Canadian Forces School of Military Intelligence



Nato Conventional Military Symbols

Programmed Instruction Package (PIP)

NAME:			
,	 	 	

January 2000

Ref.: PIP Signes conventionnels de l'OTAN produced by 4 Int Coy APP-6A Military Symbols for Land Based Systems

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CAREFULLY READ THIS PAGE

INSTRUCTIONS

This Programmed Instruction Package (PIP) uses the NATO conventional military symbols used in the Canadian Forces. The aim of this package is to teach military personnel how to use these conventional military symbols correctly.

This is not a simply a manual but a learning program. This PIP has been divided into many learning sections. Following each section you will have to apply the knowledge learned by drawing the military symbols or answering questions on the section just covered. Answers are on the page following the questions. Be sure you fully understand each section before proceeding on to the next section. If you have any questions in regards to the content of this PIP, take note and ask the instructor.

It is your responsibility not to cheat by viewing the answers before answering all the questions. You have to understand that this program is designed for self-learning.

To complete this program, you will need blue, red, black, green and yellow markers, plus a military symbol template.

DEFINITION

A military symbol is a graphic sign used, usually on a map, display or diagram, to represent a particular military unit, installation, activity or other item of military interest.

Three basic principles to remember when creating military symbols:

- **1. Accuracy:** The symbol should be easily identifiable as to what it represents, and be precisely located;
- **Speed:** It is of a greater importance to keep your map current than to design overly complex symbols; and
- **Neatness:** A sloppy symbol shows a lack of professionalism and information may be lost if not easily read.

Guidelines

Military Symbols are primarily used for:

- a. All types of battle maps;
- b. Field sketches, traces and overlays, attached to operations and administrative orders or plans;
- c. Aerial photography; and
- d. Organisational charts.

Colours and shapes used

The following Colours and shapes will be use as frames for military symbols:

- a. <u>BLUE</u> symbols are units, installations and activities that represent friendly forces;
- b. <u>RED</u> symbols are units, installations and activities that represent Hostile forces:
- c. <u>YELLOW</u> symbols are units, installations and activities that represent unknown forces. Yellow is also used to represent all type of NBC events including all areas contaminated by chemical, biological or radiation;
- d. <u>GREEN</u> symbols are units, installations and activities that represent neutral forces. Green is also used to represent all type of obstacles; and
- e. **BLACK**: all text around a symbol, its role and mobility indicator.

AFFILIATION	AIR/SPACE	LAND FORCES (Units)	LAND FORCES (Equipment)	SEA SURFACE	SUBSURFACE
UNKNOWN		•	• •		-
FRIENDLY					
NEUTRAL					
HOSTILE		$ \diamondsuit \diamondsuit$		$ \diamondsuit \diamondsuit$	

If a colour is used in a symbol, it shall indicate affiliation. This would apply to a computer generated symbol where additional contrast is required.

NOTICE

If any other colours are used in creating symbols, what they represent <u>must</u> appear in the legend. It's also important to note that <u>colours are used to draw the frame of the symbol only</u>, the icon is drawn in **BLACK**. This will allow you to be able to read the symbols while tactical lights are in use.

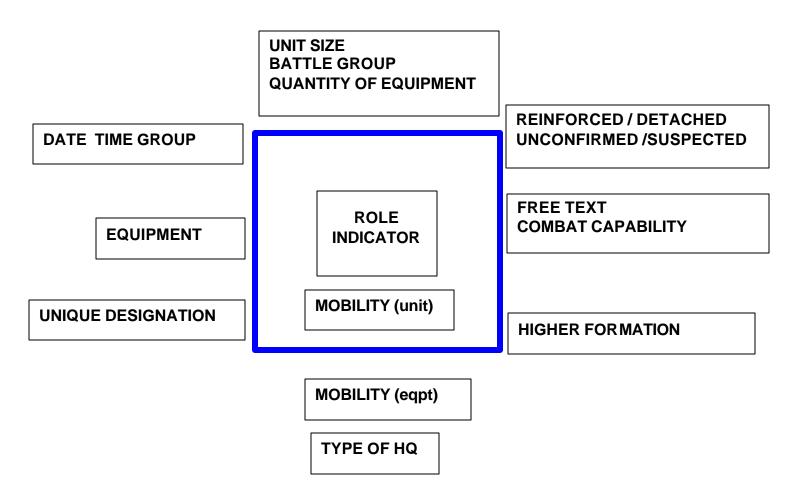
When you use computerised symbols, it is recommended that you use colours in the symbols interior. Therefore translucent colours should be used to prevent hiding information when at all possible.

During this program, use the proper colours to draw the symbols.

SYMBOL FIELDS

Symbol fields are a composition of a mix of numbers, letters and abbreviations grouped around the symbol to provide supplementary information.

The information that surrounds the symbols is as follows.



SIZE INDICATION

Symbols are used to indicate the size of a unit or an installation according to their manpower. The proper symbol is located at the Centre top of the main symbol.

Below are the size indicators for platoon size and below.

- a. \emptyset = Team/Crew
- b. = Squad
- c. = Section
- d. = Platoon (Engineer/Armour/Signals Troop)

Vertical bars are used to indicate the following formations.

- a. = Company (Artillery Battery, Engineer/Armour/Signals Squadron)
- b. | | = Battalion
- c. = Regiment/Group

When an **X** is used to indicate size they indicate the following units.

- a. **X** = Brigade
- b. **XX** = Division
- c. **XXX** = Corps
- d. XXXX = Army
- e. **XXXXX** = Army Group
- f. **XXXXXX** = Region

PROBLEM #1

Identify the size of the following symbols.

a. =_____

b. =____

C. ●●● =____

d. =_____

e. | | =_____

f. | | | =_____

g. **X** =_____

h. **XX** =

i. **XXX** =_____

j. **XXXX** =_____

k. **XXXXX** =_____

l. **XXXXX** =_____

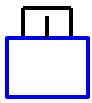
SOLUTION #1

- a. Squad
- b. = Section
- c. = Platoon
- d. = Company
- f. | | | = Regiment/Group
- g. \mathbf{X} = Brigade
- h. **XX** = Division
- i. **XXX** = Corps
- j. XXXX = Army
- k. **XXXX** = Army Group
- I. XXXXX = Region

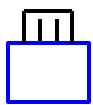
COMBAT ORGANISATION

A box placed around the size indicator specify the use of a task group.

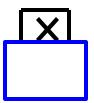
a. The following represent a combat team



b. Battle Group is formed from a battalion

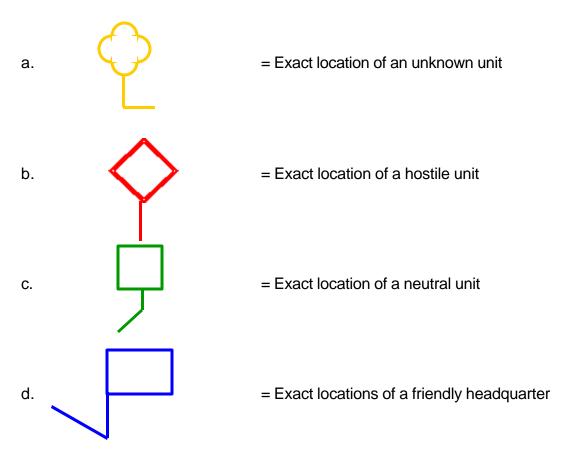


c. A Brigade Group will be represented like this

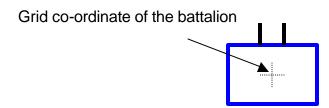


Symbol Location

The exact location of a Headquarters is shown by its mast. The exact locations of other symbols use the centre of the symbol to pinpoint the symbol location. As shown below by a line located at the bottom centre of the symbol. This method is only used when space is limited.



It is important to note, when space permits, the centre of the symbol is used to pinpoint the symbol location.

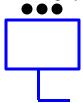


UNCLASSIFIED

PROBLEM #2

Describe the following symbols. $\bullet \bullet \bullet$

a.



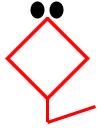
=_____

b.



= _____

C.



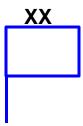
=_____

d.



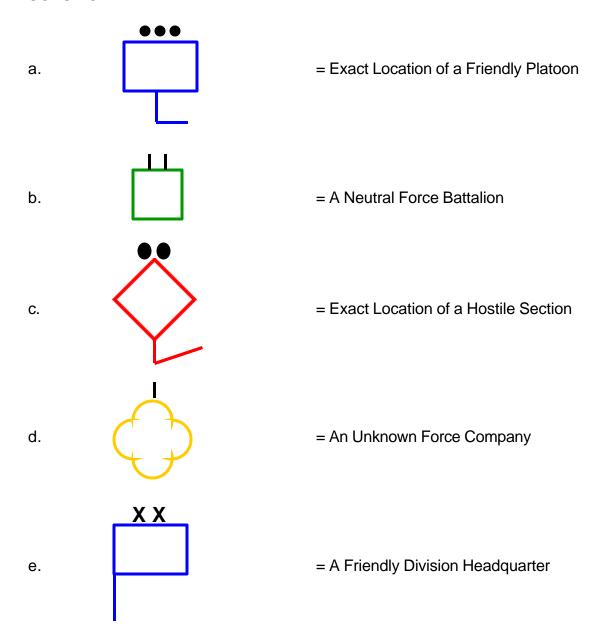
=

e.



=_____

SOLUTION #2



Role Indicator

The following symbols indicate the principal tactical role indicators.

<u>UNIT</u>	SYMBOL	DESCRIPTION
Infantry		Two crossed swords
Armour		Armour track
Reconnaissance		Cavalry belt
Engineer		bridge or E turned for Engineer
Artillery		Gun bullet
Signals	N	Lightning

PROBLEM #3

Describe the following units.

a.



=_____

b.



=_____

c.



=_____

d.



=_____

e.



=____

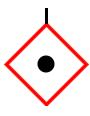
f.



=_____

SOLUTION #3

a.



= A Hostile Artillery Battery

b.



= A Friendly Engineer Troop

c.



= A Neutral Signal Squad

d.



= An Unknown Force Reconnaissance Squad

e.



= A Friendly Tank Battalion

f.

