TALONS

AIR FORCE ROTC DETACHMENT 157
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

ACE Supplemental

Table of Contents

QRC 14.2 EOD 9-LINE REPORT

LINE 1—Date-Time Group (when the item was discovered):_____
_____
LINE 2—Report Activity and Location (unit ID and grid location of the IED/UXO):_____
LINE 3—Contact Method:
Radio Frequency:_____
Call Sign: _____
Point of Contact:_____
Telephone Number: _____
LINE 4—TYPE of IED/Ordnance (unknown, dropped, projected, placed, thrown, UAS rotary or fixed wing,or possible IED). Describe the IED/UXO:__
_____
LINE 5—CBRN Contamination (Negative or Positive)
If present, describe (be as specific as possible):_____
_____
LINE 6—Target/Resources Threatened:
Personnel (coalition forces, host nation, civilian):_____
Facilities: _____
Equipment:_____
Other Assets:_____
LINE 7—Impact of Mission (short description of current tactical situation and how the IED/UXO affects the status of the mission):_____
_____
LINE 8—Protective Measures/Evacuation (measures taken to protect or evacuate personnel and equipment):_____
_____
LINE 9—Recommended Priority:
(Immediate) (Indirect) (Minor) (No Threat)

Small Unit Formations

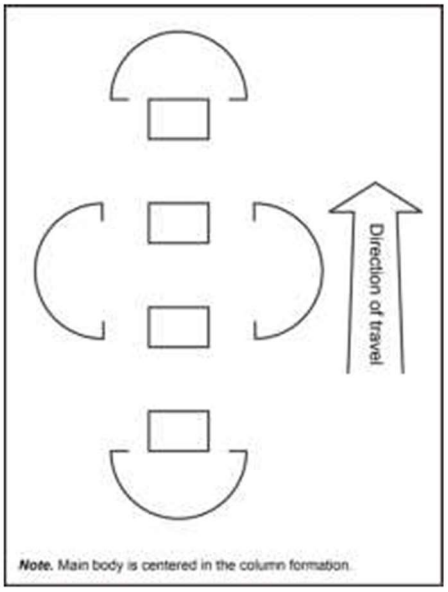
Column Formation: The column formation is a movement formation with elements arranged one behind another. A unit moves in column formation when the unit does not anticipate early contact, the objective is distant, and speed and control are critical. The location of direct fire systems within the column reflects the column's length and the range fans of those systems. Normally, the lead element uses a traveling overwatch technique while the following units are in traveling formation. A column formation—

- Provides the best formation to move large forces quickly, especially with limited routes and limited visibility.
- Makes enemy contact with a small part of the total force while facilitating control and allowing the unit to quickly mass forces.
- Provides a base for easy transition to other formations.
- Works in restricted terrain.

There are also disadvantages to using a column formation. These include—

- Units can only immediately apply the majority of the column's firepower on the column's flanks.
- The length of the column affects movement and terrain management.
- Possibly inadvertently bypassing enemy units or positions and exposing the unit's flanks.
- Running head-on into an enemy deployed perpendicular to the column's direction of movement.

Restricted terrain may limit the ability of friendly forces to maneuver if contact is made to the front of the formation.



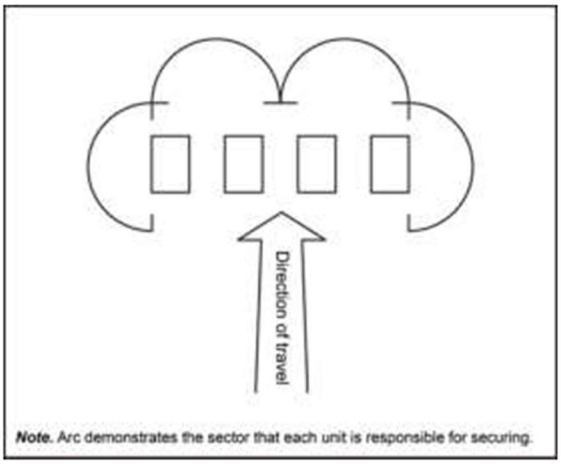
Note. Main body is centered in the column formation.

Line Formation: A line formation is a movement formation in which elements move abreast of each other. A unit typically employs this formation when assaulting an objective because it concentrates firepower to the front in the direction of movement. A line formation also—

- Facilitates speed and shock in closing with an enemy force.
- Allows the coverage of wide frontages.
- Facilitates the occupation of attack by fire or support by fire positions.

There are also disadvantages of a line formation:

- Provides less flexibility of maneuver than other formations since it does not distribute units in depth.
- Linear deployment allows a unit deployed on line to bring only limited firepower to bear on either flank.
- Provides limited or no reserve.
- Limits overwatch forces.
- Limits control of a unit using a line formation in restricted terrain or under conditions of limited visibility.



Note. Arc demonstrates the sector that each unit is responsible for securing.

