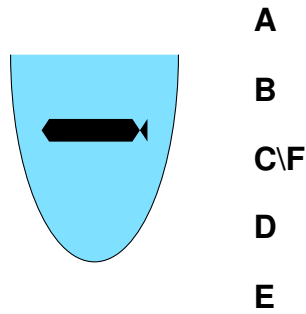


Figure 22: Location of **MilSeaSubsurface** text field amplifiers.

Location	Key	Description	Prefix*
<b>A</b>	track number	System Track Number.	TN
<b>B</b>	name	Ships Name, Hull Number or Task Organization Designator (military only), Mission / International call sign.	
<b>C</b>	position and movement	Course [degrees]/Speed [knots] or Bearing [degrees]/Distance [nautical miles] Height [feet/metres].	C/S, B/D
<b>D</b>	identification	Country of origin (STANAG 1059 - 3-letter code) or Organization (e.g. UN, NATO, EU), Any other information (e.g. IFF / AIS).	
<b>E</b>	additional information	For friendly units: Sensor or Weapon load, endurance, etc. For other Units: Credibility of Information. For submarine contacts: Classification: <ul style="list-style-type: none"> <li>• NONSUB</li> <li>• POSSUB LOW 1 or 2</li> <li>• POSSUB HIGH 3 or 4</li> <li>• PROBSUB</li> <li>• CERTSUB</li> </ul>	
<b>F</b>	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 33: 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 34. 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 34: 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

Value	Glyph	Examples			
anti satellite weapon					
civilian astronomical satellite					
civilian bio satellite					
civilian capsule					



civilian communications satellite					
civilian earth observation satellite					
civilian miniaturised satellite					
civilian navigational satellite					
civilian orbiter shuttle					
civilian satellite					
civilian space station					
civilian tether satellite					
civilian weather satellite					
military astronomical satellite					
military bio satellite					
military capsule					
military communications satellite					
military earth observation satellite					
military miniaturised satellite					

military navigational satellite					
military orbiter shuttle					
military satellite					
military space station					
military tether satellite					
military weather satellite					
planet lander					
reconnaissance satellite					
reentry vehicle					
satellite					
space vehicle					

Table 35: Table for main values in the **MilSpace** command.

### 2.11.1.2 Upper

Value	Glyph	Examples			
geostationary orbit					
geosynchronous orbit					



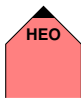



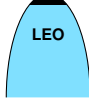
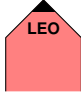




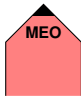




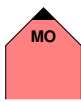


high earth orbit					
low earth orbit					
medium earth orbit					
molinya orbit					

Table 36: Table for upper values in the **MilSpace** command.

### 2.11.1.3 Lower


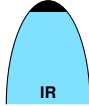
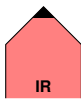



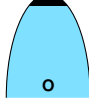
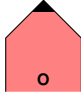



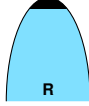
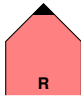




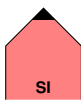


Value	Glyph	Examples			
infra red					
optical					
radar					
signals intelligence					

Table 37: Table for lower values in the **MilSpace** command.

### 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 39 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).

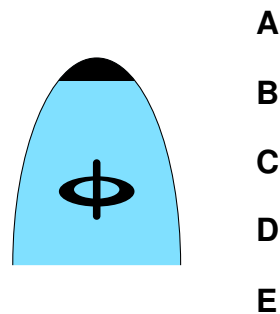


Figure 23: Location of **MilSpace** text field amplifiers.

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

\*when applicable.

Table 39: 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 40. See Chapter 5, Section 3, Table 5-7 in APP6-(C).

Value	Glyph	
	Normal	man made
small		
medium		
large		

Table 40: 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

Value	Glyph	Examples			
arrest					
attempted criminal activity					

automobile					
demonstration					
drive by shooting					
drug related activities					
explosion					
extortion 1					
extortion 2					
extortion 3					
extortion 4					
fire					
graffiti					
improvised explosive device explosion					
individual					
killing					
patrolling					

pleasure craft					
poisoning					
psychological operations					
radio and television psychological operations					
riot					
searching					

Table 41: Table for main values in the **MilActivity** command.