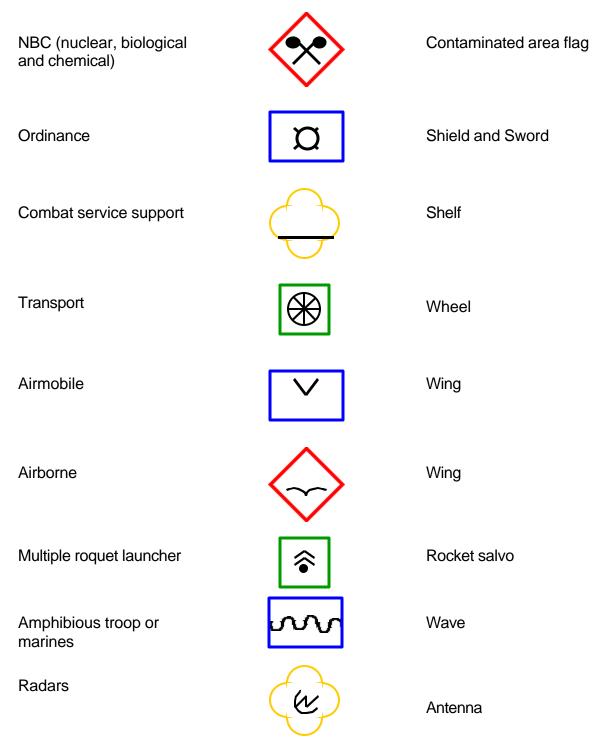


= A Hostile Infantry Regiment

Other symbols used in a specialised role.

<u>UNIT</u>	SYMBOL	DESCRIPTION
Air defence	\Diamond	Umbrella of protection
Mortar		Mortar tube
Antitank		Shaped charge warhead
Bridging		Bridge
Maintenance	◇ →	Wrench
Medical		Red cross
Missiles		Missile frame
Mountain troop		mountain

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PROBLEM #4

Illustrate the proper military symbols
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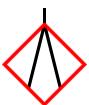
- a. A friendly medical platoon
- b. A hostile antitank company
- c. An unknown force air defence detachment
- d. A neutral airborne division
- e. A hostile surface to surface battery
- f. An unknown force bridging squadron

SOLUTION #4

a. A friendly medical platoon



b. A hostile antitank company



c. An unknown force air defence detachment



d. A neutral force airborne division



e. A hostile surface to surface battery



f. An unknown force bridging squadron



UNCLASSIFIED **Abbreviations rather than an icon represent some speciality symbols.**

Interior Security Forces

d.

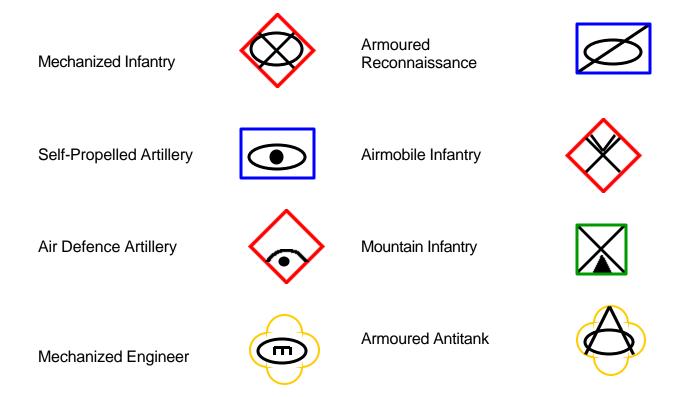
a. Military Police

b. Electronic Warfare

EW

INT

The combination of two icons together can describe more accurately a unit.



SEC

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NBC Reconnaissance



Armoured Multiple Rocket Launcher



Engineer Reconnaissance



Anti-Aircraft Artillery (AAA)



Amphibious Troop Reconnaissance



Naval infantry



Airborne Reconnaissance



Surface to Air Missile (SAM)



PROBLEM #5

Illustrate the following units.

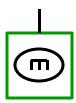
a.	A friendly self-propelled artillery brigade
b.	A neutral mechanized engineer squadron
C.	A hostile NBC reconnaissance section
d.	An unknown mountain infantry battalion headquarters
e.	A friendly naval infantry tank squadron
f.	An unknown antitank missile platoon

SOLUTION #5

a. A friendly self-propelled artillery brigade



b. A neutral mechanised engineer squadron



c. A hostile NBC reconnaissance section



d. An unknown mountain infantry battalion headquarters



e. A friendly naval infantry tank squadron



f. An unknown antitank missile platoon

ADMINISTRATION AND LOGISTIC INSTALLATION

The basic symbol for an administrative and logistical installation is a black box located on the top of the unit symbol.









Adding an icon to identify the role of the installation can modify these basic symbols.

a.



= An ammunition depot

b.



= A water point

C.



= A ration depot

d.



= A POL depot

e.



= A field hospital

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f. =A concentration area of bridging equipment =A combat service support installation g. = A maintenance installation i. = A laundry/bath installation j. = A decontamination area k. = A signal installation

= Military facility or base UNCLASSIFIED

Combinations of icons can also be made to logistic installations.

a. (1)

= An artillery ammunition depot

b.



= A refuelling point for aircraft

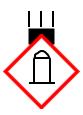
c.



A surface to air missile ammunition point.
 (Don't confuse with a SAM site represented the same way but without the black box.)

The size indicator can also be added to the symbol to know the level of command of this installation.

a.



= Hostile regimental level ammunition depot

b.



= Refuelling point of platoon no.3 of a neutral force

C.



=A concentration point of bridging equipment of a friendly squadron

ELECTRONIC WARFARE INSTALLATION

A reversed triangle is no longer used for Electronic Warfare installations.

The letters **EW** are use as an icon in the middle of the unit symbol like this.









Other indicators could be added.

a.



= An armoured electronic warfare vehicle

b.



= A direction finding station

c.



= A radio intercept station

d.



= A jamming station

e.



= A electronic warfare emission station

PROBLEM #6

Describe the following symbols.

a.



=_____

b.



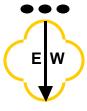
=_____

c.



=_____

d.



= _____

e.



=_____

f.



=_____

SOLUTION #6

= A Friendly Battalion Level SAM Ammunition a. Depot = A Neutral Aviation Ammunition Depot b. = A Hostile Jamming Squadron C. EW = An Unknown Radio Intercept Platoon d. = A Hostile Regimental Level Water Point e. = A Friendly Combat Service Support Installation/Platoon f.

OBSERVATION POST

The basic symbol for an observation post is the triangle. The colour determines affiliation.









Icons can be added to define the role of the OP

a.



= A reconnaissance observation post

b.



= An artillery observation post

c.



= A NBC observation post

d.



= A sound ranging post

WEAPONS INDICATOR

Conventional symbols are also used to illustrate single weapons found on the ground.









These are some basic icon uses.