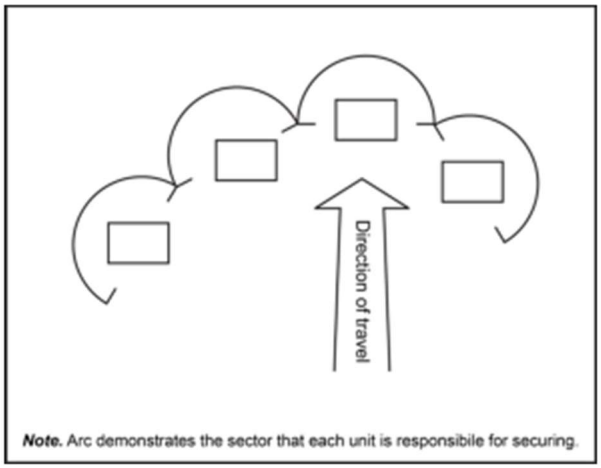
Wedge Formation: The wedge formation is a movement formation with one lead element and the trail elements are paired off abreast of each other on the flanks. Units use this formation to attack an enemy appearing to the front and flanks. Any unit can conduct a wedge formation; if there are an even number of maneuver elements, one side will be longer that the other. Leaders designate which side they want longer by directing a "heavy side." For example, if a leader said they wanted the unit in a "wedge formation—heavy left," then the left side of the unit would have more elements than the right side of the element. A unit uses the wedge when contact with an enemy force is possible or expected, but the enemy force's location and dispositions are vague. It is the preferred formation for a movement to contact in an organization with three subordinate maneuver units because it initiates contact with one unit while retaining two other subordinate uncommitted units positioned to maneuver and further develop the situation. Within the wedge, subordinate units employ the formation best suited to the terrain, visibility, and likelihood of contact. Employing a wedge formation—

- Provides maximum firepower forward and allows units to use a large portion of their firepower on the flanks.
- Allows rapid crossing of open terrain when enemy contact is not expected.
- Facilitates control.
- Allows for rapid changes in the direction of movement.

- Facilitates the rapid change to other movement formations.

The primary disadvantages to the wedge formation are that it—

- Requires sufficient maneuver space or multiple routes for dispersion laterally and in depth.
- Lacks ease of control in restricted terrain or poor visibility.



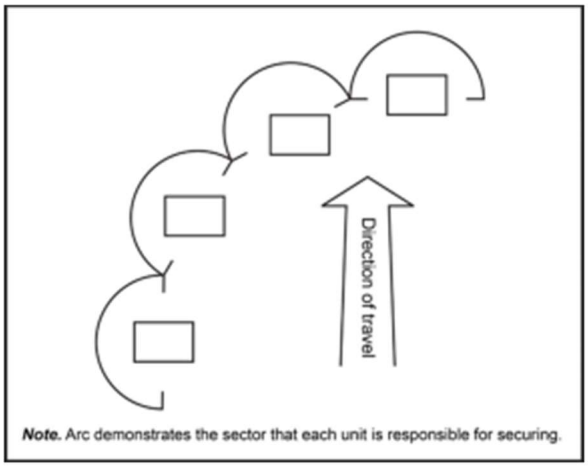
Note. Arc demonstrates the sector that each unit is responsibile for securing.

Echelon Formation: An echelon formation is a movement formation with elements arranged on an angle to the left or to the right of the direction of attack (echelon left, echelon right). This formation provides focused firepower forward and to the flank of the direction of the echelon. It facilitates control in open areas. It provides minimal security to the opposite flank in the direction of the echeloning. A unit with knowledge of potential enemy locations can use an echelon formation to deploy subordinate ground elements diagonally left or right or as a way to work within a higher echelon movement formation. Units operating on the flank of a larger formation commonly use this formation. An echelon formation—

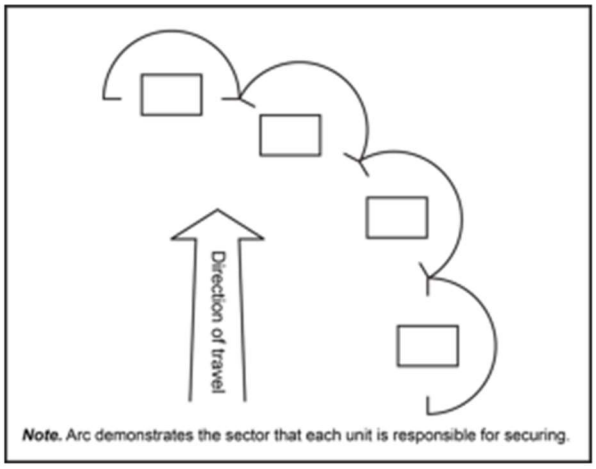
- Facilitates control in open terrain.
- Allows the concentration of the unit's firepower forward and to the flank in the direction of the echelon.
- Allows forces not in contact to maneuver against known enemy forces because all elements will not simultaneously make contact.

The primary disadvantages of this formation are—

- Difficult to maintain control over the unit in restricted terrain.
- Lacks security or firepower on the opposite side of the echelon.