### 2.13.1.2 Upper

Value	Glyph	Examples			
assassination					
execution					
hijack					
house to house					
kidnapping					
murder					
piracy					


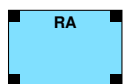
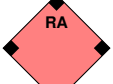

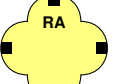


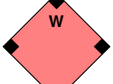


rape					
written					

Table 42: Table for upper values in the **MilActivity** command.

### 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 43 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).

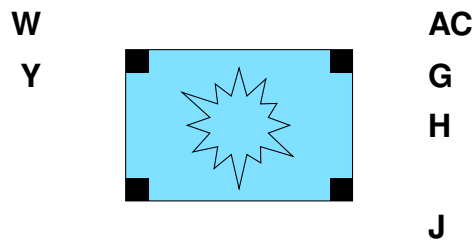


Figure 24: Location of **MilActivity** text field amplifiers.

Location	Key	Description
<b>AC</b>	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.
<b>G</b>	staff comments	Free text. Can be used by staff for information required by commander.
<b>H</b>	additional information	Free Text.

<b>J</b>	evaluation rating	<p>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).</p> <p>Reliability of Source:</p> <ul style="list-style-type: none"> <li>A. Completely reliable.</li> <li>B. Usually reliable.</li> <li>C. Fairly reliable.</li> <li>D. Not usually reliable.</li> <li>E. Unreliable.</li> <li>F. Reliability cannot be judged.</li> </ul> <p>Credibility of Information:</p> <ul style="list-style-type: none"> <li>1. Confirmed by other sources</li> <li>2. Probably true</li> <li>3. Possibly true</li> <li>4. Doubtful</li> <li>5. Improbable</li> <li>6. Truth cannot be judged.</li> </ul>
<b>W</b>	date-time group	<p>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.</p>
<b>Y</b>	location	Latitude and longitude; grid coordinates.

Table 43: Description of **MilActivity** text field amplifiers.



## 3 Custom Icons and Modifiers

### 3.1 MilSymb TikZ Picture Directory Structure

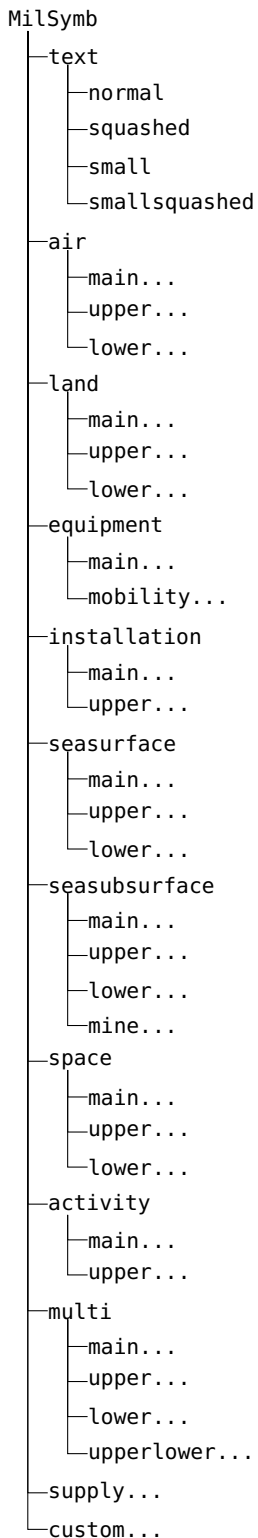


Figure 25: **MilSymb**TikZ Picture Directory Structure.

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.

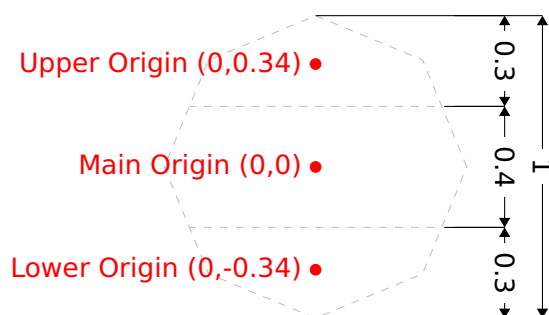


Figure 26: Dimensions of the octagon and origins of the icon and modifiers.

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 modifier 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 17, `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.