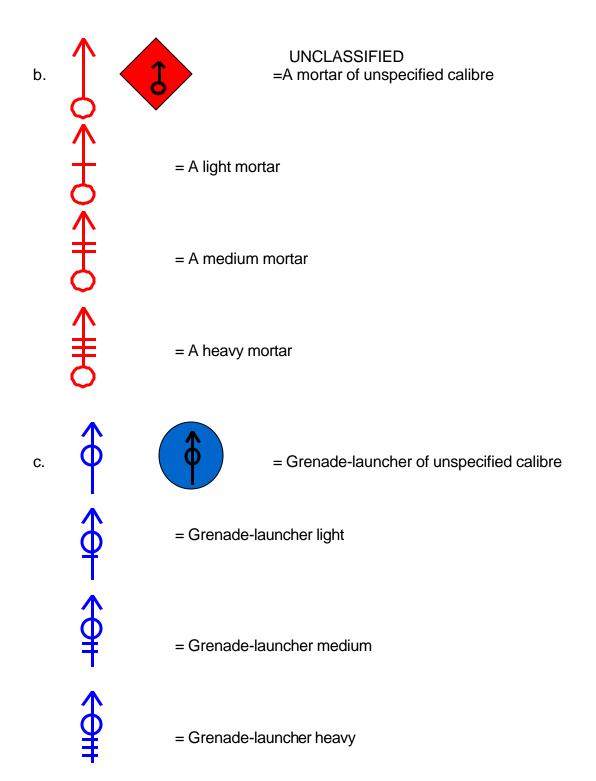
= A rifle/automatic weapon

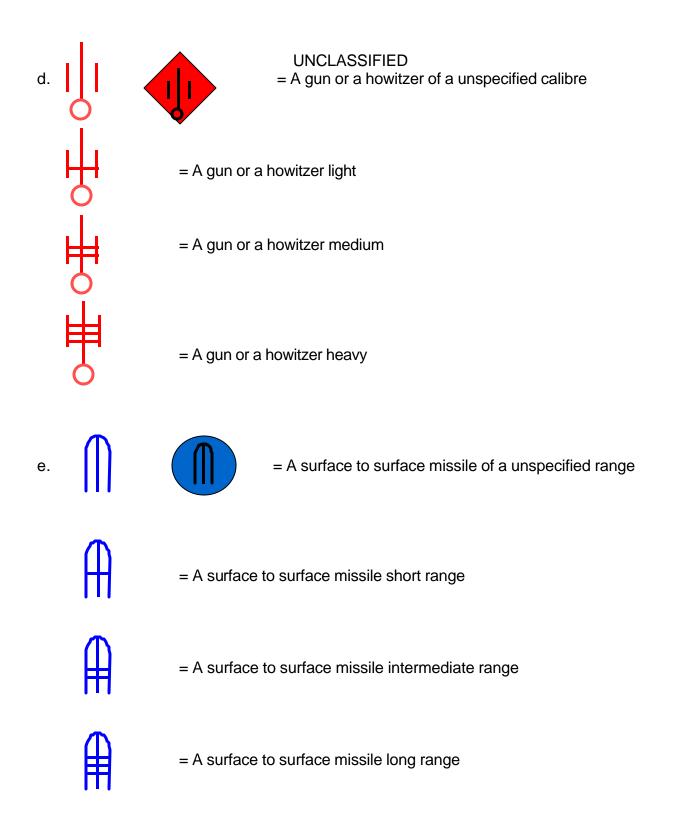


= A light machine gun



=A heavy machine gun









= A surface to air (SAM) missile of an unspecified range



= A short range SAM Air Defence missile



= A intermediate range SAM Air Defence missile



= A long range SAM Air Defence missile





= An air defence gun



= An air defence gun light

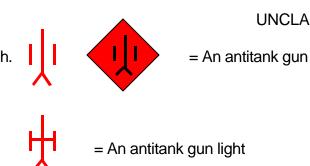


= An air defence gun medium



= An air defence gun heavy



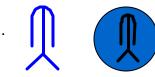




= An antitank gun medium



= An antitank gun heavy



= An antitank missile



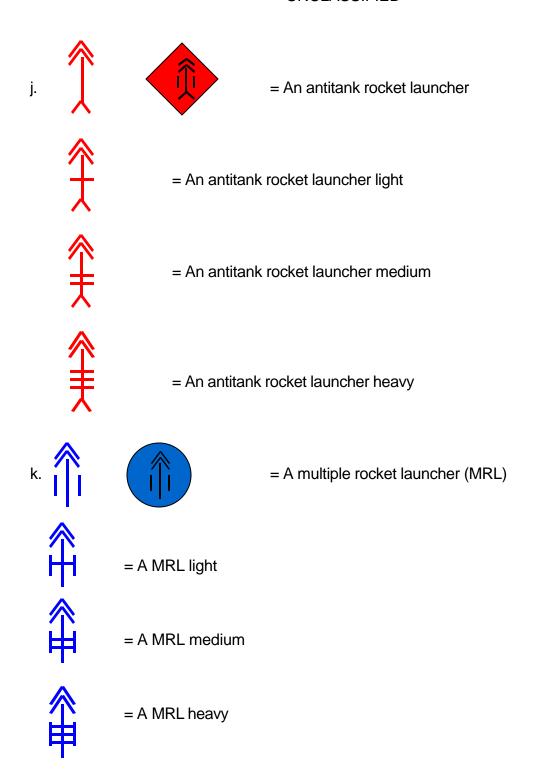
= An antitank missile light

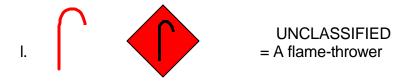


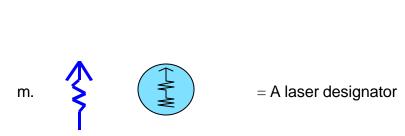
= An antitank missile medium



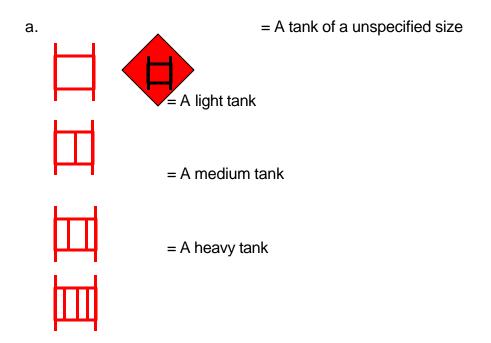
= An antitank missile heavy

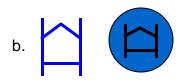




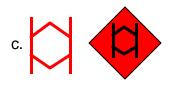


Icons are also used to describe vehicles used within the army. They follow the same rules as single weapons.





= An armoured personnel carrier (APC) of an unspecified size



= An infantry fighting vehicle (IFV) of an unspecified weight



e. = An armoured vehicle

f. = A train or wagon

g. = A hovercraft

PROBLEM #7

Describe the following symbols.

a.



=_____

b.



=_____

C.



=_____

d.



=_____

e.



=_____

f.



=_____

g.



=_____

h.



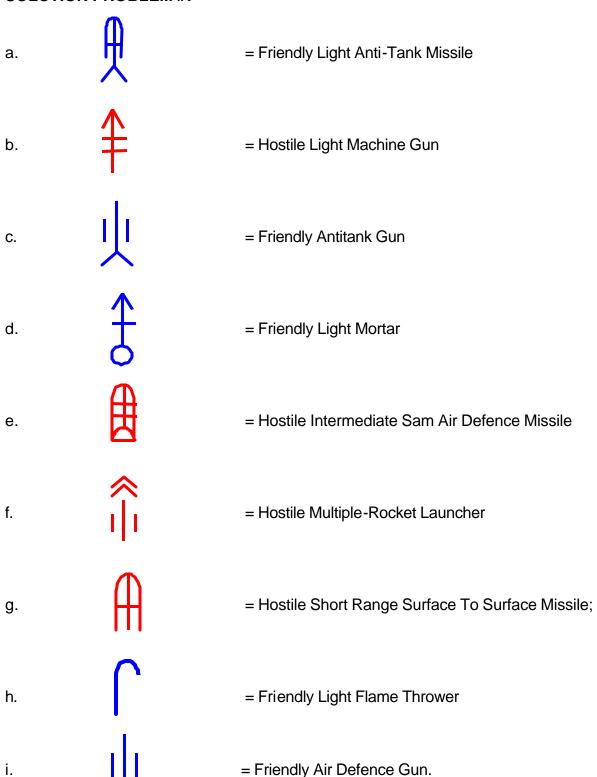
=_____

i.



=_____

SOLUTION PROBLEM #7



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Role indicators can be use to further define the task of the vehicle.

a. A reconnaissance IFV



b. A signal APC



c. A soft-skinned maintenance vehicle



d. A soft-skinned bridging vehicle



E: An engineer APC



F: A tank with a dozer blade

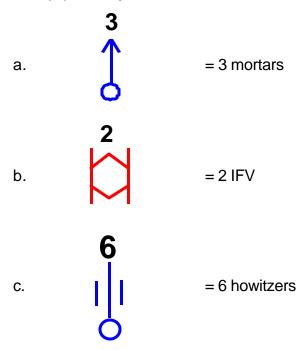


MOBILITY INDICATOR

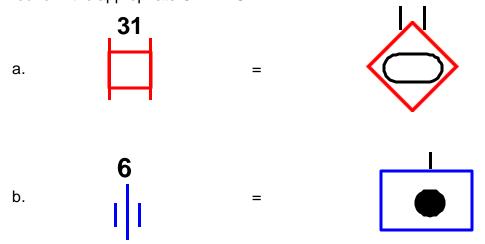
Again to provide more accurate information, some symbols are designed to indicate the type of mobility used by a vehicle.

a.	Amphibious	~
b.	Over snow	
C.	Towed	0—0
d.	On wheeled 4x4	$\overline{\bigcirc}$
e.	All terrain (6X6, 8x8, etc)	000
f.	Tracked	
g.	Half-track	

Numbers are use to indicate how many pieces of equipment are represented by an equipment symbol.



When you have many vehicles together, it is better displayed as a unit. An example, 31 tanks together would be shown as a tank battalion. The numbers can be found in the appropriate ORBATS.



The Air Force uses unique symbols for their environment.

a. A helicopter









b. An aircraft









Symbols can also be modified with a role indicator.



Fixed Wing Bomber



Fixed Wing Fighter Interceptor



Fixed Wing Fighter



Attack / Strike



Rotary Wing Attack



Rotary Wing Reconnaissance



Rotary Wing Utility Light



Rotary Wing ECM/Jammer



Civil Aircraft

Fixed Wing Operational Icons

- + Medevac
 A Attack/Strike
 B Bomber
 F Fighter
 C Cargo Airlift
 I Interceptor
- J Electronic Countermeasures (ECM/Jamming)
- K Tanker
- MIL Air Track Military
 N Anti-Surface Warfare
- P Patrol
- R Reconnaissance
- S Antisubmarine Warfare
- T Trainer
- W Airborne Early Warning
- X Reconnaissance Photograph
- Y Communications
- Z Electronic Surveillance Measures

Rotary Wing Operational Icons

- + Medevac
- A Attack
- C Cargo Airlift
- J Electronic Countermeasures (ECM/Jamming)
- K Tanker
- R Reconnaissance
- S Antisubmarine Warfare
- T Trainer
- U Utility

PROBLEM #8

Identify the following symbols.

a.



=_____

b.



=_____

c.



=____

d.



=_____

e.



=_____

f.



=_____

g.



=_____

h.



=_____

SOLUTION PROBLEM #8

a.



=A Hostile Light Tank

b.



=A Hostile Soft-Skinned All-Terrain Vehicle

c.



= A Hostile Rotary Wing ECM/Jammer

d.



= A Friendly Towed Air Defence Gun

e.



= A Soft Skinned Maintenance Vehicle

f.



= A Friendly Reconnaissance Aircraft

g.



= A Hostile Armoured NBC Vehicle

h.



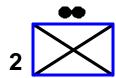
= A Hostile Engineering APC

UNITS IDENTIFICATION

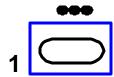
In this section, you will use a combination of numbers, letters and abbreviations to better define unit and installations.

An alphanumeric title that uniquely identifies a particular symbol is a unique designation and is located at the bottom left corner of the symbol.

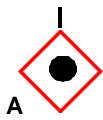
a. Section two of a friendly infantry unit



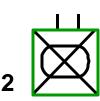
b. Troop one of a friendly armoured unit



c. Hostile artillery battery A



d. The neutral second mechanised infantry battalion



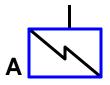
PROBLEM #9

Illustrate the symbol corresponding to these units.

The friendly signal squadron A a. b. The Hostile 88th Airmobile corps C. The neutral 1st mountain infantry battalion headquarters d. The neutral 3rd tank division A friendly medical installation held by the 3rd medical platoon e. The friendly 6th transport company f. g. A neutral observation post held by the 2nd reconnaissance section

SOLUTION #9

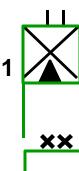
a. Friendly Signal Squadron A



b. Hostile 88th Airborne Corps



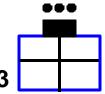
c. Neutral 1st Mountain Infantry Battalion Headquarters



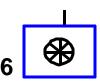
d. Neutral 3rd Tank Division



e. Friendly Medical Installation Held By The 3rd Medical Platoon



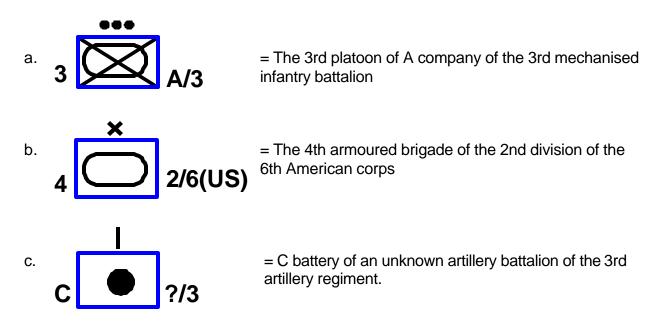
f. Friendly 6th Transport Company



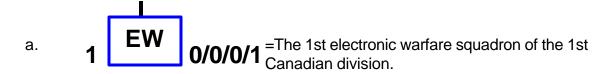
g. Neutral Observation Post Held By The 2nd Reconnaissance Section



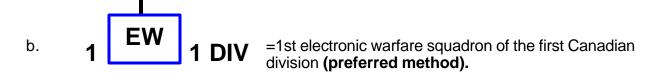
Higher Formation designations are written at the bottom right corner of the symbol. Each different higher echelon is separated by back slash. When an echelon is unknown, a question mark should be written.



When a unit belongs directly to a superior echelon without intermediate command, the steps are represented by "0", like these examples.

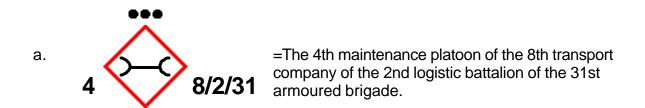


The proper abbreviation can also be used.



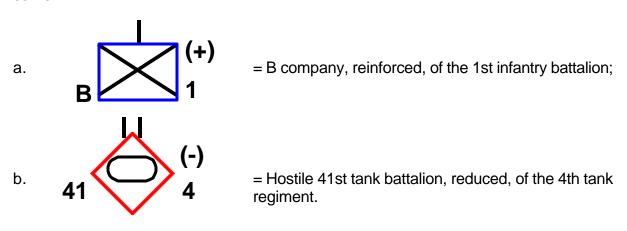
Specialised organisations like electronic warfare units or special force units don't follow the normal hierarchy found in the other units as in the combat arms.