Note. Arc demonstrates the sector that each unit is responsible for securing.



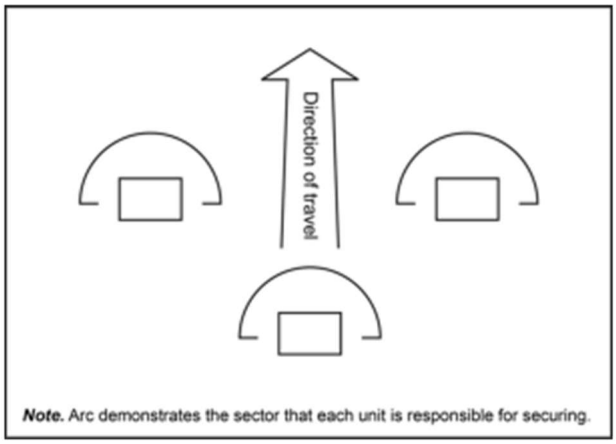
Note. Arc demonstrates the sector that each unit is responsible for securing.

Vee Formation: A vee formation is a movement formation with two elements abreast and one or more elements trailing. If there are more elements after the trail element in the vee formation, the trail elements can be in front or behind the main body. This arrangement is suited for an advance against a known threat to the front. It—

- Provides maximum firepower forward and good firepower to the flanks, but the firepower on the flanks is less than that provided by the wedge.
- Facilitates a continued maneuver after making contact and a rapid transition to the assault.
- Allows a unit to change quickly to a line, wedge, or column formation.

The primary disadvantages to this formation include:

- Reorientation in the direction of movement, such as a 90-degree turn, are more difficult than using the wedge.
- Control is difficult in restricted terrain and under limited-visibility conditions.
- Lead element masks fires of the trail element.
- Requires sufficient maneuver space for dispersion laterally and in depth.



Note. Arc demonstrates the sector that each unit is responsible for securing.

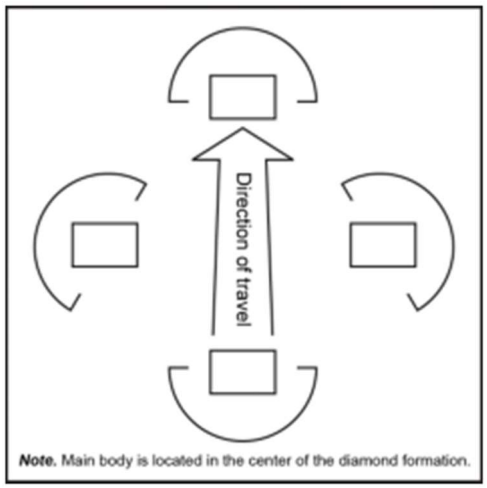
Diamond Formation: A diamond formation is a movement formation with one element leading, one element positioned on each flank, and the remaining elements to the rear. The non-security units of the diamond usually move in a column formation inside of the diamond. It is most effective during approach marches, exploitations, or pursuits when the unit has only general knowledge about the enemy.

Advantages of employing a diamond formation include—

- Allowing units to maneuver to either flank immediately, regardless of which subordinate element makes enemy contact.
- Facilitates making enemy contact with the smallest possible force yet provides all around security.
- Provides firepower to the front and flanks.
- Changes easily and quickly to another formation.
- Facilitates speed of movement while remaining easy to control.
- Provides an uncommitted force for use as a reserve.

The primary disadvantages of this formation are that it—

- Requires sufficient maneuver space or multiple routes for dispersion laterally and in depth.
- Requires four subordinate maneuver elements.



Note. Main body is located in the center of the diamond formation.

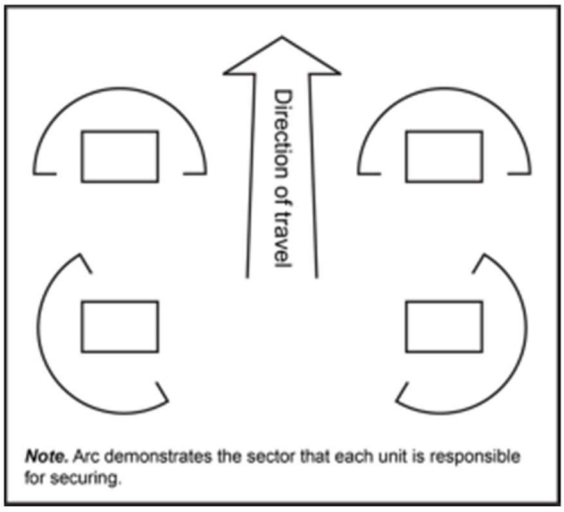
Box Formation: The box formation is a movement formation with elements arranged in a box or square, or two elements up and two elements back. This formation is only used when the unit has four security or combat elements. It is a flexible formation providing equal firepower in all directions. This formation can cause up to 50 percent of the force becoming decisively engaged simultaneously, thereby limiting the combat power available to maneuver against an enemy force. The box formation arranges the unit with two forward and two trail maneuver elements. Units with only three subordinate maneuver elements cannot adopt the box formation unless reinforced with an additional maneuver element. The subordinate elements of the box usually move in a column formation within the box formation. Units often use this formation when executing an approach march, exploitation, or pursuit when they have only general knowledge about the enemy. Employing a box formation—

- Allows a unit to change quickly and easily to any other formation.
- Facilitates rapid movement yet still provides all around security.
- Provides firepower to the front and flanks.
- Maintains control more easily than a line formation.