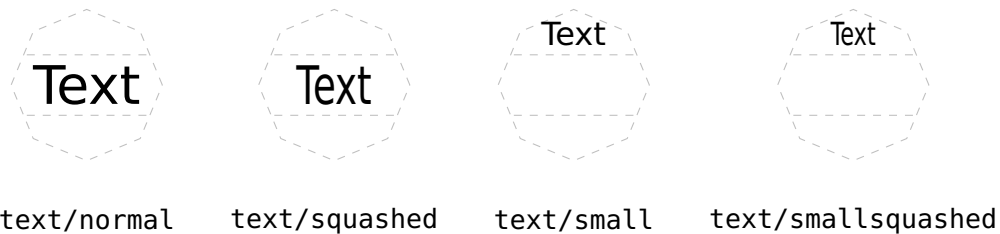





































Figure 27: **MilSymb** text templates.

#### 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.

Name	Glyph	Usage
main/amphibious		Test
main/antenna		Test
main/ammunition		Test
main/armoured		Test
main/aviation fixed wing		Test

main/aviation rotary wing		Test
main/bridge		Test
main/chemical biological radiological nuclear		Test
main/drill		Test
main/decoy		Test
main/diver		Test
main/engineer		Test
main/field artillery		Test
main/individual		Test
main/killing victim		Test
main/maintenance		Test
main/major end		Test
main/medic		Test
main/medical		Test
main/medical treatment facility		Test

main/missile		Test
main/naval		Test
main/person		Test
main/petroleum oil and lubricants		Test
main/psychological operations		Test
main/psychological operations filled		Test
main/radar		Test
main/repair parts		Test
main/sailing boat		Test
main/sensor		Test
main/signal*		Test
main/transportation		Test
main/victim of an attempted crime		Test
main/water		Test
main/water purification		Test

upper/naval	⚓	Test
upper/medic	⚕	Test
upper/runway	✈	Test
lower/pack animal	⋈	Test
upperlower/maintenance	⚙	Test
upperlower/railroad	∞	Test

Table 44: Table of Multiple Class Icons and Modifiers

### 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.

Name	Glyph	Usage
equipment/main/weapon		Test
equipment/main/air defence	⌋	Test
equipment/main/anti tank	⌋	Test
equipment/main/high trajectory indirect fire weapons system	⌋	Test
equipment/main/side bands		Test
equipment/main/single band	—	Test
equipment/main/double band	=	Test
equipment/main/triple band	≡	Test
seasubsurface/main/half sea mine	⚓	Test
seasubsurface/main/sea surface	≈	Test
supply/medicalbar	—	Test