Speciality within a unit may not correspond to a superior echelon. For example, an armoured squadron may belong to a mechanised infantry battalion. The identification of this unit is linked with the unique designation and to the role of the symbol.



UNCLASSIFIED REINFORCEMENT AND ATTACHED

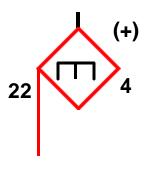
Additional equipment and or personnel can reinforce some combat units. This is illustrated by a (+) in bracket. When a unit is devoid of one of its parts or suffers losses, this is illustrated that by a (-) in bracket. These designations are located at the top right corner.



PROBLEM #10

Identify the following symbols:

a.



=_____

b.



=_____

c.



=_____

d.



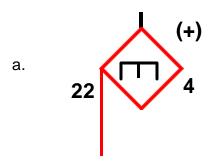
=_____

e.



=_____

SOLUTION #10



Hostile 22nd Engineer SquadronHeadquarters, Reinforced, of the 4th Battalion



Hostile Armoured Reconnaissance Troop 3 Of B Squadron of the 45th Battalion



= Friendly Observation Post 2nd Recce Section Of the 4th Platoon of C Company

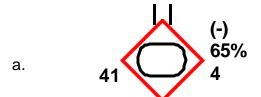


= Hostile Water Point operated by 72nd Platoon Of the 7th Company Of the 23rd Battalion



= Friendly 2nd Military Police Platoon reduced and belonging to the 25th Battalion Of the 4th Regiment

A percentage figure can also be added below the detached/reinforced symbol to indicate the capability of the unit.



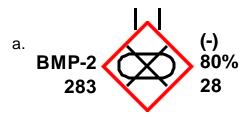
=The 41st tank battalion of the 4th tank regiment at 65% of is capabilities.

This area is reserved for the capability indicator or for free text. Free text is used to indicate relevant information. Therefore, this area is normally used to mark log number entry. Each plotted symbol should have a log entry number to retrieve the source of the information when needed. This number should be circled to differentiate from other information around the symbol:



= 2nd military police platoon with detached element (reduced), belonging to the 25th battalion of the 4th brigade. Log entry number 135.

On the opposite side of the free text is an area allocated for the unit's main equipment holdings. It's very often useful to indicate what kind of weapons a unit holds.



= Hostile 283rd mechanised infantry battalion of the 28th regiment with a combat capability of 80% is equipped with BMP-2.

THE DATE-TIME GROUP

Its <u>MANDATORY</u> that every plotted symbol must have a date-time group (DTG). This combines the date followed by the hour when the unit or the installation is reported. The hour is written in 24 hours format. These number are followed by the time zone reference letter:

a. **250530B JUN 99**

= 25 June 99 at 05:30 BRAVO time zone. (Month and year are removed when space is not available)



= 4th mechanised infantry brigade reported on the 4th of this month at 0800 hours ZULU time.

NOTE: The zulu time refers to the Greenwich Mean Time (GMT). During international operations, messages come with a DTG in zulu time. This avoids confusion with any other time zone.

From now, you must write a DTG with each symbol you draw. Use the letter "Z" for zulu time.

COMMAND POST AND HEADQUARTER

Command posts and headquarters are identified with a mast form the bottom left corner of the symbol:









NOTE: The bottom of the mast indicates the exact location of the symbol.

Four different type of HQ exists they are Main HQ, Alternate HQ, Forward HQ and Rear HQ. You should indicate the type of headquarters. The designations are marked below the symbols. The designations are as follows.

a. MAIN MAIN

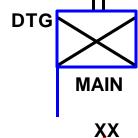
b. ALTERNATE (tactical) ALT or TAC

c. FORWARD: **FWD**

d. REAR REAR

Examples

a.



= Main infantry battalion HQ

b.



= Alternate artillery division HQ

PROBLEM #11

Draw the following symbols with the proper indications.

Hostile B armoured reconnaissance squadron with 50% capability, equipped with BRDM-2. Log entry number 224 at 0745Z on 18 Jun 96.

Hostile 31st artillery battalion rear HQ of the 3rd brigade of the 28th army equipped with 2S5. Log entry number 78 at 221420Z.

Alternate HQ of the 3rd mechanised infantry battalion reinforced, belonging to the 5th brigade of the 1st Canadian division equipped with M-113. Log entry number 561 at 0430Z on 5 Jun.

Friendly 55th transport platoon of 2nd service battalion of the 4th division. Log entry number 88 at 062311Z.

Exact location of a friendly artillery observation post held by 2 section of 1 platoon of C battery. Log entry number 78 at 121200Z.

Friendly medical post held by the 7th platoon of the 1st battalion with a capability of 75%. Log entry number 45 at 300700Z.

SOLUTION #11

Hostile B armoured reconnaissance squadron with 50% capability, equipped with BRDM-2. Log entry number 224 at 0745Z 18 Jun 96.

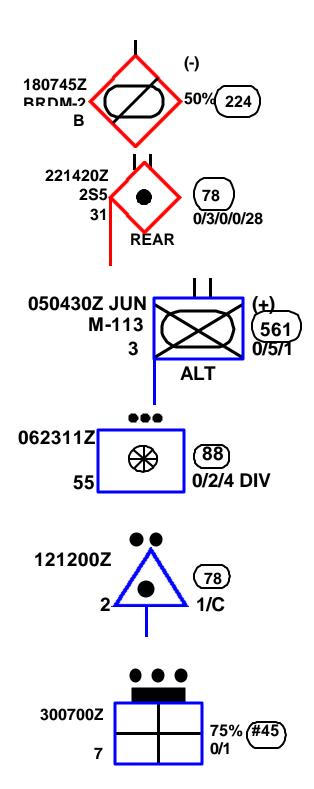
Hostile 31st artillery battalion rear HQ of the 3rd brigade of the 28th army equipped with 2S5. Log entry number 78 at 221420Z.

Alternate HQ of the 3rd mechanised infantry battalion reinforced, belonging to the 5th brigade of the 1st Canadian division equipped with M-113. Log entry number 561 at 0430Z on 5 Jun.

Friendly 55th transport platoon of the 2nd service battalion of the 4th division. Log entry number 88 at 062311Z.

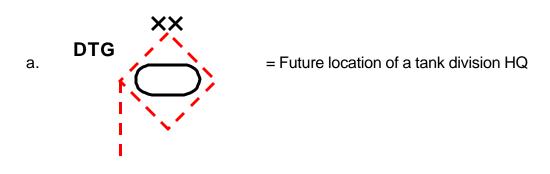
Exact location of a friendly artillery observation post held by 2 section of 1 platoon of C battery. Log entry number 78 at 121200Z.

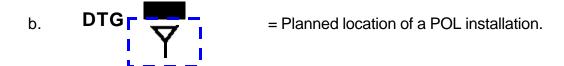
Friendly medical post held by the 7th platoon of the 1st battalion with a capability of 75%. Log entry number 45 at 300700Z.



FUTURES OR PLANNED LOCATIONS

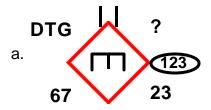
Dashed lines are used to indicate a planned or future position for a unit or an installation. Only the frame and the mast (if a HQ) are shown as a dashed line. The role indicator is still drawn as usual. This method is used to show on the map where a unit or an installation will be located as the unit is not already physically at this point.



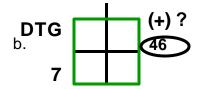


UNCONFIRMED, SUSPECTED OR POSSIBLE INFORMATION.

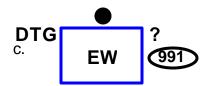
When the report of a unit cannot be confirmed, you still have to plot the symbol with a mark indicating the PROBABILITY of a unit location. The appropriate mark is a question mark "?" on the top right corner of the symbol.



= Possible location of the 67th engineer battalion of the 23rd regiment



Suspected location of the Neutral reinforced7th medical company

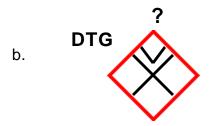


= Unconfirmed report about the location of an Electronic Warfare detachment.

A question mark "?" is also used if information is missing.



= Confirmed location of a forward observer position of an unknown section



= A hostile air mobile infantry of an unknown size



= A hostile tank squadron equipped with unknown equipment.



= The suspected location of an armoured reconnaissance squadron of an unknown force, and unidentified.

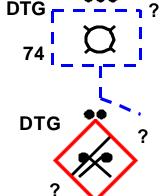
PROBLEM #12

Draw the following symbols with the proper indications.

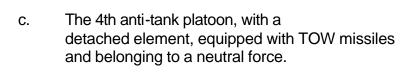
a.	Unconfirmed information, of a planned, exact location, of the friendly 74th platoon of military ordinance.
b.	Possible location, of a NBC reconnaissance section, of a hostile force.
C.	The 4th anti-tank platoon, with a detached element, equipped with TOW missiles and belonging to a neutral force.
d.	The future location of the 7th bridging battalion, from 93rd engineer regiment with an unknown type of equipment and belonging to a friendly force.
e.	Suspected friendly unidentified air defence battery equipped with ADATS.

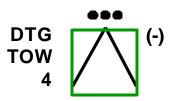
SOLUTION #13

a. Unconfirmed information, of a planned, exact location of the friendly 74th platoon of military ordinance.



b. Possible location of a NBC reconnaissance section of a hostile force.

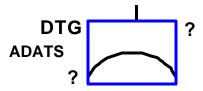




d. The future location of the 7th bridging battalion from 93rd engineer regiment with an unknown type of equipment and belong to a friendly force.



e. Suspected friendly unidentified air defence battery equipped with ADATS.



SPECIAL FORCES

Each of the next symbols represents the principal role for a Special Operation Force.

a. A Special Operation Forces unit



b. Aviation Special Operation Forces fixed wing



c. Navy Special Operation Forces



d. Helicopter unit belonging to a Special Operation Forces



e. Ranger unit



f. Reconnaissance Special Operation Forces



LINES

With the exception of boundary lines used to separate units. There are three other lines that are mainly used.

- a. Forward Edge of Battle Area (FEBA)
- b. Forward Line of Own Troops (FLOT)
- c. Report or Phase lines

FEBA lines indicate the approximate lines of Hostile forces. The FEBA of a hostile force is written in red. The friendly FLOT is drawn in blue.





= Forward Edge of Battle Area (FEBA)

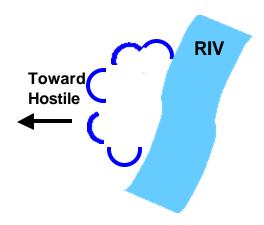
a.