Using the box formation also has disadvantages. These include—

- The requirement for sufficient maneuver space or multiple routes for dispersion.

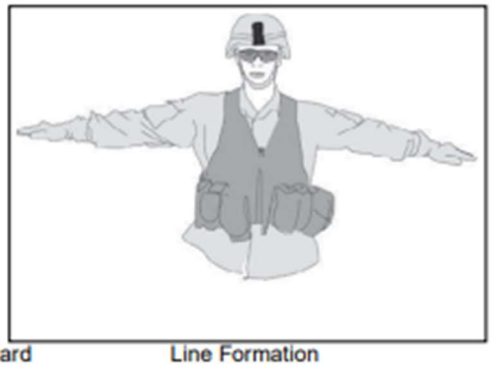
- The possibility exists of enemy units massing on one element at a time as the presence of other friendly forces can mask other element's direct fires.



Note. Arc demonstrates the sector that each unit is responsible for securing.

Dismounted Hand & Arm Signals

Join me, follow me, or come forward



Line Formation

Halt (Stop forward movement)

Take Cover

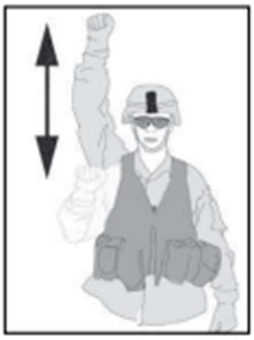
Cease Fire

Map Check

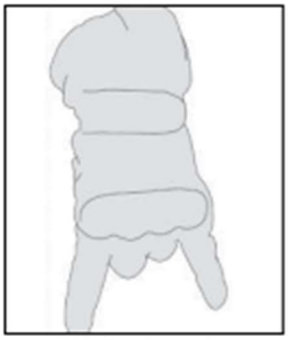
Freeze (Cease all movement)

Assemble or rally

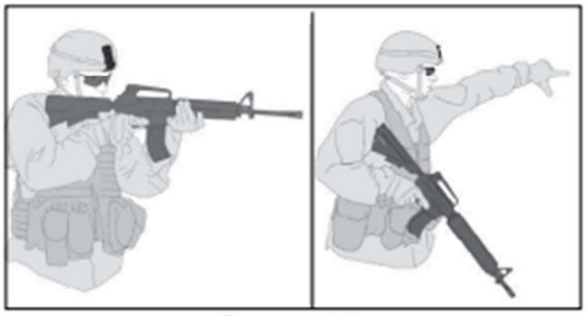
Pace count



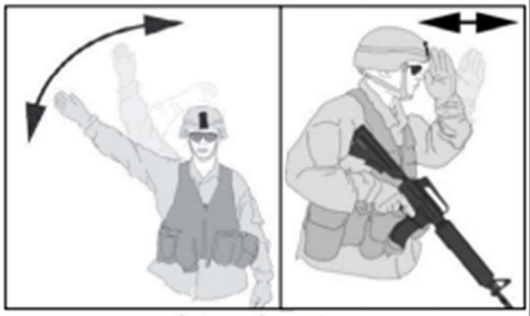
Increase speed, double time



Wedge formation



Enemy in sight



Column formation

Visual Signals: See TC 3-21.60

QRC 9.3 REACT TO AMBUSH

Near:

- Within hand grenade range—35 meters.
- Airmen in the kill zone (without orders):
  - Return fire immediately.
  - Seek nearest available cover.
  - Assume prone position.
  - Throw concussion, fragmentary, or smoke grenades.
  - After explosion of grenades, assault through ambush using fire and movement.
- Airmen not in the kill zone:
  - Identify enemy location.
  - Place accurate suppressive fire.
  - Shift fire as assault begins.
- Airmen in kill zone continue to assault to eliminate ambush or until contact is broken.
- Consolidate and reorganize.

Far:

- More than 50 meters.
- Airmen in the kill zone (without orders):
  - Return fire immediately.
  - Seek cover and concealment.
  - Suppress enemy (overwatch).
- Squad leader assesses situation.
  - Determine COA (flank).
- Airmen not in contact:
  - Move along covered and concealed route.
  - Assault enemy on weak flank.
  - Suppress enemy (overwatch).
- Overwatch Airmen continue to suppress, shift/cease fire as bounding team enters sector.
- Bounding team continues to assault through enemy.
- Consolidate and reorganize once contact is broken.