Table 45: Table of Hidden Glyphs

## 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 1<sup>st</sup> Marine Division (USA)

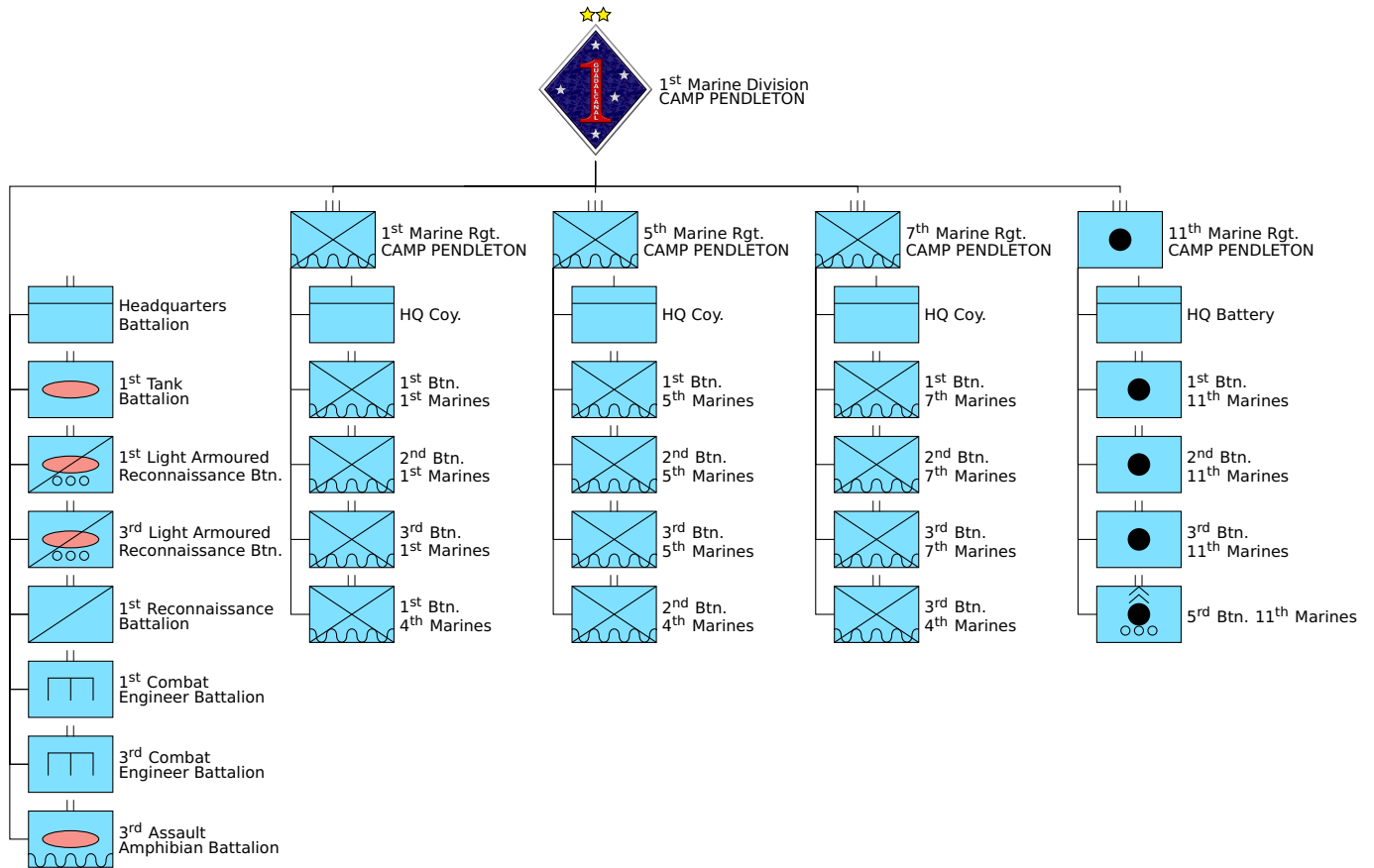


Figure 28: Recreation of Structure of 1<sup>st</sup> US Marine Division. Sourced from [Wikipedia](#)

```

\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){\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){\textsuperscript{st} Marine Rgt. \ \ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=marine](7, -2)(C21){\textsuperscript{th} Marine Rgt. \ \ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=marine](10.5, -2)(C31){\textsuperscript{th} Marine Rgt. \ \ CAMP PENDLETON}
\MilLand[scale=0.75, faction=friendly, echelon=regiment, main=field artillery](14, -2)(C41){\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){\textsuperscript{st} Tank \ \ Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -4)(C13){\textsuperscript{st} Btn. \ \ \textsuperscript{st} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -4)(C23){\textsuperscript{st} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -4)(C33){\textsuperscript{st} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -4)(C43){\textsuperscript{st} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance tank, lower=wheeled](0, -5)(C04){\textsuperscript{st} Light Armoured \ \ Reconnaissance Btn.}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -5)(C14){\textsuperscript{nd} Btn. \ \ \textsuperscript{st} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -5)(C24){\textsuperscript{nd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -5)(C34){\textsuperscript{nd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -5)(C44){\textsuperscript{nd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance tank, lower=wheeled](0, -6)(C05){\textsuperscript{rd} Light Armoured \ \ Reconnaissance Btn.}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -6)(C15){\textsuperscript{rd} Btn. \ \ \textsuperscript{st} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -6)(C25){\textsuperscript{rd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -6)(C35){\textsuperscript{rd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery](14.25, -6)(C45){\textsuperscript{rd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=reconnaissance](0, -7)(C06){\textsuperscript{st} Reconnaissance \ \ Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](3.75, -7)(C16){\textsuperscript{st} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](7.25, -7)(C26){\textsuperscript{nd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=marine](10.75, -7)(C36){\textsuperscript{rd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=field artillery, upper=multiple rocket launcher, lower=wheeled](14.25, -7)(C46){\textsuperscript{rd} Btn. \ \ \textsuperscript{th} Marines}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=engineer](0, -8)(C07){\textsuperscript{st} Combat \ \ Engineer Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=engineer](0, -9)(C08){\textsuperscript{rd} Combat \ \ Engineer Battalion}
\MilLand[scale=0.75, faction=friendly, echelon=battalion, main=amphibious tank](0, -10)(C09){\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.