FRIEND

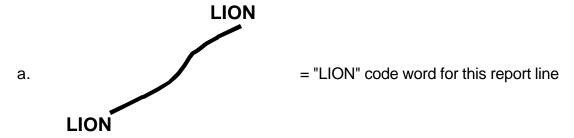


= Forward Line of Own Troops (FLOT)

A FLOT or FEBA line is also used to designate a beachhead. A beachhead is a land breakthrough from a beach or from a river:

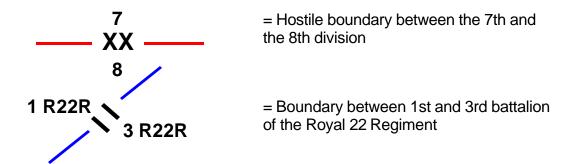


Phase lines, Report lines, are lines used for control and co-ordination of military operations, usually a terrain feature extending across the zone of action. Units normally report crossing Phase Lines, but do not halt unless specifically directed. Report lines are drawn in **BLACK** crossing the battlefield. To its extremity code words are written to identify each report line. The report line is draw like this:

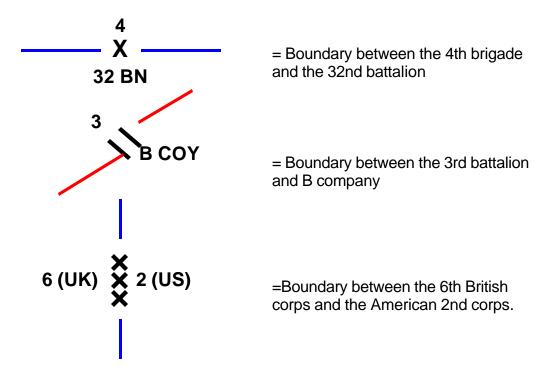


BOUNDARIES

Units operate in specified corridors. To illustrate this, separation lines are used with unit size and unique designations. Example:

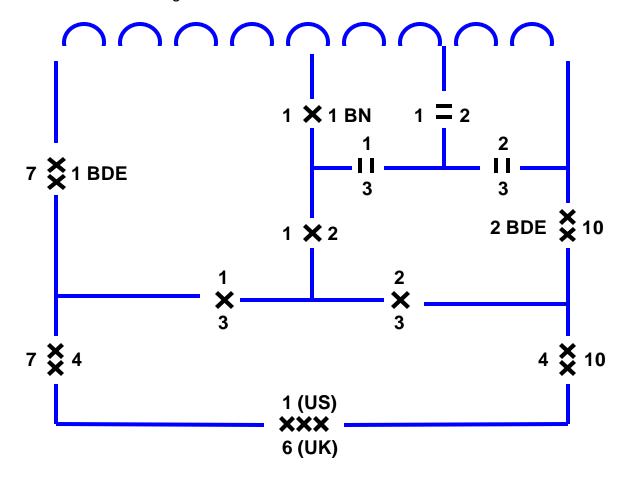


When two units of different size share a boundary, the size indicator of the largest unit is used. The smaller unit will be indicated with the proper abbreviation, as shown in example:



NOTE: International designations are written with the abbreviation of the proper country in bracket.

Size indicator are written from the smaller to the larger, the interior to the exterior as is shown in this drawing:



- a. The 4th division is part of the 1st American corps itself supported in the rear by the 6th British corps.
- b. The 4th division is located in the Centre flanked by the 7th division to the left and the 10th division to the right.
- c. Inside the 4th division we find the 1st brigade on the left flank, the 2nd brigade on the right flank and the 3rd brigade to the rear.
- d. Inside the 2nd brigade we find 1st battalion on the left flank, 2nd battalion on the right flank and 3rd battalion in the rear.

PROBLEM #13

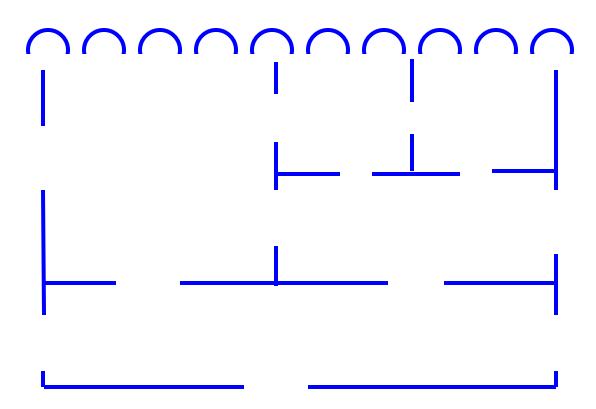
Explain the following symbols.

	a.
2 XXXX 4 CORPS	b.
41 II ?	C.

PROBLEM #14

Indicate correctly on the boundaries the unique unit designation with their proper size indicator:

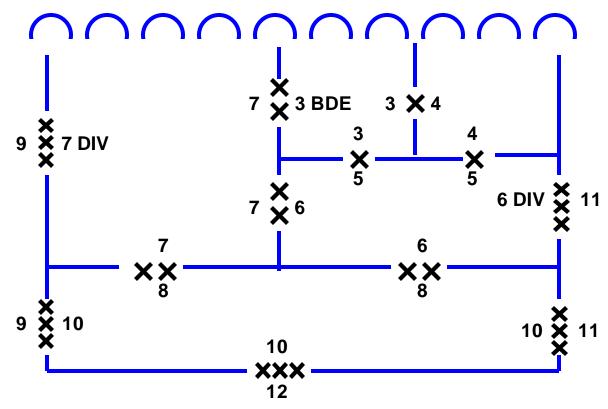
- a. The 9th corps is located on the left flank, the 10th in the centre, the 11th on the right flank and the 12th corps to the rear.
- b. The 6th division on the right flank, the 7th division on the left flank and 8th division to the rear (part of the 10th corps).
- c. The 3rd brigade is on the left flank, 4th brigade is on the right flank and a 5th brigade is to the rear (part of the 7th division).



SOLUTION #13

A I C	Boundary Between Friendly A and C Companies
XXXX 4 CORPS	Boundary Between Friendly 2nd Army And The 4th Corps
41 	Boundary Between The Hostile 41st Battalion and an Unknown Battalion

SOLUTION #14



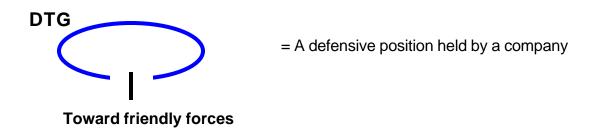
DEFENSIVE POSITIONS

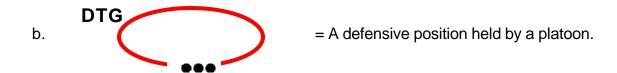
When a boundary cannot be established, the zone can be marked by a defensive position symbol. The defensive position is an oval form drawn around the grid coordination (the size of the oval is determined by the size of the unit holding the position) a gap is made in the oval to place the size indicator.

NOTE: The size indicator is located at opposite side of the Hostile forces. The indicator is written in black and the oval takes the proper colour of affiliation.

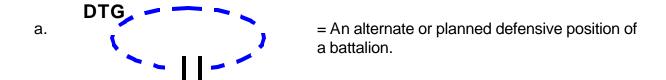
Example:

a. Toward the Hostile





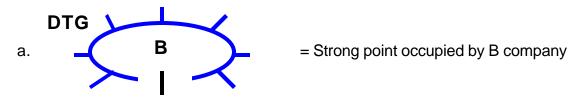
The dash line rule can be applied to a defensive position to indicate an alternate or planned position.

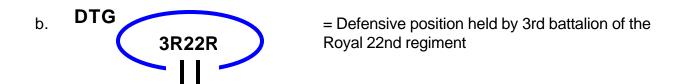


Strong Point – A defensive position, usually strongly fortified and heavily armed with automatic weapons around which other positions are grouped for its protection.



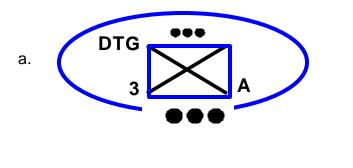
A unique unit indicator can be written in the middle of the symbol. In this manner, simplicity on the map is kept.



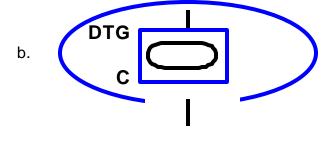


When precision is required, a complete conventional symbol can be inserted inside the position. This method is used when different speciality units are located around the position.

Example:



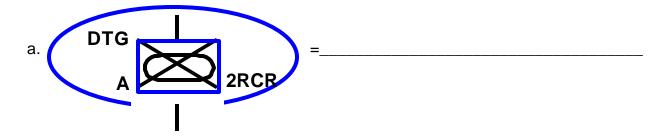
= The defensive position held by the 3rd infantry platoon of A company

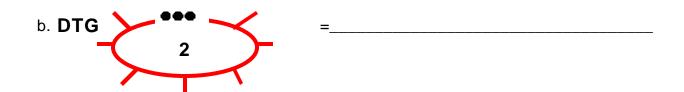


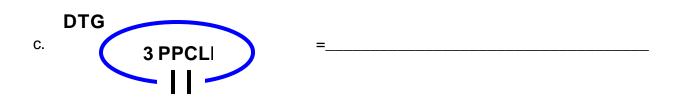
= The defensive position held by C squadron.

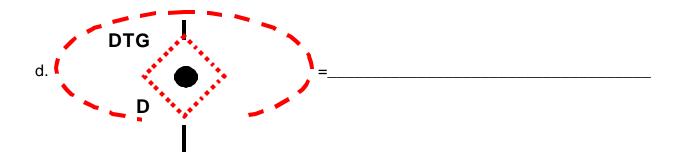
PROBLEM #15

Describe the following symbols.

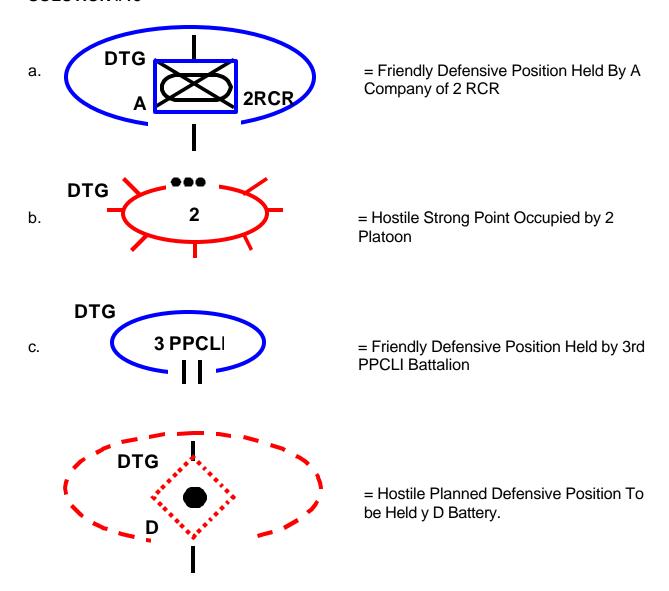








SOLUTION #15



OBSTACLES

NOTE

All types of obstacles (minefield, improvised obstacles etc) are draw in **GREEN** with the interior in BLACK regardless of their affiliation

Three types of obstacles exist:

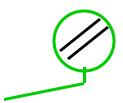
- a. Belt obstacles;
- b. Linear obstacles; and
- c. Zone obstacles.