QRC 9.4 REACT TO SNIPER

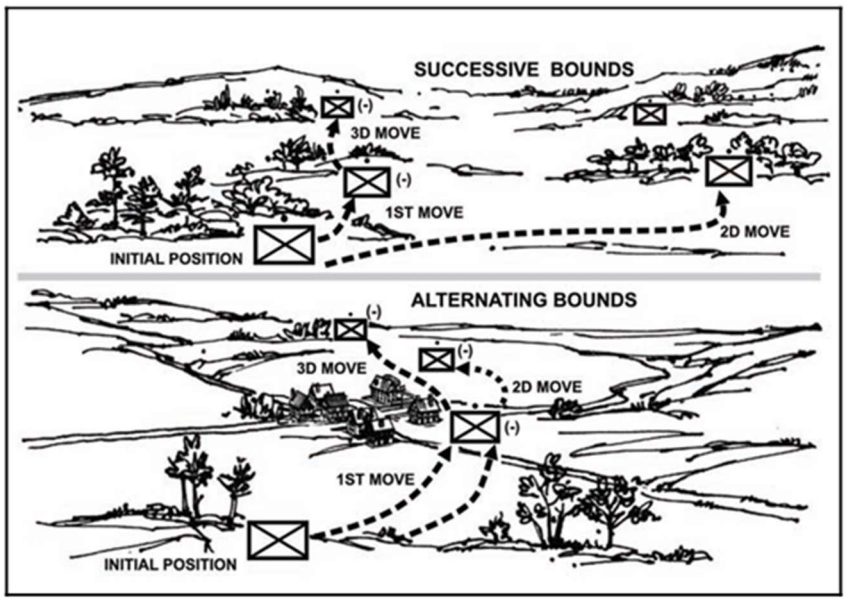
- Sniper fire is difficult to locate.
- Bound back to cover (team leader calls out direction and distance).
- Utilize smoke (if available) to mask teams location and movement.
- Once enemy's location becomes known either:
  - Place well aimed fire on enemy location.
  - Stay clear of enemy area.

QRC 9.5 BREAK CONTACT

- Squad leader orders: "BREAK CONTACT".
- Squad leader designates a support element and a maneuver element.
- Squad leader issues distance and direction or a terrain feature for the maneuver element.
- Supporting element suppresses enemy position.
- Maneuver uses smoke to mask movement.
  - Takes up overwatch position.
  - Begins to suppress enemy.
- Squad leader directs support element to break contact.
- Support element uses smoke to screen movement.
  - Takes up overwatch position.
- Squad continues to bound away until contact is broken.
- Consolidate/reorganize.

Bounding Overwatch

- Bounding overwatch is used when contact is expected, when the squad leader feels the enemy is near (based on movement, noise, reflection, trash, fresh tracks, or even a hunch), or when a large open danger area must be crossed. The lead fire team overwatches first. Soldiers in the overwatch team scan for enemy positions. The squad leader usually stays with the overwatch team. The trail fire team bounds and signals the squad leader when his team completes its bound and is prepared to overwatch the movement of the other team.
- Both team leaders must know which team the squad leader will be with. The overwatching team leader must know the route and destination of the bounding team. The bounding team leader must know his team's destination and route, possible enemy locations, and actions to take when he arrives there. He must also know where the overwatching team will be and how he will receive his instructions. The cover and concealment on the bounding team's route dictates how its Soldiers move.
- Teams can bound successively or alternately. Successive bounds are easier to control; alternate bounds can be faster.



QRC 5.1 VEHICLE SEARCH

Visual Search (Prior to Physical Contact)

Step 1: From a predetermined distance, instruct the vehicle driver to: turn lights on/off, flash high beams, turn blinkers/hazards on/off, turn wipers on/off, honk horn, lower/raise windows if electronic, open/close sun roof if electronic.

Step 2: Conduct an exterior 360 degree visual search. This may reveal indicators that an improvised explosive device (IED) was placed on the vehicle (e.g., license plate/registration inconsistent, vehicle carrying a heavy load/ weighted down, loose wires exposed from compartments, and blacked out windows).

Step 3: If available, have a military working dog (MWD) search the vehicle.

Visual Search (Physical Contact/Conducting the Search)

Step 1: Instruct the driver and all occupants to dismount the vehicle. Place them in a staging area to shield them from observing the search.

Step 2: Initiate a systematic and thorough search. What you do on one side of the vehicle, you must do on the opposite side.

Step 3: Use search mirrors and flashlights to search all areas of the vehicle (e.g., the doors, trunk, engine compartment, passenger compartment, glove box, center console, gas cap area, and under the vehicle). Be sure to also search the fluid reservoirs and gas tanks. If necessary, use a dipstick to inspect.

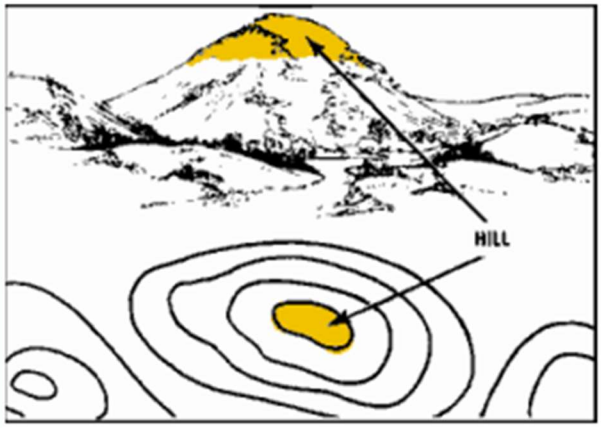
Step 4: If available, utilize ION scanning equipment.

Step 5: If an IED or suspicious item is discovered at any time during the search, clear the area, initiate a minimum cordon using **QRC 14.1 5-Cs**, detain the vehicle occupants, and contact security forces immediately.

QRC 20.1 MEDICAL EVACUATION (MEDEVAC) 9-LINE

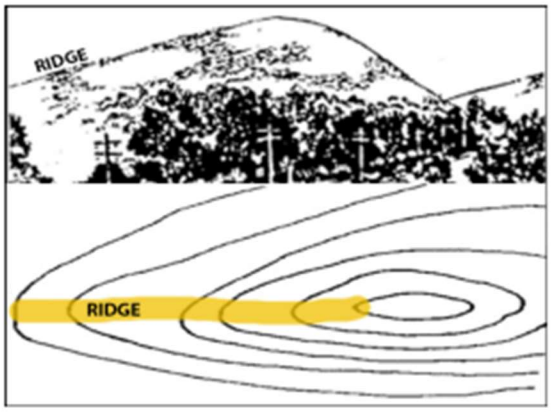
LINE 1—Location, give grid coordinates _____
LINE 2—Radio frequency and call sign _____
LINE 3—Number of patients by precedence (if two or more categories must be reported, say "break" between) _____
A—Urgent (Immediate, ASAP)
B—Priority
C—Routine
D—Convenience
LINE 4—Special equipment required _____
A—None
B—Hoist
C—Evacuation equipment (Stokes® litter, etc.)
D—Ventilator
LINE 5—Number of patients by type _____
A—Litter
B—Ambulatory
C—Escort
LINE 6—Security of pickup site (Wartime) _____
N—No enemy troops in area
P—Possible enemy troops in area (approach with caution)
E—Enemy troops in area (approach with caution)
X—Enemy troops in area (armed escort required)
*Number and type of wound, injury, illness (Peacetime)—Specific info (gunshot, shrapnel, bleeding) _____
LINE 7—Method of marking pickup site _____
A—Panels
B—Pyrotechnic signal
C—Smoke signal
D—None
E—Other (mirror, person, light, etc.)
LINE 8—Nationality and status of casualties _____
A—US military
B—US civilian
C—Non-US military
D—Non-US civilian
E—Enemy prisoners of war (EPW)
LINE 9—Status of chemical, biological, radiological, and nuclear contamination (Wartime) _____
C—Chemical
B—Biological
R—Radiological
N—Nuclear