A. Roadblocks, Craters and Blown Bridges

A barrier or obstacle (usually covered by fire) used to block or limit the section of the road.

a. = Planned destruction
b. = Prepared for destruction Safe state
c. = Prepared and Armed for destruction
d. = Destruction Completed

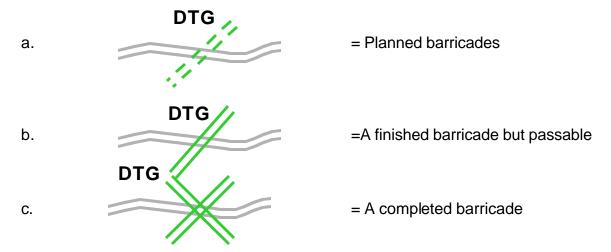
These symbols are located directly on the obstacle's grid co-ordinates but when space is not available, a mast can be used.



Information around the symbols are shown in the same manner as other conventional symbols e.g., DTG on the top left corner, designation on bottom left corner, and supplementary information in the free text area on the middle right of the symbol.



Can also be found on the road to represent roadblocks or barricades.



PROBLEM #16

Using the appropriate colours, draw the conventional symbols corresponding to the following descriptions.

- a. A prepared and armed obstacle logged on #K88 at 1545Z on June 6th with indication of no destruction prior to 072300Z
- b. A Hostile planned destruction #401 in reserve, marked on 061300Z
- c. An obstacle destroyed on June 6th at 1400Z

d. **DTG**

SOLUTION #16

a. A prepared and armed obstacle logged on #K88 at 1545Z on June 6th with indication of no destruction prior to 072300Z



b. An Hostile planned destruction #401 in reserve, marked on 061300Z



c. An obstacle destroyed on June 6th at 1400Z



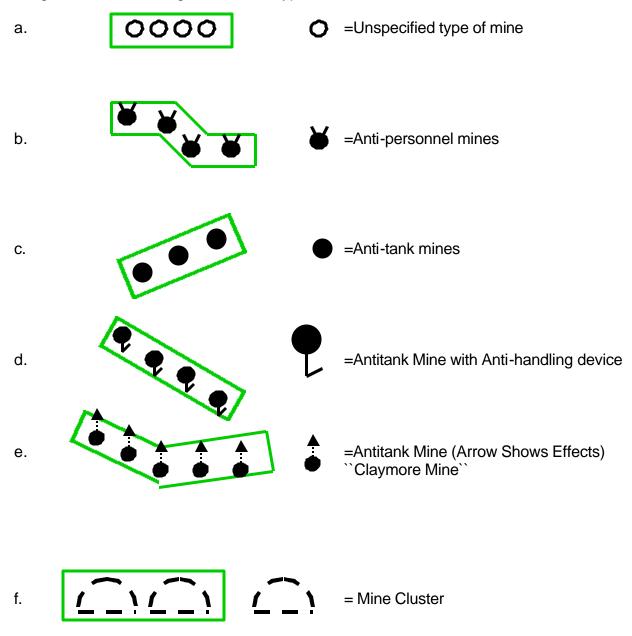
d.

= Completed Barricade but Passable.

B. Linear obstacles

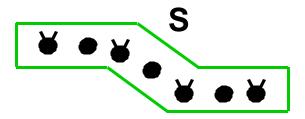
Linear obstacles can take the form of a minefield, booby trap lines, barbed wire etc. Their length and depth should respect the scale of the map and their size on the ground. When space is not available a mast will be used to indicate the exact location of the obstacle.

1. A minefield can take a linear or area form. A minefield would be traced around the grid co-ordinates in green with the type of mine inside in black.

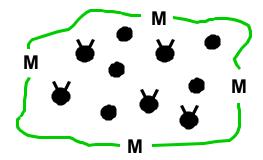


When a minefield is composed of a variety of mines they should all be represented in the frame symbol.

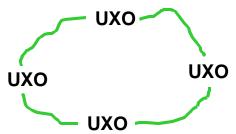
It is also possible to have a minefield composed of scatterable mines. Aircraft or artillery lays these. The letter "S" is used to indicate a scatterable minefield.



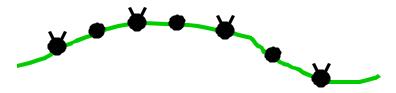
A mined area can be indicated by a green frame with gaps to put the letter "M".



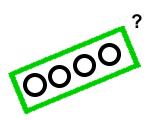
An unexploded ordnance area is an area containing explosive ordnance which has been fused or armed and remains unexploded and constitutes a hazard to operations.



A single green line indicates a belt or line of mines with the corresponding type of mines on it.



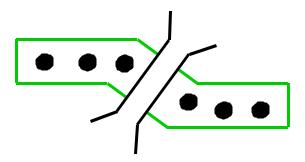
When a report of a minefield is unconfirmed, you must, like any other symbol, put a question mark "?" on the top right corner.



Indicate a future location for a planned minefield by using dash lines.



A breach through a minefield is indicated by the symbol of a bridge crossing through the minefield.



PROBLEM #17

Describe the following symbols.

a. **DTG**

=_____

b. DTG A A A

=_____

DTG

0 0 0 0

=_____

d. M M

=_____

e. DTG M M

=____

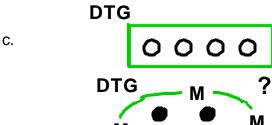
SOLUTION #17



= Anti-Personnel Mines With Anti-Handling Device

b. **DTG** A A A

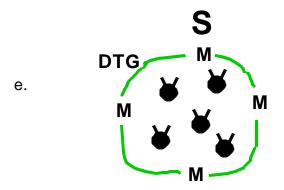
= A Line of Antitank Directional Mines



= Unspecified Type of Minefield

d. M M

= Probable Mined Area with Anti-Tank Mines



=Mined Area with Scatterable Anti-Personnel Mines

Other lines of obstacles can be composed of natural elements (tree, ditch etc) or man made (barbed wire, concrete wall etc). Like the minefield symbols, these are drawn to scale in green.



= Abatis is a vehicular obstacle constructed by felling trees.



= Booby trap



= Anti-tank obstacle, non-explosive

= Planned Single Fence



f. XXX

= Completed Single Fence

DTG

g. VV

= Anti-tank ditch under construction

DTG

h.

= Completed anti-tank ditch

DTG

i. 513

= Unspecified linear obstacles.

PROBLEM #18

Illustrate correctly the following linear obstacles.
--

- a. A line of dragon teeth
- b. Completed single fence
- c. An Hostile line of trip wire
- d. Trees cut with a booby trap
- e. Hostile anti-tank ditches in preparation

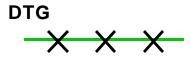
f. Unspecified line of obstacle

SOLUTION#18

a. A Line of Dragon Teeth



b. Completed Single Fence



c. A Hostile Line of Trip Wire



d. Trees Cut With A Booby Trap



e. Hostile Anti-Tank Ditches in Preparation



f. Unspecified Line of Obstacle

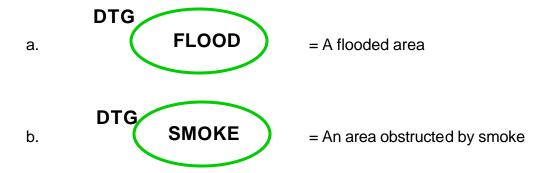


C. Area Obstacles

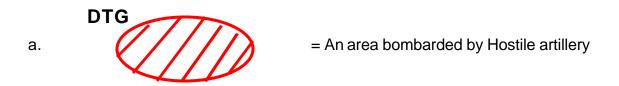
Area obstacles are pieces of ground that must be taken into consideration because of natural characteristics or from human intervention. Natural obstacles are mountains, swamps or flooded areas. Artificial obstacles could include a NBC contaminated area or crater made by artillery.

NOTE: NBC event will be shown latter in the program.

The way to illustrate an area obstacle is by tracing a green line around the designated area with a description inside the area to indicate the type of obstacle. It's important to mention the DTG to indicate when the obstacle appeared.



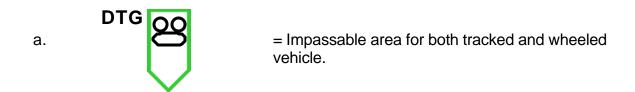
An area bombarded by artillery is a temporary obstacle, it is not draw in green but with the colour of affiliation of who fired it. The area is then draw in red, or blue with hash lines of the same colour inside the area.



Symbols also exist for describing areas impassable for vehicles. The symbol is draw to the exact location or with a mast when space is not available. The frame is in green with information written inside in black.



Some combinations can be made as well



PROBLEM #19

Describe the following symbols

a. SMOKE

=_____

b. 060940Z

=_____

c. 060880Z 00

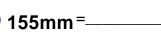
=_____

d. FLOOD

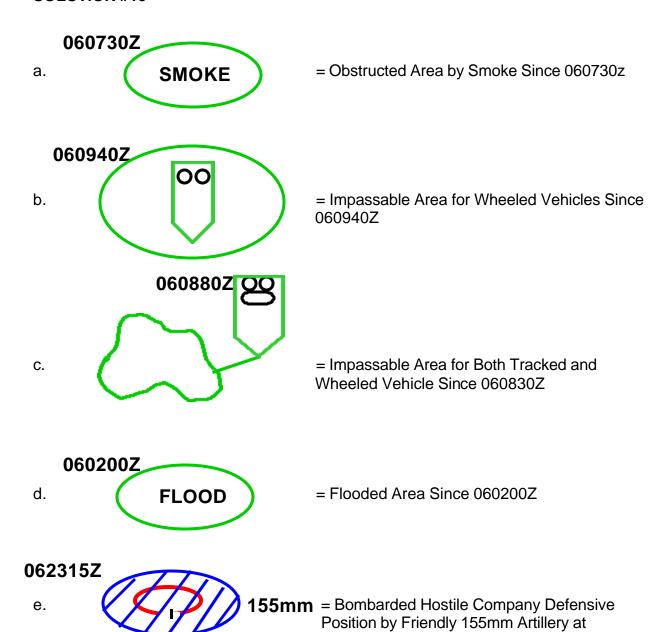
=_____

062315Z

e.