QRC 8.1 MAJOR TERRAIN FEATURES

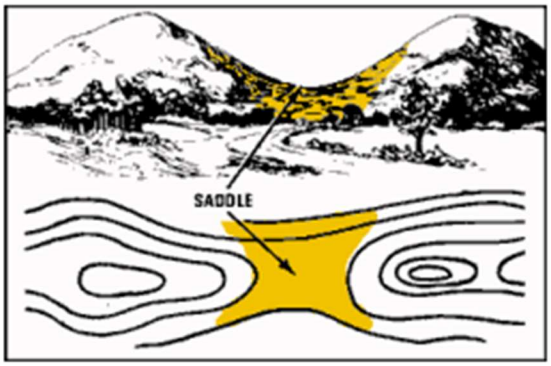


Hill

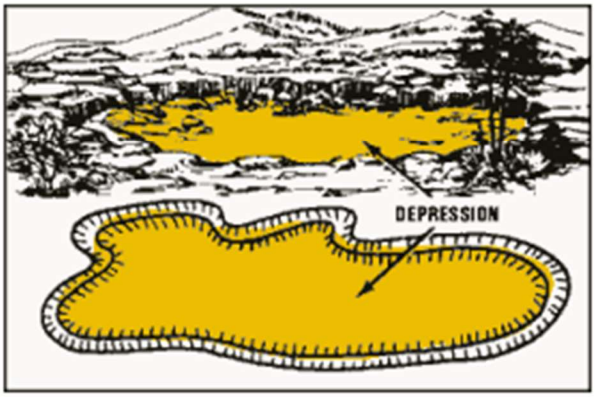
Valley



Ridge

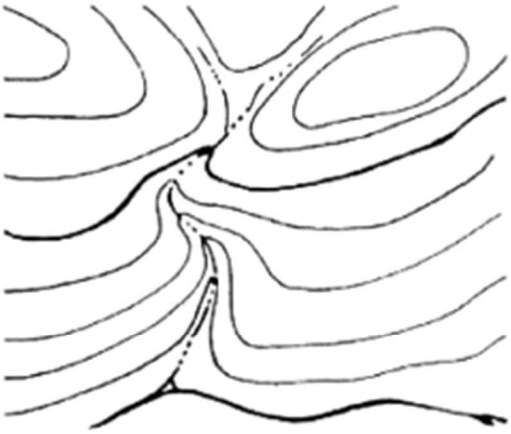


Saddle

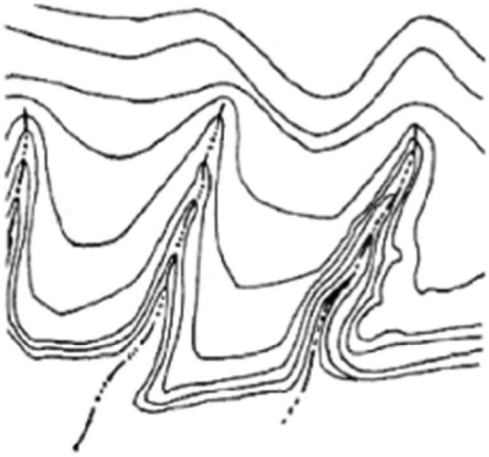


Depression

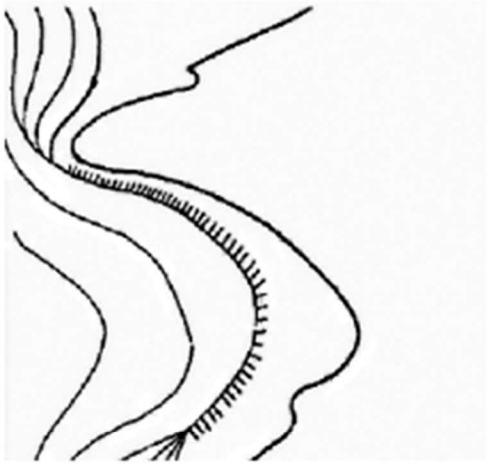
QRC 8.2 MINOR TERRAIN FEATURES



Draw



Spur

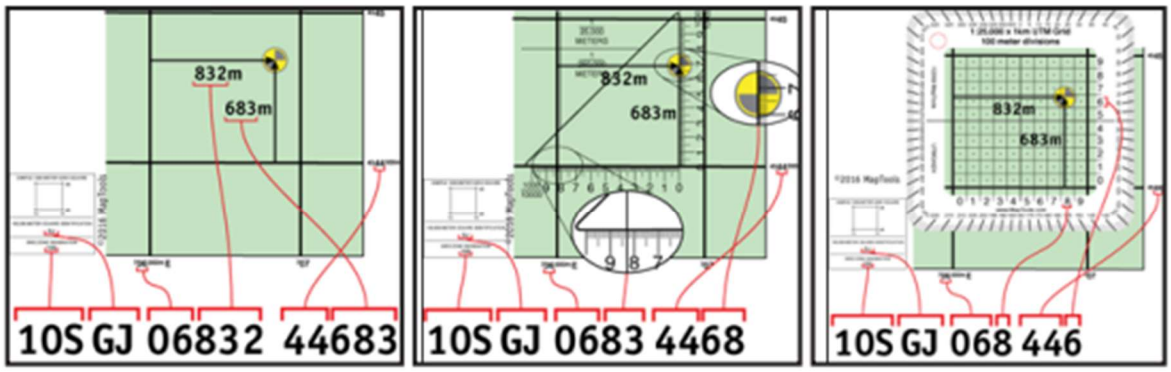


Cliff

Cut/Fill

QRC 8.5 USING MGRS

- Military Grid Reference System (MGRS) is a system of 1,000 meter grids (both North and South of the equator) and is typically used as the installation grid map.
- When all of the coordinates you are working with are localized within the same 100,000 meter square identifier, it is permissible to drop the Grid Zone Designator and the 100,000 meter square id.

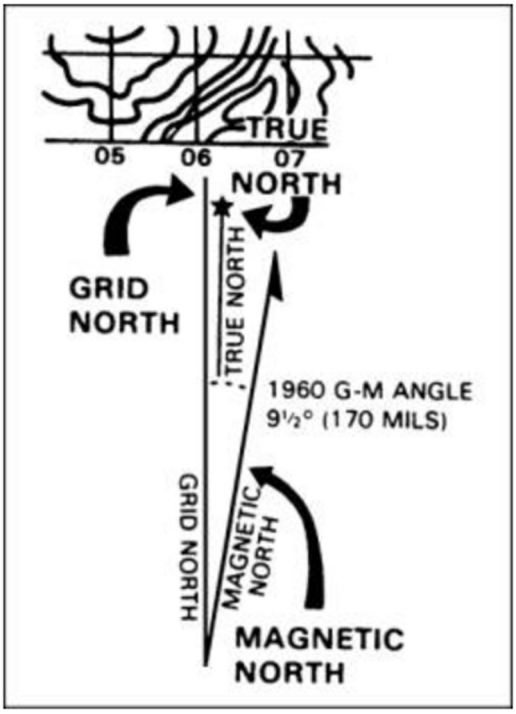


10S The Grid Zone Designator
GJ The 100,000 meter ID (Grid Square)
06832 The East/West position
44683 The North/South position