SOLUTION #19



062315Z

PROBLEM #20

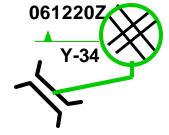
Draw the conventional symbols accordingly to the following statements.

a.	Bridge #Y-34 destroyed by Hostiles at 061220Z
b.	Anti-tank non-explosive obstacle
C.	Line of anti-tank mines
d.	Impassable area for tracked vehicles since 061900Z
e.	Unspecified mine area laid by the Hostiles
f.	Minefield composed of unspecified mines and anti-personnel mines
g.	Completed anti-tank ditch since 060540Z June

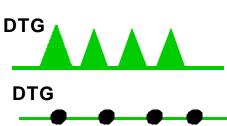
h.	Bridge destruction set on armed
i.	Line of trip wire
j.	Area bombarded by Hostile 122mm artillery started at 060400Z June
k.	Area mined with cluster mines
l.	Line of single fence
m.	Minefield composed of anti-tank and anti-personnel mines

SOLUTION #20

a. Bridge #Y-34 Destroyed by the Hostiles at 061220Z



b. Anti-Tank Non-Explosive Obstacle

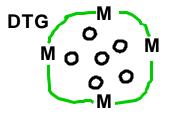


c. Line of Anti-Tank Mines

d. Impassable Area for Tracked Vehicle Since 061900Z



e. Unspecified Mine Area Laid by Hostiles



f. Minefield Composed of Unspecified Mines and Anti-Personnel Mines

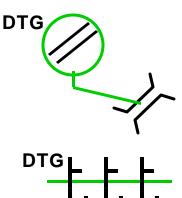


060540Z

g. Completed Anti-Tank Ditch Since 060540Z



h. Bridge Destruction Set on Armed



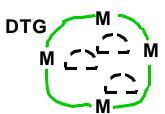
i. Line of Trip Wire

060400Z JUN

j. Area Bombarded by Hostile 122m Artillery Started at 060400Z June



k. Area Mined with Cluster Mines



I. Line of Single Fence



m. Minefield Composed of Anti-Tank and Anti-Personnel Mines

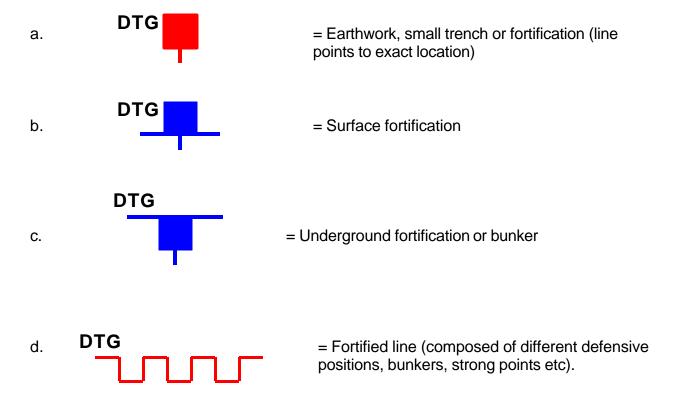


FORTIFICATIONS

Fortifications like strong points have comprehensive sets of improvements in a normal defensive area.

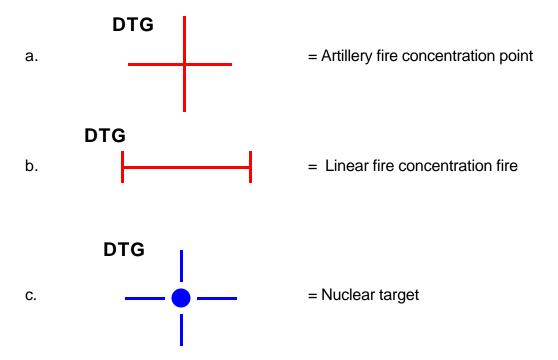
As fortifications are occupied military positions, they are illustrated with the colour of affiliation rather than green.

The symbols for fortification are the following.



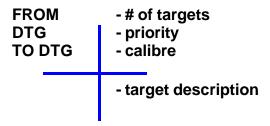
ARTILLERY FIRE PLANNING

A fire plan has to be very accurate. Simple to draw, these symbols indicate a planned target for artillery fire. These symbols use the colours of affiliation, Hostile or friendly. Even though these symbols represent planned events, they are not drawn with dashed lines.



NOTE: The nuclear target symbol could be used to designate a chemical or biological attack as well. For these cases, the specific type of weapon used should be indicating to the right of the symbol.

The associated DTG to these symbols indicate the hour and duration of the fire. The DTG is composed of two times with the prefix "from" and "to" to indicate the duration of fire. The other information fields if known is the following.

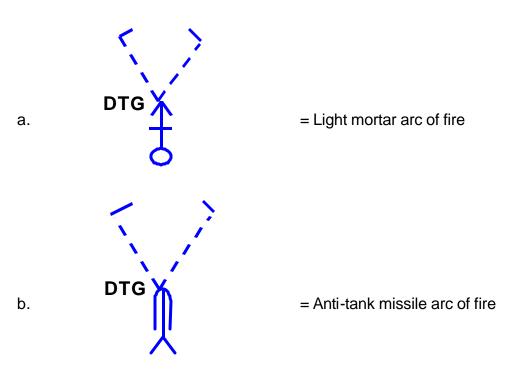


For linear fire, the DTG is located below the symbol and the amplifying information above the symbol.

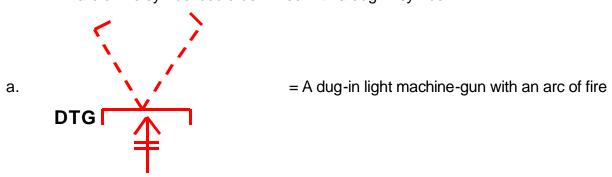


ARCS OF FIRE

Arcs of fire are associated with their respective weapons. They indicate the range and direction of fire of a particular weapon. This is illustrated by a dashed line out to their maximum range or to an obstacle.

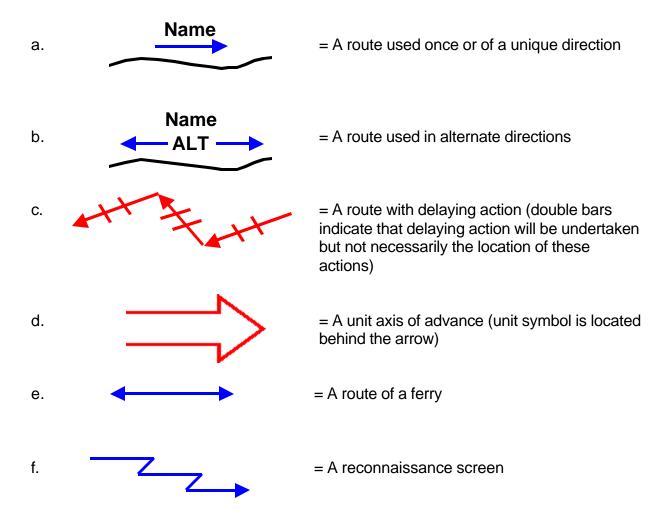


An arc of fire symbol could be mixed with a dug-in symbol.



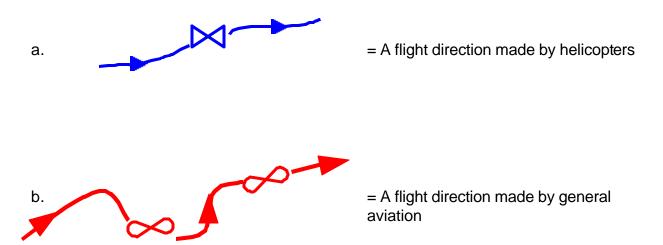
MOVEMENTS

Route marking follows the actual line of movement and may be a solid or broken line depending on the event. Arrows show the direction of movement and should be repeated as often as necessary for clarity. If movement is in both directions, no arrows should be shown.



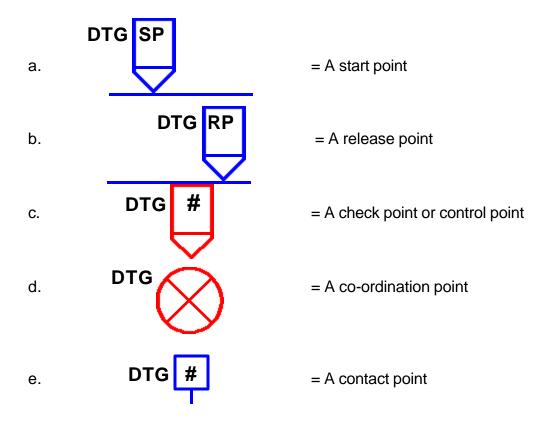
NOTE: Dashed lines could be used for these symbols if they are planned routes.

For aviation flight direction, the aircraft symbols have to be added to the itinerary symbol. When an itinerary becomes a regular one, the aviation symbol is enough like these examples:



POINTS

Points linked with itinerary are used to inform post control on a road. Number or designation of the point is written in the free text area.



NOTE: Co-ordination points indicate a meeting area between two units in the field. These points are located normally at an intersection of report lines. Co-ordination points are not therefore used on itinerary.

PROBLEM #21

Describe the following symbols

DTG 501

=_____

=_____

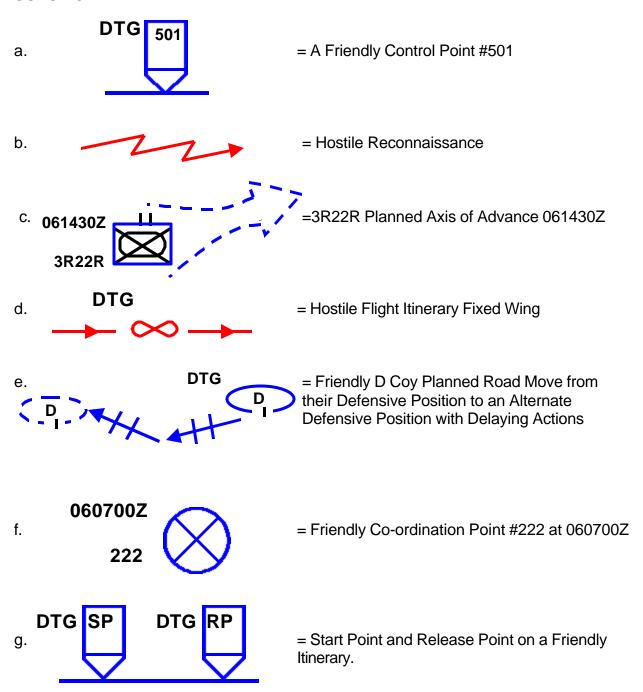
c. 061430Z 3R22R

DTG
d. =_____

f. 222 =_____

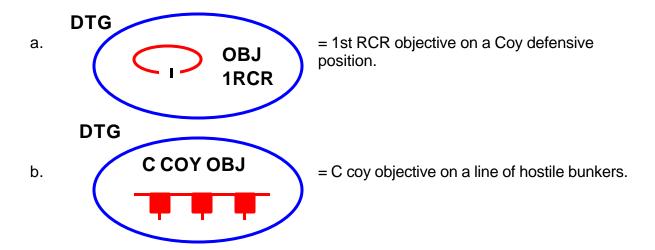
g. DTG SP DTG RP =_____

SOLUTION #21



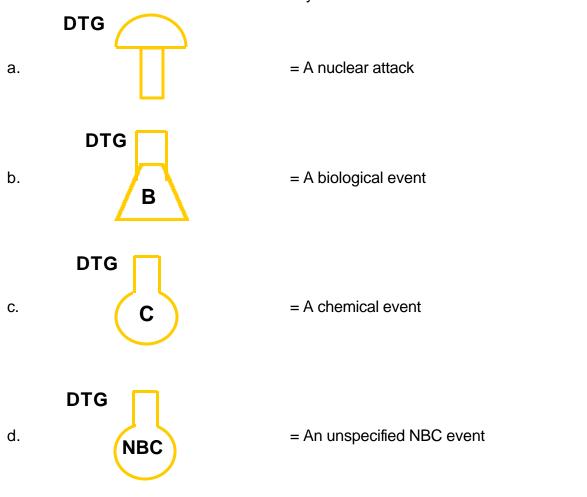
OBJECTIVES

The Military objectives are simply drawn with an oval form around the targeted area with the abbreviation "OBJ" inside. The colour of the attacker is use.

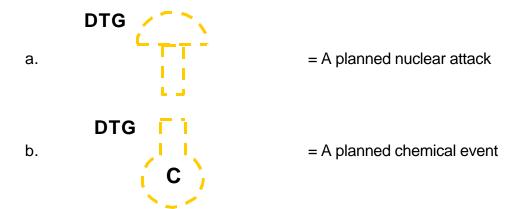


NBC EVENTS

For either an NBC attack or an area contaminated by an NBC agent, the colour used is YELLOW. Information around the symbol remains in BLACK.



Dash lines are used when an NBC event is planned.



Important information required when using these symbols are:

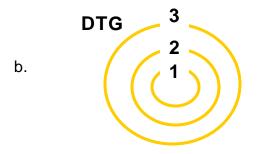
- a. The power of the explosion or of the agent;
- b. Wind speed and direction; and
- c. Means of delivery.

The information should appear as below.

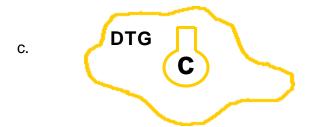


NBC contaminated areas are drawn with a group of circles where they indicate the concentration of the agent. A gap is made in the circle to indicate the degree of contamination or to write the MINIMUM SAFE DISTANCE indicator. Example:





= An area of nuclear impact showing the minimum safe distance by the level 1, 2 and 3



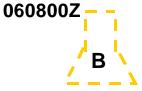
= A chemical contaminated area without indication of the concentration.

NOTE: Because of the complexity of this type of warfare, NBC specialists rather than Intelligence report concentration and radioactivity indications. For example, centigray is an international measurement for radioactivity. The abbreviation is cGy.

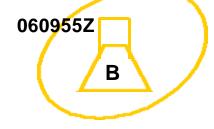
PROBLEM #22

Describe the following symbols.

a.



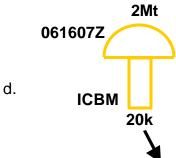
b.



060640Z

C.

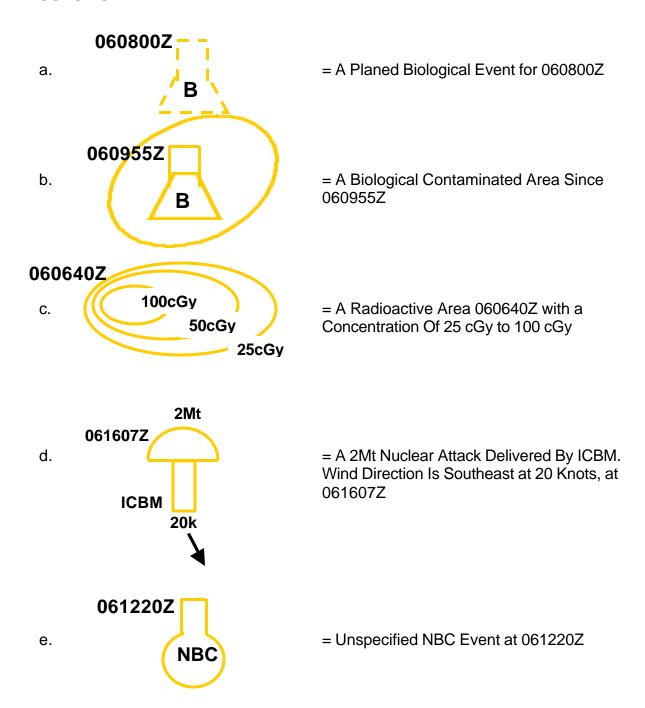




e.



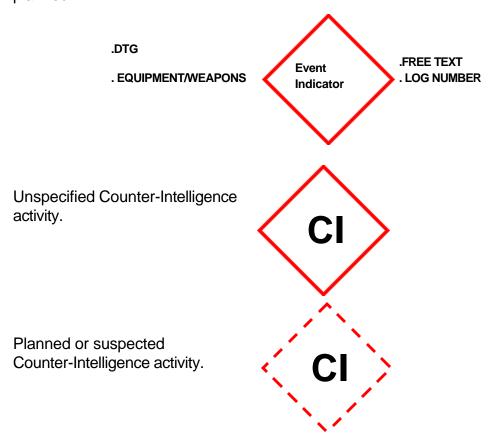
SOLUTION #22



COUNTER-INTELLIGENCE ACTIVITIES

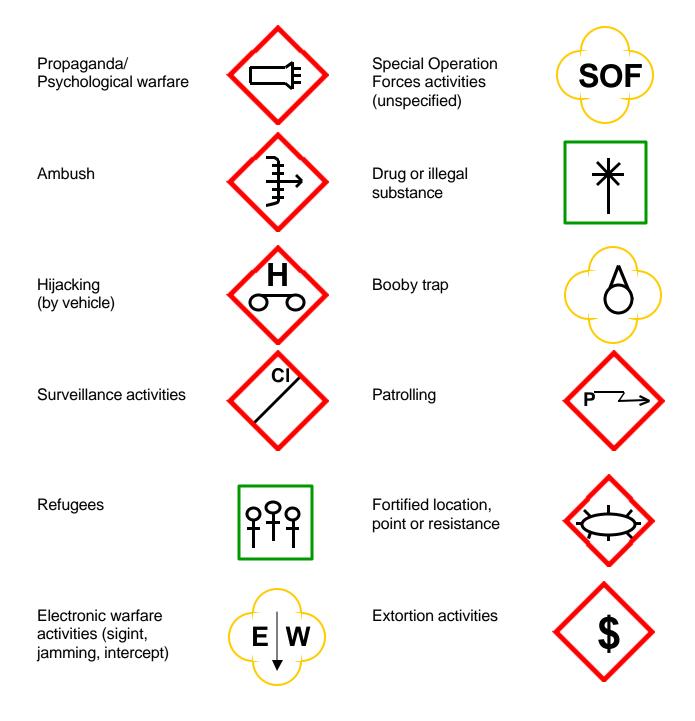
In each conflict or military operation, counter-intelligence (CI) activities can happen in the area of responsibility. These events can range from civil unrest to sabotage against military facilities. It's important to take note of these activities and be able to analyse the situation in detail.

Cl activities are illustrated by the unit symbol that produces the event, e.g. friendly, hostile etc. Dashed lines are used when these events are suspected or planned.



The principal counter-intelligence activity symbols are.

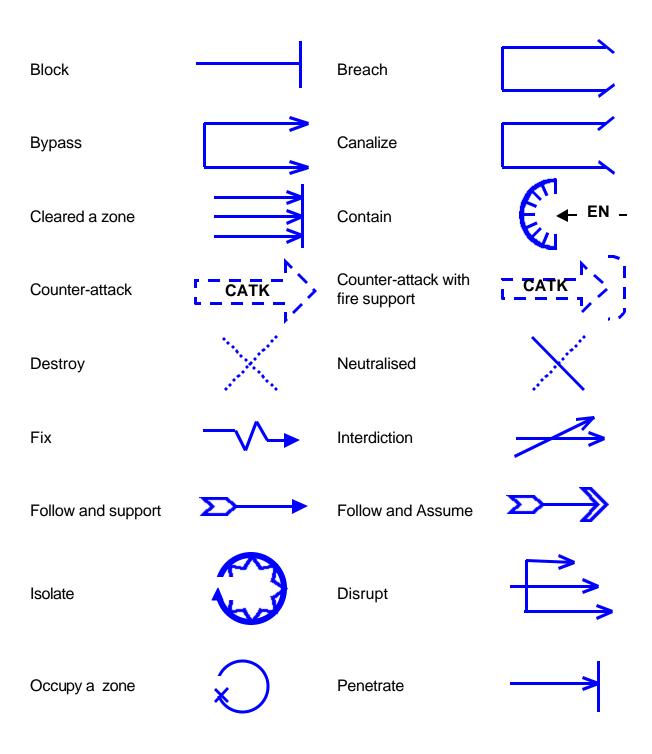
Attempted Murder	9.	Assassination/Murder/ Execution	
Explosion/Bomb Unknown	ВОМВ	Poisoning	
Barricade / road block (completed)		Incendiary/Fire Unknown Origins	FIRE
Barricade / road block (in construction)		Recruiting activity (Willing)	₩ O T
Civil unrest	MASS	Arrest	9
Pillage		Spying activities	SPY
Ammunition cache		Sniping activity	S

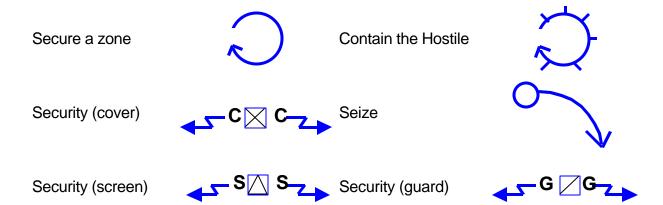


Some activities do not have standard symbols, therefore you could create a new symbol and indicate its significance in the legend.

OPERATIONAL MANOEUVRE ORDERS

Manoeuvre symbol help to indicate the orientation of a unit or a commander's intention of hostile or friendly force.

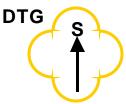




PROBLEM #23

Identify the following symbols.

a.



=_____

b.



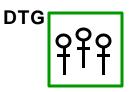
=_____

C.



=_____

d.



=_____

e.



=_____

f.



=_____

SOLUTION #23