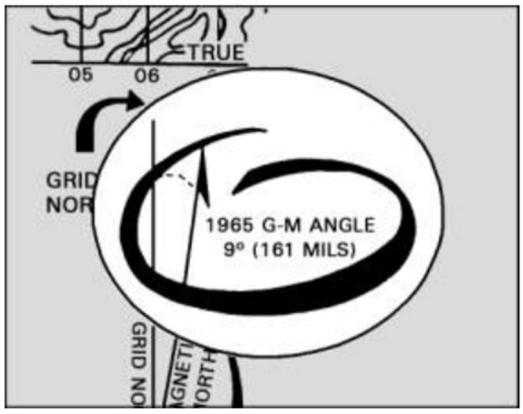
MGRS Coordinate	Accuracy
10S GJ 06832 44683	1 meter square
10S GJ 0683 4468	10 meter square (Typical PAR team accuracy)
10S GJ 068 446	100 meter square
10S GJ 06 44	**1,000 meter or 1 kilometer square***
10S GJ 0 4	10,000 meter or 10 kilometer square
10S GJ	100,000 meter or 100 kilometer square
**1,000 Grid lines – typical of Installation Grid Map*	

Steps for Magnetic Declination

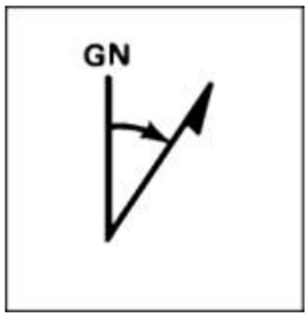
1. The north-south lines on your mab give grid north. The needle of your compass points to magnetic north. Grid north and magnetic north are usually different by a few degrees. Neither one points towards true north.



2. The difference between grid north and magnetic north is called the grid-magnetic (G-M) angle. The diagram at the bottom of the map tells you how to change grid azimuths to magnetic azimuths and magnetic azimuths to grid azimuths.



3. For example, you aim your compass at a distant point. The compass reading you get is 190 degrees, the magnetic azimuth. The diagram on your map tells you that the G-M angle is 9 degrees, and it also tells you that “to convert a magnetic azimuth to a grid azimuth, add the G-M angle.” Therefore, add 9 degrees to your compass reading. This gives you a grid azimuth of 199 degrees.
4. The G-M angle depends on where you are in the world.
5. Converting Azimuths with easterly vs westerly G-M
    a. Easterly: To convert a magnetic azimuth to a grid azimuth, add the value of the G-M angle to the magnetic azimuth. To convert a grid azimuth to a magnetic azimuth, subtract the G-M angle from the grid azimuth.



    b. Westerly: To convert a magnetic azimuth to a grid azimuth, subtract the value of the G-M angle from the magnetic azimuths. To convert a grid azimuth to a magnetic azimuth, add the value of the G-M angle to the grid azimuth.

Finding Your Pace Count

DETERMINING TRAVEL DISTANCE

DETERMINE DISTANCE BY PACE COUNT

- In thick jungle, where landmarks can not always be seen to track your position, PACE COUNT is the best way of measuring distance. It is the only method which lets a navigator know how far he has traveled. With this information, he can estimate where he is at any given time.
- To be accurate, the navigator must practice pacing over different types of terrain. First you have to do some calculations. Measure out exactly 100 meters on three types of ground. Flat **easy** terrain, **rougher** terrain with some slope and then **steep hill** terrain. Then on each measured course count your paces (every time your left foot touches the ground or every 2 steps = 1 pace). You will have 3 different pace counts for different types of terrain. If you wear a pack when in the woods then do your pace testing with the pack and boots on. Once finished MEMORIZE your pace count of all 3 types.
- When using a map and you have a destination that's 3 km's away you have an idea how many paces it will take you to travel that distance as an estimate.
- A navigator could make a PERSONAL PACE TABLE like one of these three examples:

TERRAIN	METERS	PACES
Swamp	100	85
Forest	100	70
Desert	100	115
Snow	100	115
Jungle	100	125
Prairie	100	65
Hills	100	95

TERRAIN	METERS	PACES
Sand	100	115
Gravel	100	100
Snow	100	120
Flat	100	65
Thick brush	100	80
Up hill	100	95
Down hill	100	90

Flat easy terrain	100 meters	65 paces
Rougher terrain with some slope	100 meters	75 paces
Steep hill terrain	100 meters	95 paces